

## AN ABSTRACT OF THE THESIS OF

Antony S. Cheng for the degree of Doctor of Philosophy in Forest Resources presented September 16, 1999. Title: Who's in Place, Who's Out of Place: Examining the Politics of Natural Resource Collaboration.

Abstract approved: \_\_\_\_\_

Steven E. Daniels

A qualitative research approach composed of three strategies was employed to systematically examine the politics of natural resource collaboration. First, using the Oregon Plan for Salmon and Watersheds as a case study, the behavioral assumptions of natural resource policy instruments enabling collaboration were uncovered and analyzed. Three key assumptions emerge: 1) stakeholders are internally motivated by strong social values to work with others to save salmon and restore their watersheds; 2) stakeholders are willing to take action in their watershed but lack the capacity to do so, such as financial, technical, and information resources; 3) stakeholders are capable of learning about, testing, and processing feedback from alternative restoration approaches. Second, theoretical perspectives focusing on the social influence of place were integrated with Elinor Ostrom's behavioral theory of collective action. The resulting theoretical framework proposes that place is a variable that influences choice of behavioral strategies in natural resource collaboration by: 1) providing a means for stakeholders to identify and, therefore, understand how to relate to one another; and 2) influencing the probabilities that stakeholders can expect to interact with one another in the future.

Third, a qualitative, comparative case study of two watershed councils in western Oregon applied the framework and identified three key dimensions of group identification related to place: 1) group identities related to stakeholders' interest and values in the watershed; 2) group identities related to stakeholders' ways of knowing the watershed; and 3) group identities related to social ties within the watershed. The qualitative research approach sheds light on the diverse behaviors stakeholders exhibit in natural resource collaboration. It challenges the notion that stakeholders are strictly motivated to maximize material self-interest in natural resource politics. Stakeholders vary in their interactions depending on the geographic scale of the landscape in question. The study also provides compelling evidence that stakeholders' collective identification to a shared place generates a higher likelihood of sustaining collaborative relationships and trust in one another.

**Who's in Place, Who's Out of Place: Examining the  
Politics of Natural Resource Collaboration**

by

**Antony S. Cheng**

**A THESIS**

**submitted to**

**Oregon State University**

**in partial fulfillment of  
the requirements for the  
degree of**

**Doctor of Philosophy**

**Presented December 6, 1999**

**Commencement June 2000**

Doctor of Philosophy thesis of Antony S. Cheng presented on December 6, 1999.

APPROVED:

---

Major Professor, representing Forest Resources

---

Chair of Department of Forest Resources

---

Dean of Graduate School

I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my thesis to any reader upon request.

---

Antony S. Cheng, Author

## ACKNOWLEDGEMENTS

A doctoral dissertation may be authored by one person, but it embodies the inspiration, motivation, and assistance of numerous individuals. I would like to thank first and foremost my advisor, Steve Daniels, for providing me the opportunity to seek my own path while guiding me back when I ventured too far afield. Thanks also go to my committee, John Bliss (Forest Resources, Oregon State University), Gregg Walker (Speech Communications, Oregon State University), John Orbell (Political Science, University of Oregon), and Eric Hansen (Forest Products, Oregon State University), for their guidance and challenges. A special thanks go to the participants of the McKenzie Watershed Council and the Mohawk Watershed Planning Group for allowing me to be a part of their efforts for 16 months. Without their honesty and openness, this dissertation would not have been possible. I owe a large measure of gratitude to the Dorothy D. Hoener and the Mary J.L. McDonald foundations for their generous financial support. Although there are too many to mention by name, I would also like to recognize my peers and mentors in the department, at OSU, and beyond who recognized the importance of maintaining perspective and humor while conducting rigorous, thorough research. Finally, I wish to thank my family for their undying love, faith, and support in my journeys through school and life.

## TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION.....	1
CHAPTER 1: EXAMINING THE ASSUMPTIONS OF CITIZEN BEHAVIOR IN NATURAL RESOURCE POLICY INSTRUMENTS.....	6
1.0 Abstract.....	7
1.1 Introduction .....	8
1.2 Background: the Oregon Plan .....	11
1.3 The Behavioral Assumptions of Policy Instruments .....	16
1.4 Behavioral Assumptions of the Oregon Plan .....	21
1.5 Discussion and Conclusions .....	32
1.6 References .....	38
CHAPTER 2. "PLACE" AS A BASIS FOR UNDERSTANDING NATURAL RESOURCE POLITICS: BLENDING GEOGRAPHIC AND POLITICAL SCIENCE IMAGINATIONS.....	41
2.0 Abstract.....	42
2.1 Introduction .....	43
2.2 "Place" Conceptions in Human Geography .....	46
2.3 Ostrom's Core Relationship .....	51
2.4 Blending Perspectives: Towards a Place-Based Behavioral Theory of Natural Resource Politics.....	56
2.5 Discussion.....	64
2.6 References .....	67
CHAPTER 3: A CASE STUDY ON THE POLITICS OF NATURAL RESOURCE COLLABORATION .....	72
3.0 Abstract.....	73
3.1 Introduction .....	74
3.2 Case Study Background .....	78
3.3 Group Identifications as Key Factors Affecting Collaboration.....	89
3.4. Discussion and Conclusions .....	107
3.5. References .....	113
SUMMARY .....	117
BIBLIOGRAPHY .....	121

## TABLE OF CONTENTS (Continued)

	<u>Page</u>
APPENDIX 1: CASE STUDY METHODOLOGY.....	131
A.1 Introduction .....	132
A.2 Case Study Selection Process .....	132
A.3 Data Collection .....	135
A.4 Data Analysis.....	146
A.5 References.....	163

## LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
2-1 A general model of place that relates place, social processes, and individual behavior .....	49
2-2 Ostrom's "core relationship" which defines cooperation as a function of reciprocity, reputation, and trust .....	54
2-3 A proposed place-based theoretical framework for examining natural resource politics.....	59



## LIST OF TABLES

<u>Table</u>	<u>Page</u>
1-1 Types of policy instruments according to behavioral assumptions of target population.....	18
1-2 Content analysis indicators of Oregon Plan behavioral assumptions.....	22
1-3 Texts used in content analysis .....	23
1-4 Categorization of Oregon Plan by Policy Instruments Based on Behavioral Assumptions in Oregon Plan-related Texts .....	25
3-1 Land use and ownership distribution in the McKenzie and Mohawk watersheds. ....	79
3-2 Axial coding statements from grounded theory coding procedures.....	87
3-3 Frequency of factors affecting collaborative behavior identified in interview transcripts .....	89
3-4 Relative density of factors affecting collaborative behavior identified in Participant-Observation field notes and written documents.....	89
3-5 Frequency of Group Identification Dimensions Expressed in Interviews.....	91

## LIST OF APPENDIX TABLES

<u>Table</u>	<u>Page</u>
A-1 Level of detail of participant-observation recording according to type and nature of dialogue or event among watershed council meeting participants.....	138
A-2 Excerpt of observation notes from MoWPG meeting .....	139
A-3 Informed Consent Form for individual interviews .....	141
A-4 Interview questions and key themes.....	143
A-5 Written documents used in case study.....	145
A-6 Example of Open Coding labeling of individual interview (from transcript #mg0415b).....	149
A-7 Code book for Open Coding labels and categories .....	150
A-8 Derivation of an Axial Coding statement from Open Coding label.....	154
A-9 Axial Coding Statements Grouped into Four Primary Themes.....	156
A-10 Frequency of factors affecting collaborative behavior identified in interview transcripts .....	162
A-11 Relative density of factors affecting collaborative behavior identified in Participant-Observation field notes and written documents .....	162
A-12 Frequency of Group Identification Dimensions Expressed in Interviews .....	162

## PREFACE

This dissertation is comprised of three distinct, stand-alone manuscripts intended for submission to peer-reviewed journals. The first manuscript is intended for submission to *Environmental Management*, an international journal with an audience of policy makers, scientists, and environmental auditors. The second manuscript is intended for submission to *Social Science Journal*, an interdisciplinary academic journal. The third manuscript is intended for submission to *Human Ecology Review*, a bi-annual interdisciplinary journal on issues related to human behavior and the environment. It is bounded by global introduction and summary chapters, and a global bibliography.

# Who's in Place, Who's Out of Place?: Examining the Politics of Natural Resource Collaboration

## INTRODUCTION

Natural resource policy analyses have typically relied upon three general assumptions of human behavior (Francis 1990; Ostrom 1990, chapter 1): 1) When it comes to natural resource use, people are primarily self-interested; 2) people will employ certain strategies to maximize their self-interest in natural resource decision-making processes, such as forest planning; and 3) collaboration is *not* a viable strategy because natural resource decisions will benefit some individuals at a cost to others, and no one wants to be the one who loses potential benefits. Given these assumptions, policy analyses tend to converge on a common prescription for natural resource problems: third-party authorities are necessary to define and enforce conservation measures or property rights (Ostrom 1990). What differs among the prescriptions are the rules and institutional structures by which those third-party authorities should operate (e.g., regulate resource users versus protect property rights).

The emergence of collaborative decision processes in natural resources over the past decade challenges these assumptions and, therefore, the enterprise of natural resource policy analysis. Prominent cases such as the Applegate Partnership in southwestern Oregon and the Quincy Library Group in northern California demonstrate that individuals with fundamentally opposing interests can collaboratively define and work towards attaining common natural resource goals. Dozens of similar collaborations have developed throughout the U.S., ranging from watershed councils to

public-private partnerships organized around local resource issues (Natural Resources Law Center 1996; Williams and Ellefson 1997; Yaffee et al. 1996). They are quite often referred to as “community-based” or “place-based” collaborations due to their focus on localized landscapes and issues.

Since their emergence into the limelight, place-based collaborations have been subject to both celebration and scrutiny. Federal and state policymakers favor place-based collaboration as an alternative to top-down, command-and-control forms of environmental regulation (Dombeck 1997; Kitzhaber 1996). The justification for this position is best articulated by the following statement from the Western Governors’ Association’s “Enlibra” doctrine (Western Governor's Association 1998):

“The regulatory tools we have been relying on over the last quarter of a century are reaching the point of diminishing returns. In addition, environmental issues tend to be highly polarizing, leading to destructive battles that do not necessarily achieve environmental goals. Successful environmental policy implementation is best accomplished through balanced, open and inclusive approaches at the ground level, where interested stakeholders work together to formulate critical issue statements and develop locally based solutions to those issues. Collaborative approaches often result in greater satisfaction with outcomes and broader public support, and can increase the chances of involved parties staying committed over time to the solution and its implementation.”

Arguments against place-based collaborative approaches are voiced by both environmental interests and so-called “Wise Use” private property rights advocates (Environmental Conservation Organization 1997; McCloskey 1996). Concerns are raised over the legality of collaborative decision-making and the danger of special interests dominating the process.

From a policy analysis standpoint, place-based collaborations pose analytical challenges. Conventional policy analysis models may have limited utility because they assume collaboration is not a strategy that allows individuals to maximize their self-

interest. However, there are few alternative analytical frameworks to examine collaboration in natural resource politics aside from descriptive surveys. The objective of this dissertation is to examine place-based collaboration in natural resources from a “behavioral” approach. The primary thrust of the behavioral perspective is to empirically examine a target population’s behavior in response to particular policy instruments. The focus is on *behavioral* outcomes rather than purely substantive *biophysical* or *economic* outcomes. The behavioral approach to policy analysis is summarized by Schneider and Ingram (1990):

“[W]hether target populations actually comply with policy, take advantage of policy opportunities, or change their behavior in some other way has not been the focus of [conventional policy analysis]. Policy-relevant behavior has either been taken for granted or assumed to be unimportant. To determine whether policy types have consequences for policy participation, in the sense of citizen responses to policy tools, the behavioral assumptions of policy need to be studied (pp. 511-512).”

The behavioral approach is important because the attainment of substantive policy goals depends on if and how target populations respond to policy instruments. However, if and how target populations respond to policy instruments can not always be directly inferred from a fixed set of variables (e.g., economic costs and benefits, socio-economic status, interest group affiliation) as hypothesized by conventional natural resource policy analysis models. A key premise underlying the behavioral approach is that target population behavior is influenced as much by situational variables (e.g., social and geographic contexts) as it is by non-situational variables. In essence, this dissertation defines, develops, and analyzes relevant situational variables affecting collaboration in natural resources.

The dissertation is presented in three distinct manuscripts. The first applies Schneider and Ingram’s (1990) framework for analyzing the behavioral assumptions of

policy instruments to the Oregon Plan for Salmon and Watersheds. The Oregon Plan is a state-level policy initiative that relies heavily upon place-based collaboration to achieve the twin policy goals of salmon restoration and watershed enhancement. The Oregon Plan is also touted as an alternative to federally mandated environmental regulation. The first manuscript's focus is to set out general propositions for how (and why) people are likely to respond to policy initiatives calling for place-based collaboration. A key behavioral proposition emanating from this analysis is that people are motivated to collectively achieve policy goals as long as those goals are consistent with socially symbolic values. The long-term progress of the Oregon Plan turns on the power of salmon as a socially symbolic icon among Oregon citizens. The plan also proposes that watersheds are geographic units that have sufficient symbolic meaning to bring together diverse individuals around common concerns such as water quality and rapidly increasing development.

The behavioral influence of geography is explored in-depth in the second manuscript, which blends "place" theories from human geography with behavioral decision theories from political science. The primary objective of the second manuscript is to propose a conceptual framework for examining place-based collaboration in natural resources. In general, theories of "place" in human geography propose that landscape – natural or human-made – are frames of reference that enable one to identify one's socio-cultural groups and, therefore, to learn norms for how people should relate to the natural environment. The conceptual framework proposes a relationship between place, group identification, social norms, trust, and collaboration.

In short, it proposes a relationship between situational variables and collaboration in natural resource politics.

The third manuscript applies the conceptual framework to a qualitative case study of two watershed councils in western Oregon. The case study is qualitative in the sense that it does not formally “test” the relative effect of the variables on group behavior using statistical techniques. Instead of accepting or rejecting hypotheses, the case study employs grounded theory procedures (Glaser and Strauss 1967; Strauss and Corbin 1990) to: 1) uncover the social psychological environment of collaborative watershed planning; 2) identify key factors influencing behavior; and 3) posit a relationship among the factors to explain the range of behaviors exhibited in collaborative watershed planning. The case study findings may assist policymakers in considering the social dimensions of spatial scale when developing natural resource policy instruments. The case study also provides a departure point for developing a place-based behavioral approach to a theory of natural resource politics. By uncovering and placing in to relationship key variables affecting the behavioral strategies of watershed council participants, the case study complements a growing body of empirical studies of natural resource collaborations from which propositions can continue to be empirically examined and theory can continue to evolve.



**CHAPTER 1: EXAMINING THE ASSUMPTIONS OF CITIZEN BEHAVIOR IN  
NATURAL RESOURCE POLICY INSTRUMENTS**

Antony S. Cheng

Department of Forest Resources  
Peavy Hall 280  
Oregon State University  
Corvallis, OR 97331  
U.S.A.

## 1.0 Abstract

In the past decade, there has been a flourishing of policy instruments that give citizens an active role in defining, selecting, and implementing natural resource conservation measures. A central question is whether citizens actually behave according to the expectations embodied in policy instruments. This paper examines the behavioral assumptions embodied in the Oregon Plan for Salmon and Watersheds, a policy initiative that relies on voluntary citizen action through local watershed councils. Using content analysis techniques, the Plan's assumptions are analyzed using the behavioral assumptions framework in Schneider and Ingram (1990). The Plan is a persuasion instrument because it attempts to touch upon citizens' shared values over salmon, their local watershed's health, and self-governance. It is a capacity instrument because it assumes that citizens just need coordination, funding, and technical assistance to carry out necessary actions. The plan is a learning instrument because it entrusts participants in local watershed councils to develop these measures to suit their own unique watershed conditions – conditions which they learn about collectively. Implications for policy and research are discussed.

**Key words:** policy analysis, citizen participation, behavior, values, watershed management

## 1.1 Introduction

Current debates over natural resource policy in the U.S. are as much about means as about ends. While a majority of the U.S. public strongly favors conserving biological diversity and protecting environmental quality as policy goals, they lack consensus on the most appropriate instruments for attaining those goals (Dunlap 1992; Kempton, Boster, and Hartley 1995). In the past decade, there has been a flourishing of policy instruments that give citizens an active role in defining, selecting, and implementing resource conservation measures (US Department of the Interior 1998; US Environmental Protection Agency 1996; Western Governor's Association 1998). The justification for this new generation of policy instruments is best expressed by the Western Governors' Association's "Enlibra" doctrine on environmental policy, which states, "Successful environmental policy implementation is best accomplished through balanced, open and inclusive approaches at the local level, where interested public and private stakeholders work together to formulate critical issue statements and develop locally based solutions to those issues (Western Governor's Association 1998, p. 2)."

A policy instrument is defined as a set of techniques by which governments use their power to affect social change, such as regulation, subsidies, and information campaigns (Bemelmans-Videc, Rist, and Vedung 1998). A central question is whether citizens actually behave according the expectations embodied in policy instruments. Countering the optimism embodied in Enlibra and similar policy initiatives are warnings against giving local citizens too much control over natural resource decision-making. For instance, Michael McCloskey of the Sierra Club writes: "[S]mall local

minorities are given an effective veto power to positive action...Any recalcitrant stakeholder can paralyze the process and defy the popular will. Only the lowest common denominator ideas survive the process (McCloskey 1996).”

The purpose of this paper is to examine the behavioral assumptions of citizen-based natural resource policy instruments and to locate those instruments within a broader categorization scheme. By comparing and contrasting citizen-based policy instruments with other types of instruments, it is possible to evaluate the potential efficacy of emerging citizen-based policy instruments. The examination is based on the policy analysis framework set out in Schneider and Ingram (1990) which explicitly deals with policy instruments directed at achieving citizen compliance with policy goals. The general premise of the framework is that every policy instrument embodies certain assumptions of how people behave in policy-relevant situations. For instance, tax and financial incentive programs assume that private landowners may have good intentions but lack the financial ability to enact conservation measures. By contrast, regulations assume landowners will not alter damaging management practices unless threatened by sanctions. Evaluating the behavioral assumptions of policy instruments is increasingly regarded as a viable policy analysis approach (Bemelmans-Videc, Rist, and Vedung 1998; Knetsch 1995).

Schneider and Ingram’s framework of behavioral assumptions is applied to the Oregon Plan for Salmon and Watersheds (originally the Coastal Salmon Recovery Initiative or CSRI), a policy initiative developed in Spring of 1997 to address the decline of anadromous fish stocks in particular, and watershed health in general. The framework is well suited to analyzing the Oregon Plan because of the Plan’s emphasis

on citizen participation in defining and implementing conservation actions. In lieu of federal agencies developing and enforcing broad land use regulations, the Oregon Plan calls upon citizens to collectively craft and implement restoration plans tailored to their local watershed. According to the Oregon Plan, relying on voluntary collective action among citizens is key to salmon recovery because “government, alone, cannot conserve and restore salmon across the landscape. The Plan recognizes that actions to conserve and restore salmon must be worked out by communities and landowners, with local knowledge and ownership in solutions (State of Oregon 1997c, p. 1).” Given its reliance on citizen action, the Oregon Plan is a dramatic departure from conventional natural resource policy instruments. It not only assumes that individual citizens will voluntarily take action to mitigate their *own* effects on watershed health, it also expects them to voluntarily collaborate with *others* to protect and enhance their local watershed. By examining these assumptions using Schneider and Ingram’s framework, it is possible to locate the Oregon Plan within broader categories of policy instruments. Doing so would provide policymakers and analysts a foundation upon which to evaluate and revise (or do away with) the Plan, and to develop policy instruments in the future.

The examination unfolds in four sections. The first section provides a brief overview of the Oregon Plan and its major components. The second lays out Schneider and Ingram’s behavioral assumption framework. The third section presents the findings of a content analysis of the Oregon Plan using the behavioral framework as an analytical guide. Content analysis is a research method often used in policy analysis to make valid inferences about intent and meaning from texts (Johnson and Joslyn 1995, pp. 244-251; Neuman 1994, pp. 261-271). The final section discusses the plan’s

assumptions and assesses the relationship between the Oregon Plan and other policy instruments. The discussion also examines the utility of the behavioral framework as a form of policy analysis.

## **1.2 Background: the Oregon Plan**

At the beginning of the 20<sup>th</sup> century, the rivers draining from Oregon's Coast Range into the Pacific Ocean historically produced approximately 1 million returning adult coho salmon annually (State of Oregon 1997b, p. 4). By the 1950's, annual production had declined by half. Returns during the 1980's and 1990's ranged between 50,000 and 80,000, depending on ocean conditions. Salmon stocks along the Pacific Northwest coast and throughout the Columbia River basin experienced similar declines over the same period. In 1993, a coalition of regional environmental organizations petitioned the U.S. Department of Commerce's National Marine Fisheries Service (NMFS) to list coho salmon stocks along the entire Pacific Coast as 'threatened' under the Endangered Species Act (ESA). NMFS is responsible for ensuring the protection and viability of all anadromous fish populations that inhabit U.S. waters.

As NMFS undertook the lengthy process of determining which "evolutionarily significant units" of coho salmon to list along the Pacific Coast, Oregon Governor John Kitzhaber gathered an interdisciplinary team to strengthen the state's existing coastal salmon recovery plan. The team's objective was to craft measures to not only protect salmon from further decline but to rebuild their populations (State of Oregon 1996). Including recovery as a goal suggested the involvement of landowners and communities

and compelled the team to expand their horizons beyond governmental actions. In October 1995, work on the Coastal Salmon Recovery Initiative began in earnest. By late February 1997, the governor's CSRI team released its review draft to the legislature, an independent team of scientists, and the general public. The final draft was revised and presented to the Oregon legislature in March. In April 1997, two pieces of enabling legislation (SB 924 and HB 3700) and an appropriations bill (HB 5042) were signed, thereby giving life to the CSRI (State of Oregon 1998). As a result, NMFS announced that it would not list coho salmon along Oregon's central and north coast under the Endangered Species Act.<sup>1</sup> The scope of the CSRI was broadened by the Steelhead Supplement in March 1998 to account for declining steelhead populations in the lower Columbia River and Willamette River basins. The supplement was significant, since the state's population and agricultural centers in the Willamette Valley would now be directly effected. The CSRI and Steelhead Supplement blossomed into a statewide effort now commonly known as "The Oregon Plan" (State of Oregon 1998).

### **1.2.1 Watershed Councils: the backbone of the Oregon Plan**

The Oregon Plan can be viewed as a response to conventional recovery plans developed under ESA. It is non-regulatory, for the most part<sup>2</sup>, and is based on a completely different premise than ESA concerning who is accountable for the decline and, as a result, the recovery of a species. The plan essentially declares that *all* citizens of Oregon are responsible for the decline of salmon and, therefore, must be involved in

---

<sup>1</sup> However, in response to a federal court ruling brought on by environmental groups, NMFS did list Oregon's coastal coho salmon stocks in August 1998.

their conservation and restoration. Moreover, government alone can not (and will not) conserve and restore salmon across all watersheds. These principles are expressed in the plan's opening statement: "We, the people of Oregon, promise to do our best to understand and respect the needs of salmon, and to make meaningful commitments in the way we conduct our lives, in the hope that salmon and people will survive and flourish, together long into the future (State of Oregon 1997b, Forward)." Hence, rather than being a legal contract between an individual landowner and a federal agency, like ESA provisions, the plan is more like a covenant among citizens of Oregon to follow a general course of action. The vehicles for citizen-based action are local watershed councils.

By definition, a watershed council is a locally organized, voluntary, non-regulatory group established to assess the condition of their watershed and build a work plan to implement enhancement and protection activities within their watershed (Oregon Revised Statutes 1995, Chapter 541.388). A watershed council may include representatives of local government, representatives of nongovernment organizations, and private citizens, including but not limited to: representatives of local and regional boards, commissions, districts, and agencies; representatives of federally recognized Indian tribes; public interest group representatives; private landowners; industry representatives; members of academic, scientific and professional communities; and representatives of state and federal agencies. Oregon's watershed enhancement statute (Oregon Revised Statutes 1995, Chapter 541.345-541.400) provides for flexibility in council representation in recognition of the uniqueness of each watershed.

---

<sup>2</sup> The Oregon Plan does not contain any *new* regulatory authority, but does identify the Oregon Forest Practices Act and state water quality standards as instrumental to achieving the plan's goals.



In lieu of having government agencies conduct on-the-ground assessments and prescribe action, the Oregon Plan expects local watershed councils to be the backbone of the state's fish restoration strategy. More specifically, the Oregon Plan expects watershed councils to fulfill a list of rules and responsibilities that can be summarized into three themes (State of Oregon 1997b, Chapter 17a, p. 6):

1) Watershed councils should *provide a forum for all interested parties within a watershed to learn about and address natural resource issues affecting the watershed*. Specifically, watershed councils should enable people to: foster communication and cooperation; learn about resource management issues affecting their watershed; resolve conflicts over critical resource management issues; and participate in decisions affecting resource management within the watershed. In short, watershed councils are the means for diverse individuals to find common ground on natural resource issues.

2) Watershed councils should *write, implement, and monitor watershed action plans with the input of all interested parties*. The watershed action plan is the essential product of a watershed council's efforts. It provides the basis upon which landowners, interested citizens, and government agencies can make resource management decisions. The action plan is, in turn, based on an assessment of watershed conditions. Using one of any number of assessment protocols, a watershed council should identify and prioritize key natural resource issues. From the list of priorities, the council is expected to formulate actions that mitigate resource management practices, protect watershed resources from further degradation, and/or enhance watershed conditions. Once the action plan is developed, the watershed council should promote its implementation and monitoring throughout the watershed.

3) Watershed councils should *promote the education of broader communities within their respective watersheds about conservation and restoration priorities*. A watershed council is expected to reach out to a broad array of people, including local governments, landowners, businesses, and community members. The outreach has two purposes. One is to educate broader audiences within the watershed about technical issues and resource management priorities. This includes educating citizens about taking steps in their daily lives to reduce their impact on watershed resources and assisting landowners to achieve compliance with existing regulations. The second is to recruit financial and technical support from within the watershed. By enlisting local investments, watershed councils can muster community support for local actions and become independent of state funding and, therefore, influence.

In sum, local watershed councils bear a significant portion of the burden of making the Oregon Plan work on the ground. In this way, the Oregon Plan is among the first natural resource policy initiatives to rely on the voluntary actions of citizens to recover a threatened species listed under ESA. This reliance engenders a question relevant to this paper, which is, "Why and how will citizens overcome their diverse interests and viewpoints to collectively work towards attaining the goals set forth in the Oregon Plan?" Using Schneider and Ingram's framework, it is possible to respond to this question by uncovering the assumptions of citizen behavior embedded in the Oregon Plan.

### 1.3 The Behavioral Assumptions of Policy Instruments

Schneider and Ingram's behavioral assumptions framework is an outgrowth of a long line of inquiry that focuses on what instruments best achieve policy goals. This line of inquiry dates back to the early-1900's to the works on public administration by Max Weber and Frederick Taylor. Both Weber and Taylor maintained that there is always a rational and, therefore, predictable way to attain a policy goal (Shafritz and Hyde 1997, pp. 30-32, 37-43). The "way" is a hierarchical bureaucracy with a clear chain of command, division of labor, and decision-making procedures. Taylor in particular was convinced that there was "one best way" to perform a particular task to meet a goal. Works in public finance during the 1950's followed this track. In Musgrave's theory of the "public household," a well-structured bureaucracy would invariably lead public administrators to rationally seek to maximize the public welfare, however it was defined by voters and legislators (Atkinson and Stiglitz 1980, p. 297). Hence, public policy goals would be carried out by "benevolent" public administrators following well-ordered rules.

These early models of public administration had their critics. Herbert Simon cast doubts on the capacity of public administrators to attain policy goals by taking a psychological approach (Simon 1976). Rather than assuming that administrators pursue a "one best way" to attain all policy goals, Simon maintained that administrators tend to satisfy a minimum level of policy objectives. In a more cynical vein, William Niskanen and Gordon Tullock contended that administrators are fundamentally self-interested, seeking only to maximize their own budgets and power (Mueller 1989, pp. 229-259). Though policy goals may be well-defined and supported by a majority of the people,

public administrators frequently fail to carry out actions to attain those goals because they do not enhance the administrators' budgets or power. Schneider and Ingram follow Simon by offering a psychological approach to examining the behavioral assumptions of policy instruments. Its focus is broader than Simon's since it is not confined solely to public administrators. The framework specifically emphasizes the behavioral assumptions of *citizens* embedded in policy instruments. For this reason, it is a useful approach for examining the Oregon Plan.

The behavioral assumptions framework begins with the presumption that policy instruments are enacted "to get people to do things that they might not otherwise do, or it enables people to do things that they might not have done otherwise (Schneider and Ingram 1990, p. 513)." In this view, policy instruments imply that people's behaviors are somehow constrained, inhibited, or directed towards undesirable social goals, and require an external force to either enable or prevent behaviors. Five types of policy instruments are described by Schneider and Ingram: Authority, Incentive, Capacity, Persuasion, and Learning. The typology is summarized in Table 1-1.

*Authority instruments* grant permission, prohibit, or require action under designated circumstances. These instruments are mainly used within government bureaucracies, although they also extend to citizen target populations. Authority tools assume that agents and targets are responsive to the organizational structure of leader-follower relationships and that lower level agents usually do as they are told for fear of sanctions. The notification and permit rules under many state forest practices laws are classic authority tools in natural resources. These rules require landowners to notify the

**Table 1-1. Types of policy instruments according to behavioral assumptions of target population**

Type of Instrument	Behavioral Assumptions of Target Population	Examples
Authority	<ul style="list-style-type: none"> <li>• Respond to leader-follower relationship</li> <li>• Motivated by fear of sanctions</li> </ul>	<ul style="list-style-type: none"> <li>• Private forestry regulations</li> <li>• Agency environmental impact analyses</li> </ul>
Incentive	<ul style="list-style-type: none"> <li>• Seek to maximize material benefits</li> <li>• Motivated by manipulation of money, liberty, life, or other tangible payoffs</li> </ul>	<ul style="list-style-type: none"> <li>• Stewardship Incentives Program for forest landowners</li> <li>• Property tax abatements</li> </ul>
Capacity	<ul style="list-style-type: none"> <li>• Make decisions based on available information</li> <li>• Motivated to alter behavior given adequately information</li> </ul>	<ul style="list-style-type: none"> <li>• State extension programs</li> <li>• Forestry technical assistance</li> <li>• Public education &amp; outreach efforts</li> </ul>
Persuasion	<ul style="list-style-type: none"> <li>• Respond to policies that are consistent with values</li> <li>• Internally motivated by social and cultural notions of right, wrong, justice, equality, individualism, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Public speeches, newspaper editorials, media campaigns</li> <li>• Slogans and symbols such as "Smokey Bear"</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Seek to learn about and adapt policy-preferred actions suited to specific situation</li> <li>• Internally motivated to alter behavior given the opportunity to learn</li> </ul>	<ul style="list-style-type: none"> <li>• Clean Water Act nonpoint source water pollution control programs</li> </ul>

(Schneider and Ingram 1990)

state forestry agency before they can conduct any kind of forestry practice, such as logging and road maintenance projects. The state forestry agency, in turn, can condition or reject notifications, enforce minimum standards, and punish infractions.

*Incentive instruments* are tangible payoffs, either positive or negative, to induce compliance or encourage utilization of a policy instrument. They assume that individuals seek to maximize their benefits and will not be positively motivated to take policy-relevant action unless they are influenced, encouraged, or coerced by manipulation of money, liberty, life, or other tangible payoffs. Furthermore, incentive instruments presuppose that individuals have adequate information and decision-making skills to select alternatives that are in their best interests. The numerous federal and

state cost-sharing programs available to private landowners represent incentive instruments. Prominent programs include the Conservation Reserve Program for farmers and the Stewardship Incentives Program for private forest land owners. Depending on the program, the government will grant a financial payment to private landowner ranging from 50 to 100 percent of the cost of undertaking certain conservation measures including furloughing tillable agricultural from production or planting native vegetation to enhance wildlife habitat. Property tax abatement programs such as modified forest land tax assessments offered by many states also serve the same purpose.

*Capacity instruments* provide information, training, education, and resources to enable individuals, groups, or agencies to carry out certain policy-relevant activities. Capacity instruments assume that individuals do not take actions that will contribute to policy goals because they lack adequate information, skills, or resources. The target population is assumed to have sufficient motivation to participate or change behavior if they are properly informed and have the necessary resources. The objectivity and accuracy of information is taken for granted. Technical assistance, education, and cooperative extension programs fall under this category of policy instruments. They are perhaps the most common among the natural policy instruments (Cubbage, O'Laughlin, and Bullock 1993).

*Persuasion Instruments*<sup>3</sup> attempt to encourage compliance or support of policy goals by appealing to the dominant values of the target population in order to maintain support for policy goals. By using persuasion instruments, many policymakers assume

---

<sup>3</sup> Schneider and Ingram defines this class of instruments as "symbolic and horatory." For the sake of simplicity, they are jointly defined as "persuasion" instruments.

that people are motivated from within and decide whether or not to take policy-related actions based on values such as cultural notions of right, wrong, justice, individualism, equality, obligations, and so forth. Persuasion instruments can take many different forms, including public speeches, newspaper editorials, boycott threats, and mass media information campaigns. The USDA Forest Service's "Smokey Bear" campaign is a persuasion instrument imploring people use caution in the forest for fear of igniting destructive forest fires. Woodsy Owl's "Give a hoot, don't pollute" is a similar campaign aimed at reducing litter.

*Learning Instruments* are based on the premise that some policy goals apply differently to different individuals and situations. Since the outcomes of some policy goals are frequently uncertain, it is often necessary to leave the choice of alternative courses of action to lower level agents or a citizen target population. Learning instruments are used in these situations. Learning instruments assume that target populations can learn about policy-preferred actions and will select the approaches best suited to their unique situations. For example, when the federal Clean Water Act declares that it wants to reduce nonpoint sources of water pollution, it does not specify an exact level of reduction, how reduction is achieved for each source, and how to monitor the reduction process. Instead, the law leaves these decisions up to the states. In turn, the states develop different instruments according to economic sector, landowner group, or watershed such as "best management practices" in the forestry sector. Learning instruments are generally used in concert with capacity instruments.

To summarize Schneider and Ingram's behavioral assumptions framework: policy instruments embody expressions of how citizens are expected to behave. Some

instruments expect that the desire for material gain or fear of punishment are primary behavioral factors. Others consider the lack the information or technical capacity as barriers to policy-consistent behavior. Yet others take for granted citizens' internal motivation and either appeal to deep-seated values or allow citizens to customize the measures best suited to their unique situation. Using Schneider and Ingram's framework, policy instruments can be readily evaluated with respect to their expectations of, and likely effect on, target populations.

#### **1.4 Behavioral Assumptions of the Oregon Plan**

To uncover the behavioral assumptions of the Oregon Plan, its text and relevant documents were examined using a content analysis procedure. Content analysis is a technique for making valid inferences from a text by systematically identifying, coding, and analyzing specified contents of the text (Weber 1990, p.9). Contents may include words, meanings, pictures, symbols, ideas, themes, or any message that can be communicated. Content analysis has been employed in various types of social research (Johnson and Joslyn 1995, pp. 244-251; Neuman 1994, pp. 261-271), including analyzing social values in natural resource management (Xu and Bengston 1997). The content analysis procedure used in this analysis was based on Weber's (1990) basic framework.

The objective of the content analysis was to determine how the assumptions of citizen behavior are expressed within the Oregon Plan. By categorizing the behavioral assumptions in the Plan, it is possible to identify the plan according to a typology of



policy instruments and compare the plan's potential effects relative to other policy instruments. The expression of these assumptions were uncovered using a set of indicators, or a "coding scheme." The coding scheme included any words and phrases that articulated an expectation of how non-government individuals or groups are to act. The coding scheme indicators are listed in Table 1-2. Imperative indicators encompass auxiliary verbs that signal an imperative action by citizens. Action indicators are verbs that denote expected actions of citizens in the Oregon Plan. A total of 17 texts were used in this procedure, which are numerically ordered in Table 1-3.

**Table 1-2. Content analysis indicators of Oregon Plan behavioral assumptions**

Citizen Indicators	Imperative Indicators	Action Indicators
CITIZEN COMMUNITY INDIVIDUAL INTERESTS LOCAL PARTNERSHIP RESIDENTS STAKEHOLDERS WATERSHED COUNCIL	EXPECTED (TO) MAY SHALL SHOULD WILL	ASSESS ANALYZE COLLABORATE COMMUNICATE COOPERATE COORDINATE DEVELOP EDUCATE ENCOURAGE ENGAGE FACILITATE FORM IDENTIFY IMPLEMENT INCLUDE INVOLVE OFFER PARTICIPATE PROMOTE PROTECT

**Table 1-3. Texts used in content analysis**

1. Adams, B., L. Lundquist, and J.A. Kitzhaber. 1997. Memorandum regarding the Oregon Plan for Coastal Salmon Restoration Initiative and Healthy Streams Partnership: <http://www.oregon-plan.org/letter.html>.
2. Kitzhaber, J.A. 1996. We Oregonians, working together, can save our salmon. *The Oregonian*, August 6, 1996, B7.
3. Kitzhaber, J.A. 1998. Western Governor's Association Enlibra speech: Governor's Office, State of Oregon.
4. Kitzhaber, J.A. 1998. Willamette River Basin speech: Governor's Office, State of Oregon.
5. Mapes, J. 1999. Governor says city dwellers must help fish. *The Oregonian*, February 26, 1999, A1, A21.
6. Oregon Revised Statutes. 1995. Chapter 541, Section 345 to 400.
7. Pampush, G. 1997. Plan's worth a try. *The Oregonian*, March 26, 1997, B11.
8. Rickenbach, M., and S. Reed. 1998. A point in time: Oregon's watershed councils. Corvallis, OR: Forestry Extension, Oregon State University.
9. State of Oregon. 1992. Proposal: a watershed management strategy for Oregon. In *Final report and recommendations of the SWPG Policy Work Group*. Salem, OR: Strategic Water Management Group, State of Oregon.
10. State of Oregon. 1995. Oregon's watershed health program, Volume 1. Salem, OR: Oregon Watershed Health Program, State of Oregon.
11. State of Oregon. 1995. Guidelines for watershed councils. Salem, OR: Oregon Watershed Health Program, State of Oregon.
12. State of Oregon. 1996. The Governor's Coastal Salmon Restoration Initiative - executive summary. Salem, OR: Governor's Natural Resource Office, State of Oregon.
13. State of Oregon. 1997. *The Oregon Plan for Salmon and Watersheds: Coastal Salmon Restoration Initiative* 1997 [cited November 1 1997]. Available from <http://www.oregon-plan.org/>
14. State of Oregon. 1997. *The Oregon Plan for Salmon and Watersheds: Coastal Salmon Restoration Initiative - Executive Summary Overview* 1997 [cited November 1 1997]. Available from <http://www.oregon-plan.org/FExec.html>.
15. State of Oregon. 1997. Governor's Watershed Enhancement Board program status, 1995-1997. Salem, OR: Governor's Watershed Enhancement Board, State of Oregon.
16. State of Oregon. 1998. The Oregon Plan for Salmon and Watersheds: Supplement I Steelhead – executive summary. Salem, OR: Governor's Natural Resource Office, State of Oregon.
17. State of Oregon. 1999. The Oregon Plan for Salmon and Watersheds: annual report 1999. Salem, OR: Governor's Natural Resource Office, State of Oregon.

The texts were manually coded according to what behaviors were expected from citizens. A word or phrase was identified if the indicators in the coding scheme appeared in any combination. For instance, the phrase “watershed councils are expected to ... integrate watershed assessments and to implement recovery efforts (State of Oregon 1997b, Chapter 17A, p. 5)” is a prime example of a phrase that would be identified by the coding scheme. The coding scheme resulted in the categorization of the texts according to various expectations of citizen behavior.

The categories were cross-referenced with the texts to ensure full coverage of the texts. They were also cross-referenced with each other to eliminate redundancy among categories. The categories were then ranked according to the frequency of their appearance across all texts. Table 1-4 shows the frequency of categories based on any combination of indicators across all texts. Categories occurring only once were eliminated. Although there was no predetermined numeric cut-off for eliminating infrequent categories, there was a clear separation between high and low frequency categories. This is due in large part to a high degree of consistency between the Oregon Plan and existing policy instruments directed at developing a statewide watershed enhancement program. From the content analysis, the behavioral assumptions of the Oregon Plan can be categorized into two general themes: expectations of behavioral motivations and expectations of behavior.

#### **1.4.1 Assumptions About Citizens' Motivations**

The Oregon Plan assumes that *citizens are internally motivated* to voluntarily participate in restoring salmon runs through local watershed action. This assumption of

**Table 1-4. Categorization of Oregon Plan by Policy Instruments Based on Behavioral Assumptions in Oregon Plan-related Texts**

Oregon Plan Behavioral Assumptions	Type of Policy Instrument	Frequency of Assumptions by Text	
		Text Number	Frequency
Taking watershed action (e.g., projects)	Learning	1, 2, 3, 4, 5, 6, 8, 10, 11, 13, 14, 15, 16	35
Communication, cooperation, coordination among stakeholders	Capacity Learning	1, 2, 3, 4, 5, 6, 9, 11, 13, 14, 16, 17	27
Positive motivation to save salmon	Persuasion	2, 3, 5, 7, 12, 13, 16, 17	22
Positive motivation to participate in local watershed council	Persuasion Learning	2, 3, 10, 11, 13, 17	17
Assess and analyze technical watershed information	Capacity	6, 9, 10, 11, 13, 17	16
Taking community action (e.g., education, involvement)	Persuasion Learning	2, 3, 5, 12, 13, 14, 15, 16, 17	16
Positive motivation to protect, restore, and enhance watershed	Persuasion	2, 4, 12, 13, 14, 17	11

internal motivation is based on three expressions: 1) citizens *value salmon as a symbol* of what it means to be an Oregonian; 2) citizens *value a voice in the local natural resource issues*; and 3) citizens *value a collective identity of community-based self-governance* and collaboration to solve natural resource problems. The assumption that citizens value the symbolism of salmon is expressed primarily in Oregon Governor John Kitzhaber's efforts to build public support for the Oregon Plan. For example, in an opinion piece in the Portland, Oregon daily newspaper, *The Oregonian*, the governor wrote,

"Nothing expresses what it means to live in the Pacific Northwest as much as the story of the salmon.... Native Americans and the earliest European settlers in Oregon depended on salmon for daily sustenance. At statehood, salmon fishing and processing ranked equal to agriculture and forestry in economic importance to Oregon. Generations of Oregonians have enjoyed the thrill of

seeing a fishing rod bend under the weight of a silver-bright salmon or steelhead... Throughout Oregon, people are working at the local level creating solutions to our salmon crisis that never find their way into the headlines. With care, persistence and investment, we can succeed in keeping salmon and trout a part of the Oregon story (Kitzhaber 1996)."

The governor echoed the symbolism of salmon in a speech to the Western

#### Governors' Association:

"There is an almost mythical connection with salmon among people who live in the Pacific Northwest. It is a powerful connection that cannot be overestimated – the power of history, the power of identity, the power of the past's promise to the future. But even beyond that, if the salmon runs are not healthy, then our watersheds are not healthy – and if our watersheds are not healthy then we have truly mortgaged the future (Kitzhaber 1998)."

For Kitzhaber, the Oregon Plan touches on an identity of Oregonians as people who place a high value on salmon as a cultural symbol and on watersheds as the home that allows the symbol to endure.

The assumption that Oregon citizens value a strong voice in decisions affecting the state's natural resources is expressed by Oregon Plan supporters to spur citizens into action in lieu of federal regulators. A memorandum accompanying the final Oregon Plan signed by the governor, president of the state senate, and speaker of the state house is a clear expression of this assumption:

"As leaders of this state, we believe that Oregonians will choose to do what is right for Oregon. We believe Oregonians want to maintain control of Oregon's resources, and of Oregon's destiny. None of us want the federal government to have to step in because we failed to maintain the health of the species and watersheds in our trust (Adams, Lundquist, and Kitzhaber 1997)."

Convincing the general citizenry to support the Oregon Plan is strategic because attaining the plan's goals rests on achieving a higher rate of voluntary participation among private landowners to do restoration work than the rate of landowner compliance with ESA regulations. The strategic value of having a strong local voice in natural

resource decisions is articulated by Geoff Pampush, the executive director of Oregon Trout, an environmental group that participated in the original petition to list Oregon's coastal coho salmon runs. As Pampush states in an editorial in *The Oregonian*,

“While we believe federal regulatory controls can help, affirmative local decisions are ultimately the core of restoration of our watersheds... If the state falls short, we will support an endangered species listing. But lets' give the citizens of Oregon the next two years to prove that local conservation efforts work (Pampush 1997).”

Hence, even the environmental skeptics recognize that citizens may be capable of taking effective restoration efforts in their local watersheds.

The third expression that citizens are internally motivated revolves around the contention that Oregon citizens have cultivated an identity of taking community-based, collaborative approaches to addressing natural resource problems. Oregon Governor John Kitzhaber almost always touched upon this identity in promoting the Oregon Plan. In his speech before the Western Governors' Association, Governor Kitzhaber holds up the Oregon Plan as part of a rich history in which Oregonians collaborate around protecting the environment:

“It was the same kind of broad-based collaborative effort that cleaned up the Willamette River in the 1970's under the administration of Tom McCall. It was this community sense of environmental responsibility that let us make our beaches public and to pass the returnable bottle bill which has made littering tantamount to betraying your roots as an Oregonian (Kitzhaber 1998).”

Kitzhaber restates this identity in the introduction to the Oregon Plan's 1999 annual report: “The Oregon Plan for Salmon and Watersheds is an unprecedented effort to restore at-risk fish populations and water quality throughout the state. Oregonians have chosen this proactive approach because we are proud of Oregon's history of environmental responsibility, and we want to do our best to maintain our natural resource heritage (State of Oregon 1999).”

Taken together, these three expressions of citizen behavior center on the assumption that citizens are internally motivated to support and participate in implementing the Oregon Plan. In this view, the plan is partly a persuasion instrument. It is designed to be consistent with citizens' values about the symbolism of salmon, the importance of having a strong voice over local natural resource issues, and the centrality of Oregonian's collective identity as a community-based, self-governing people when it comes to natural resources problems.

#### **1.4.2 Assumptions of Citizens' Behavior**

The Oregon Plan is unusual among natural resource policy instruments because it provides citizens the opportunity to *relate to one another in a cooperative rather than a competitive manner*. The Oregon Plan assumes that watershed council participants can form cooperative relationships because they collectively value salmon as a cultural symbol, local stakeholder voice in natural resource decisions, and their identity as people capable of community-based collaboration. In short, council participants are assumed to cooperate because they share the same internal motivations. The assumption is expressed in most early texts related to the Oregon Plan. In the 1996 editorial in *The Oregonian*, Governor Kitzhaber points to salmon as the glue that binds together diverse stakeholders: "We can make Oregon better by investing to restore the fabled runs of salmon and trout that help make the Pacific Northwest such a treasured place to live. Throughout Oregon, people are working at the local level creating solutions to our salmon crisis that never find their way into headlines (Kitzhaber 1996)."

The Oregon Plan itself assumes that local watersheds can inspire cooperative relationships in the same way Kitzhaber underscores the symbolic power of salmon, as indicated by this passage:

“[Watershed] councils have brought together diverse interests within a watershed... in partnerships that are working toward a common goal of restoring watershed health and the species dependent on healthy watersheds. Stakeholder groups and individual landowners representing all landownerships in each watershed have made commitments of their own time and resources to match public resources in an effort to address watershed issues in a more holistic manner (State of Oregon 1997b, p. 3).”

Text from the 1999 annual report of the Oregon Plan suggest that watershed council participants do indeed share watersheds as a common symbol around which diverse stakeholders can cooperate. As Geoff Pampush declared in the report, “In the end, all conservation is local. The Oregon Plan has rekindled the embers of local conservation around a common value to all – clean water in a healthy watershed. And while I have my days of skepticism than an effort based on voluntary efforts will work, I have also come to believe that nothing else will (State of Oregon 1999).”

How is cooperative behavior expected to be manifested? One of the basic behavioral assumptions of the Oregon Plan is that once stakeholders within a watershed are together, they will communicate openly about issues and coordinate resources and resource management decisions. Communication and coordination is, in part, a necessity due to the way watershed councils receive funding. The Oregon Plan, through the Oregon Watershed Enhancement Board (OWEB, formerly the Governor’s Watershed Enhancement Board), provides funding for watershed assessments and projects through a competitive grant process. Grants are distributed based on a variety of criteria, not least of which is whether the proposal involves a diversity of stakeholders within the watershed. Hence, finding proposed projects makes



communication and coordination a necessity. Grants are also approved once a watershed council has completed its watershed action plan, which also requires a high level of communication and coordination. As the state's watershed council manual states,

“Developing a watershed action plan is the initial core work of a watershed council. The council should already have a mission statement and a shared vision of its watershed. Goals and objectives should be clearly outlined before the group begins to develop the action plan. The development of watershed action plans is a group process that is improved by team work from local citizens and public agencies (State of Oregon 1995a, p. 17, emphasis added).”

Even though OWEB grants provide a small incentive for stakeholders to cooperate initially, stakeholders are expected to sustain cooperation through the process of developing the watershed assessment and action plan. It is assumed that the process of collectively learning about watershed conditions and priority actions can strengthen the watershed as a shared value, especially if the watershed is degraded. This assumption is expressed in the Oregon Plan:

“Watershed councils bring together diverse interests around a common goal of watershed health. In many councils, it is no longer apparent which individuals represent which stakeholder group. As council partners spend more time working through issues and alternative strategies to resolve those issues, the more common ground is found among former adversaries (State of Oregon 1997b, Chapter 17A, p. 3).”

Hence, through group learning, stakeholders are expected to overcome their differences and find common ground. They can also overcome differences in information and expertise that frequently lead to conflicts over resource management issues. By reducing conflicts, stakeholders may build trust in one another to alter resource management practices and everyday activities that may have a detrimental impact of watershed health. A participant on a watershed council in the John Day River

basin in eastern Oregon expressed the expectation and reality of cooperation in the 1999 annual report in this way:

“When people cooperate, everybody wins. The fish win and I win. I consider these four miles of the river mine. I want to take care of them. This ranch has reinvested hundreds of thousands of dollars in conservation projects over the past few years, but because we don’t have a public relations officer we don’t get credit for that work at all (State of Oregon 1999, p. 15).”

Using Schneider and Ingram’s categories, Oregon Plan is at once a persuasion, capacity, and learning instrument. It supplements authority instruments such as the Oregon Forest Practices Act and ESA provisions, but emphasizes voluntary actions. It also provides a small level of incentives for watershed support and projects. However, over the long-term, watershed councils are expected to sustain cooperation by working through the watershed action planning process. The Plan is a persuasion instrument because it attempts to touch upon citizens’ shared values over salmon, their local watershed’s health, and self-governance. It is a capacity instrument because it assumes that citizens just need coordination, funding, and technical assistance to carry out necessary actions. Citizens are expected to have a working knowledge of their local watershed and a willingness to collectively take locally based measures to restore salmon. The plan is a learning instrument because it entrusts participants in local watershed councils to develop these measures to suit their own unique watershed conditions – conditions that they learn about collectively.

## 1.5 Discussion and Conclusions

The Oregon Plan is essentially a social experiment. It draws upon the internal motivations of non-government individuals and groups, and places faith in their ability to develop cooperative ways of relating to one another. In the two years since the Oregon Plan was enacted, over 50 watershed councils have formed, adding to the 30 watershed councils in existence prior to the plan. Over 1,200 documented projects have been completed under the plan, many of which were implemented by diverse stakeholders working through their local watershed councils (State of Oregon 1999). This is a remarkable increase from the 60 watershed restoration or enhancement projects implemented by watershed councils prior to the plan's enactment (State of Oregon 1997a). By these measures, watershed councils have made a qualified difference.

For students of natural resource policy, the Oregon Plan provides a rich case study in voluntary, cooperative collective action. Using Schneider and Ingram's behavioral assumptions framework it is possible to frame questions that examine the plan's potential effects. In light of the assumptions uncovered in this paper, a key question is, "Do diverse individuals really value salmon and their local watershed as a cultural symbols, and, if so, are these symbols sufficient to motivate diverse stakeholders to cooperate with one another?" Governor Kitzhaber is not the only one who sees salmon as a cultural symbol. Richard White writes in *The organic machine: the remaking of the Columbia River*,

"[E]ven in their decline, salmon remain culturally as powerful as when they passed upriver in a flood of abundant life. They are repositories of meaning. People still desire salmon. Salmon symbolize nature in the Pacific Northwest;

the experience of taking them has become a quintessential Northwest experience. Salmon are not just fish... they are tokens of a way of life (1995, pp. 90-91)."

As White further maintains, salmon as a cultural symbol accounts for numerous instances of collective action:

"As a cultural talisman, wild salmon have demonstrated their power as they have diminished in numbers. Scarce salmon have pitted fishers against one another in recurring 'fish fights' along the Columbia. They have sparked expensive efforts to replace wild salmon with hatchery salmon... And now, with more runs dwindling to extinction, the decline of salmon has sparked a widespread environmental offensive against the dams, against ranching, against irrigation farming, against logging, against all the activities along the river that threaten the fish. The economic value of the... salmon has not been much of an indicator of its cultural power (, p. 91)."

Watersheds are similar to salmon in that they have ecological and social significance. In a case study of three watershed councils in the American West, McGinnis and others assert the symbolic importance of watersheds: "A watershed is a culturally meaningful construct because of the associations, relationships, and partnerships that can be created (McGinnis, Woolley, and Gamman 1999, p. 3)." Just as a watershed gathers precipitation and funnels it to a common outlet, it gathers people's activities and concentrates the impacts downstream. The hundreds of watershed-based organizations throughout the U.S. are a collective testament that watersheds are a key basis for voluntary collective action (Clark 1997; Natural Resources Law Center 1996).

Symbols are not just important in natural resources, but in politics in general. According to Elder and Cobb (1983), "Symbols serve to link the individual to the larger political order and to synchronize the diverse motivations of different individuals, making collective action possible. Because of this, symbols are vital to the operations of the political system (p. 1)." There is, then, compelling reason to believe that diverse

stakeholders can undertake cooperative collective action based on shared attachments to salmon and watersheds as cultural symbols. Furthermore, acknowledging the importance of symbols in collective action broadens the behavioral assumptions most natural resource policy analyses employ. Conventional approaches to examining natural resource policy instruments predict that people will not act consistently with policy goals unless the instruments somehow provide better material benefits, or “payoffs”, than not participating. In this view, people are assumed to be motivated by self-interest, not shared social values. If citizens continue to respond to the Oregon Plan and engage in their local watershed councils, there is cause to rethink these assumptions, not just as a basis for analysis but for the future of natural resource policy instruments.

In closing, what is new or significant about the Oregon Plan? The foremost conclusion offered here centers on what the Oregon Plan does not include, namely, authority and incentive instruments. The de-emphasis of these two instruments is significant because they have traditionally been the instruments of choice to achieve natural resource policy goals (Ostrom 1990, chapter 1). Indeed, the Oregon Plan stands in sharp contrast to the Endangered Species Act by explicitly eschewing top-down bureaucratic regulations in favor of voluntary, community-based action. The Oregon Plan also precludes economic incentives since it spreads the burden of protecting and restoring salmon among all citizens. OWEB grants provide some limited financial resources to the watershed council as a whole, but are probably not sufficient to induce strictly self-interested stakeholders from participating in watershed councils.

By forsaking new authority and incentive instruments, the Oregon Plan sends a unique message about how citizens are expected to behave in the face of challenging natural resource policy problems. Rather than assuming that citizens respond only to external forces, such as government regulations or monetary incentives, the plan assumes that citizens are also internally motivated and can do the right thing if they are free to collaborate and innovate, given broad direction. In this view, the Oregon Plan is very much like a scaffolding. It provides an overarching structure that directs citizens' attention towards certain priorities but allows citizens to decide, through their local watershed councils, what actions to take and what techniques are to be used.

Moreover, the behavioral assumptions of the Oregon Plan converge on an implicit call for social change. Debating the objectives and implementation of on-the-ground actions, citizens are in large part responding to a higher calling of sorts, one that persuades them to share in the monumental task of restoring salmon by taking action in their local watershed. The Oregon Plan is in many ways a blueprint for a social movement centered around local watersheds. Hence, local watershed councils are not simply an aggregation of individuals that develop and implement watershed projects. They provide the means for citizens to discover shared values regarding how they regard salmon, their local watershed, and the prospect of working with others despite their differences. In turn, citizens may discover common courses of action. As McGinnis and others conclude in their case study of three watershed councils, "Indeed, the great value of watershed planning is that it may cause society to confront our own limitations, to initiate community-based responses based on shared values about nature, science, technology, and participation (McGinnis, Woolley, and Gamman 1999, p. 10)."

This discovery of shared values resembles Robert Reich's (1985) vision of public administration, which rests squarely on the kind of public deliberation expected of local watershed councils. For Reich, public deliberation is the process by which individual values can be transformed into social values and, as a result, lead to collective actions that individual citizens may not otherwise take. As Reich asserts,

“[P]ublic deliberation allows people to discover latent public values that they have in common with others, and in the process to create public values. Together, citizens begin to define targets of voluntary action, to identify what they value most about the community, and to uncover goals and commitments that transcend their narrower self-interests (, p. 1636, emphases in original).”

This is a central expectation of the Oregon Plan: that a more clearly defined set of social values consistent with the policy goals of protecting and recovering imperiled salmon may emerge from local watershed councils. Although these values may or may not actually restore imperiled salmon stocks, they nevertheless provide a foundation for voluntary, local collective actions that may otherwise not occur. Given the current disenchantment with authority and incentive instruments, such local collective actions may pave the way for new venues for addressing future natural resource issues. The impact of the Oregon Plan may be measured in decades to come and in locales far from Oregon.

In conclusion, Schneider and Ingram's behavioral framework reveals the expressive aspects of the Oregon Plan. In other words, the plan is not merely a set of practical measures to attain specific goals. It reflects what policymakers and, by extension, citizens in Oregon value, such as local self-governance. The Oregon Plan is similar to other policy instruments in that it conveys values that are hopefully internalized by citizens (Yanow 1996, p. 22). However, it is unusual among traditional natural resource policy instruments in that it allows citizens to discover shared social

values within their local watersheds rather than directing behavior through regulations or incentives. As federal and state policymakers continue to search for policy instruments to achieve natural resource policy goals, the Oregon Plan stands as an alternative approach to authority and incentive instruments.



## 1.6 References

- Adams, B., L. Lundquist, and J.A. Kitzhaber. 1997. Memorandum regarding the Oregon Plan for Coastal Salmon Restoration Initiative and Healthy Streams Partnership: <http://www.oregon-plan.org/letter.html>.
- Atkinson, A.B., and J.E. Stiglitz. 1980. Lectures on public economics. McGraw-Hill, New York, 619 pp.
- Bemelmans-Videc, M., R.C. Rist, and E. Vedung (eds.). 1998. Carrots, sticks, and sermons: policy instruments and their evaluation. Transaction Publishers, New Brunswick, N.J., 280 pp.
- Clark, J. 1997. Watershed partnerships: a strategic guide for local conservation efforts in the West. Western Governors' Association, Denver, 38 pp.
- Cubbage, F.W., J. O'Laughlin, and C.S. Bullock. 1993. Forest resource policy. John Wiley & Sons, New York, 562 pp.
- Dunlap, R.E. 1992. Trends in public opinion toward environmental issues: 1965-1990. Pages 89-116 in R. E. Dunlap and A. G. Mertig (eds.) American environmentalism: the U.S. environmental movement, 1970-1990. Taylor and Francis, Philadelphia.
- Elder, C.D., and R.W. Cobb. 1983. The political uses of symbols. Longman, New York, 173 pp.
- Johnson, J.B., and R.A. Joslyn. 1995. Political science research methods. 3rd ed. Congressional Quarterly Press, Washington, 452 pp.
- Kempton, W., J.S. Boster, and J.A. Hartley. 1995. Environmental values in American culture. MIT Press, Cambridge, MA. 320 pp.
- Kitzhaber, J.A. 1996. We Oregonians, working together, can save our salmon. *The Oregonian*, August 6, 1996, B7.
- Kitzhaber, J.A. 1998. Western Governor's Association Enlibra speech. Governor's Office, State of Oregon, Salem, OR.
- Knetsch, J.L. 1995. Assumptions, behavioral findings, and policy analysis. *Journal of Policy Analysis and Management* 14:68-78.
- McCloskey, M. 1996. The skeptic: collaboration has its limits. *High Country News*, May 25, 1996, page 7.

- McGinnis, M.V., J. Woolley, and J. Gamman. 1999. Bioregional conflict resolution: rebuilding community in watershed planning and organizing. *Environmental Management* 24:1-12.
- Mueller, D.C. 1989. Public Choice II. Cambridge University Press, Cambridge, England, 518 pp.
- Natural Resources Law Center. 1996. The watershed sourcebook: watershed-based solutions to natural resource problems. Natural Resources Law Center, University of Colorado, Boulder, CO, 276 pp.
- Neuman, W.L. 1994. Social research methods: qualitative and quantitative approaches. 2nd ed. Allyn and Bacon, Boston, 538 pp.
- Oregon Revised Statutes, 1995. Chapter 541, Section 345 to 400.
- Ostrom, E. 1990. Governing the commons: the evolution of institutions for collective action. Cambridge University Press, Cambridge, England 280 pp.
- Pampush, G. 1997. Plan's worth a try. *The Oregonian*, March 26, 1997, B11.
- Reich, R.B. 1985. Public administration and public deliberation: an interpretive essay. *Yale Law Journal* 94:1617-1642.
- Schneider, A., and H. Ingram. 1990. Behavioral assumptions of policy tools. *Journal of Politics* 52:510-529.
- Shafritz, J.M., and A.C. Hyde, eds. 1997. Classic of public administration. 4th ed. Harcourt Brace College Publishers, Fort Worth, 596 pp.
- Simon, H.A. 1976. Administrative behavior: a study of decisionmaking processes in administrative organization. Third ed. The Free Press, division of Macmillian Publishing Company, New York, 364 pp.
- State of Oregon. 1995. Guidelines for watershed councils. Oregon Watershed Health Program, State of Oregon, Salem, OR, 78 pp.
- State of Oregon. 1996. The Governor's Coastal Salmon Restoration Initiative - executive summary. Governor's Natural Resource Office, State of Oregon, Salem, OR, 14 pp.
- State of Oregon. 1997a. Governor's Watershed Enhancement Board program status, 1995-1997. Governor's Watershed Enhancement Board, State of Oregon, Salem, OR, 70 pp.
- State of Oregon. 1997b. The Oregon Plan for Salmon and Watersheds: Coastal Salmon Restoration Initiative, 1997 [cited November 1 1997]. Available from <http://www.oregon-plan.org/>.

- State of Oregon. 1997c. The Oregon Plan for Salmon and Watersheds: Coastal Salmon Restoration Initiative, 1997 - Executive Summary Overview [cited November 1 1997]. Available from <http://www.oregon-plan.org/FExec.html>.
- State of Oregon. 1998. The Oregon Plan for Salmon and Watersheds: Supplement I Steelhead - executive summary. Governor's Natural Resource Office, State of Oregon, Salem, OR, 15 pp.
- State of Oregon. 1999. The Oregon Plan for Salmon and Watersheds: annual report 1999. Governor's Natural Resource Office, State of Oregon, Salem, OR, 44 pp.
- US Department of the Interior. 1999. An ecosystem management approach to fish and wildlife conservation. US Fish and Wildlife Service, US Department of the Interior, 1998 [cited February 5 1999]. Available from <http://bluegoose.arw.r9.fws.gov/NWRSfiles/HabitatMgmt/concept.html>.
- US Environmental Protection Agency. 1996. Watershed approach framework. Office of Water, US Environmental Protection Agency, Washington, 11 pp.
- Weber, R.P. 1990. Basic content analysis. 2nd ed. Sage Publications, Newbury Park, CA, 96 pp.
- Western Governor's Association. 1998. Policy Resolution 98-001: Enlibra: a new shared management doctrine for environmental management. [cited October 7 1998]. Available from <http://www.westgov.org/wga/initiatives/enlibra.htm>.
- White, R. 1995. The organic machine: the remaking of the Columbia River. Hill and Wang, New York, 130 pp.
- Xu, Z., and D.N. Bengston. 1997. Trends in national forest values among forestry professionals, environmentalists, and the news media. *Society and Natural Resources* 10:43-59.
- Yanow, D. 1996. How does a policy mean? Interpreting policy and organizational actions. Georgetown University Press, Washington, 261 pp.

**CHAPTER 2. "PLACE" AS A BASIS FOR UNDERSTANDING NATURAL  
RESOURCE POLITICS: BLENDING GEOGRAPHIC AND POLITICAL  
SCIENCE IMAGINATIONS**

Antony S. Cheng

Department of Forest Resources  
Peavy Hall 280  
Oregon State University  
Corvallis, OR 97331

## 2.0 Abstract

Despite the emergence of hundreds of “place-based” collaborations for natural resource management throughout the U.S., there is a lack of theoretical frameworks to guide inquiry in these innovative forms of collective action. This paper proposes a theoretical framework for examining natural resource politics that accounts for the centrality of place in these emergent collaborations. The framework blends perspectives from human geography and political science. From human geography, the framework integrates theories of people-place relationships, particularly those related to group behavior in place. The “core relationship” proposed by Elinor Ostrom (1998) is the political science perspective. Together, these perspectives converge on the notion that place “mediates” individuals’ choice of behavioral strategies in natural resource politics in two important ways. First, place provides a basis by which individuals can identify one another particular social group categories. A primary group identification is whether one is an “insider” or an “outsider” to a place. Second, place affects how individuals perceive the probability of expectations of future interactions. For inhabitants of a place, regardless of their divergent perspectives on a natural resource problem, they have three choices: leave, stay and attempt to prevail individually, or stay and attempt to address the problem collaboratively. By employing this place-based framework, it is possible to examine natural resource politics as an emergent social process that occur at different levels and spatial scales.

Key words: natural resource policy, collaboration, place (psychology), group identity

## 2.1 Introduction

“The old model of command and control, enforcement based programs is reaching the point of diminishing returns. It now frequently leads to highly polarized constituencies that force traditional actions by government authorities without first determining if they are the most effective ways to protect environmental values. Successful environmental policy implementation is best accomplished through balanced, open and inclusive approaches *at the ground level*, where interested public and private stakeholders work together to formulate critical issue statements and develop locally based solutions to those issues (Emphasis added, Policy Resolution 98-001, Western Governor's Association 1998).”

The Western Governors' Association's policy resolution reflects a disenchantment within the natural resources policy community with what Behan (1991) calls, “Potomocentric statutory fixes” – the suite of national environmental laws enacted by Congress in the 1970's (e.g., National Environmental Policy Act, Endangered Species Act). Instead of having the federal government continue taking the lead in designing and enforcing broad regulations, Enlibra and similar initiatives favor collaborative problem-solving approaches that center around specific places. Proponents of so-called “place-based” collaboration point to the hundreds of partnerships, watershed councils, and various place-based working groups that have emerged across the U.S. as evidence that this approach can work (Natural Resources Law Center 1996; Williams and Ellefson 1997). In general, these groups are composed of individuals with divergent viewpoints who nevertheless voluntarily work together towards defining and achieving common natural resource goals.

In the wake of this veritable social movement, one would expect to find a blossoming field of inquiry. After all, the prospect of diverse natural resources stakeholders collaborating towards common ends is rather remarkable considering the long history of conflict and distrust in natural resource politics. However, the groundswell of inquiry has not yet occurred, due in part to a scarcity of theoretical frameworks for examining the many facets of collaboration. As Elinor Ostrom (1990) explains in *Governing the commons*, conventional theories generally predict that collaboration will ultimately *fail* because, in the end, stakeholders are never assured that others will voluntarily uphold collective agreements. This dreary prediction may actually discourage scholars from engaging the topic altogether. But how can the hundreds of enduring place-based collaborations be explained? For Daniel Kemmis, author of *Community and the politics of place* (1990), part of the answer lies in the qualities of place itself: "Places have a way of claiming people. When they claim very diverse kinds of people, then those people must eventually learn to live with each other; they must learn to inhabit their place together... (Kemmis 1990, p. 119)." For Kemmis, place is not simply a location but an essential feature of human experience that brings people into relationship with one another. This conception of place is echoed by geographer Byron Miller (1992), who writes, "Individuals who come to share domains of particular places must necessarily confront the meaning of such interactions... [I]ndividuals may come to see commonalities in their experience. They may come to consider themselves members of a community and view themselves in collective terms (Miller 1992, p. 32)."

Both authors converge on a key theme: place is a variable that mediates collective behavior. Even though neither author explains in any systematic way how or why this might occur, they bring to light the possibility that place is an influencing factor in natural resource politics. The purpose of this paper is to propose a place-based theoretical framework for examining natural resource politics. The framework blends perspectives from geography and political science, the home disciplines of Miller and Ostrom, respectively. From geography, the framework integrates humanistic theories of place, particularly those that relate group behavior to place. In relation to political science, the framework draws from Ostrom's (1998) "core relationship" proposed in the January 1998 issue of *American Political Science Review*. The core relationship demonstrates how diverse individuals, through face-to-face communication, can learn about, use, and adapt norms that bring about cooperation.

The proposed framework, then, has a distinct social psychological flavor. As such, it may provide a means to uncover nuances of behavior in natural resource politics that other frameworks may omit. The slant towards social psychology is inspired in part by Brandenburg and Carroll (1995), which examines how people assign different meanings to the same watershed. The authors discovered a profound difference between the sentiments individuals expressed in one-on-one interviews and the opinions they expressed in US Forest Service public meetings. In one-on-one interviews, individual sentiments can be rich and nuanced. In public meetings, individuals tend to follow the lead of their dominant reference group, such as loggers or environmentalists, who characterize the watershed in narrow, instrumental terms. The authors draw upon the social psychological concepts of "front region" and "back region" to explain this



difference between individually versus publicly expressed values – a difference other frameworks may overlook.

The place-based framework is developed in three sections. The first synthesizes place conceptions from human geography into a general model of place. The model poses individual behavior as a function of social processes that are shaped by and, in turn, affect place. The second introduces Ostrom's core relationship. The third section bridges the place model and Ostrom's framework by centering on key factors affecting behavior in natural resource politics. An ensuing discussion examines the research and policy implications of applying this behavioral framework to the study of natural resource politics.

## **2.2 "Place" Conceptions in Human Geography**

Place is broadly defined as a physical space imbued with meaning (Low and Altman 1992, p. 5). Consider the phrase, "There's no place like home." A home is more than a physical structure; it is a repository of memories, experiences, and social relationships. As such, home evokes a constellation of sentiments for each person. Home is also a cultural symbol that expresses stability, comfort, security, and personal identity (Brown and Perkins 1992, p. 285). Taken together, home gathers our experiences and provides a benchmark for who we are. People rarely can talk about themselves without revealing where they are from and where they live. Indeed, we tend to define ourselves as much by the places we inhabit as by our occupation, ethnicity, or religion. A place, then, acquires meaning because it is significant to the people who

encounter it. Moreover, each physical space can be a different place depending on who is imparting meaning.

Until recently, place has been underemphasized or what John Agnew (1989) considers “devalued” as a fundamental aspect of social life. The exception is human geography, where place has always been a central analytical focus. Since the late-1960’s, the examination of place has taken a behavioral approach, as scholars in human geography have increasingly drawn on concepts from cognitive and social psychology (Buttimer and Seamon 1980; Golledge and Rushton 1976). A central theme underlying the behavioral approach is that places are intertwined with how people define themselves and others. It is perhaps an innate part of being human to express one’s identity through material objects. Indeed, individuals and groups have always endowed geographic settings with names, symbols, memories, and histories (Greider and Garkovich 1994; Tuan 1974). Places not only reflect how people demarcate and give order to the world, they are “fundamental means by which we make sense of the world and through we act (Sack 1992, p. 1).” Like a tinted window, place is at once reflective and transparent, allowing one to look upon oneself while looking upon others.

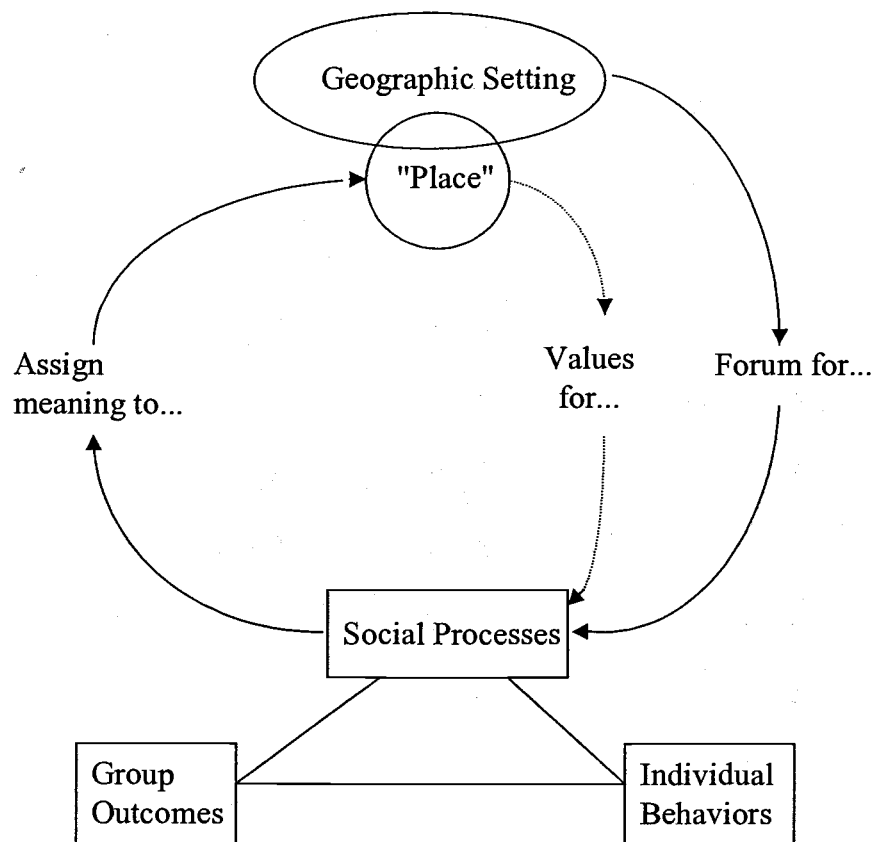
At an individual-level, it is not uncommon for people to express their personalities and social status through the appearance of their homes (Brown and Perkins 1992; Duncan and Duncan 1976). Groups, cultures, and entire nations have creation myths that explain how they have come to be in a particular geographic location (see examples in Anderson and Gale 1992; and Feld and Basso 1996). Even defining an area as a ‘watershed’ reflects the goals and biases of scientists as members of unique social groups (Starrs 1994). In this view, places are embodiments of social

and cultural identity, thereby giving individuals a sense of self in an otherwise chaotic world (Eyles 1985; Proshansky, Fabian, and Kaminoff 1983; Twigger-Ross and Uzzell 1996). As Relph (1976) wrote: "To be human is to live in a world that is filled with significant places: to be human is to have and to know *your* place (Relph 1976, p. 1)." Places are also frames of reference that allow individuals to make sense of other settings and people, including ones they have never personally encountered (Burnett 1976; Canter 1977; Kaplan and Kaplan 1989; Kramer 1995).

Empirical studies centered on place confirm a strong association between place, identity, and behavior. In a pilot study of Group x Place interactions, Minami and Tanaka (1995) discovered that distinct groups organize and interact according to 'group-occupied space.' The authors also found that the spaces themselves become targets of strategies to maintain group identity. Group members were found to take extraordinary actions to protect and maintain their shared space against intrusions by others. In naturalistic field settings, anthropologists have centered numerous studies on the relationship between place and social processes (Altman and Low 1992; Duncan and Ley 1993; Feld and Basso 1996; Hirsch and O'Hanlon 1995; Rodman 1992). Similar to findings by Minami and Tanaka, public places are instrumental to how different social groups develop and how individuals behave as members of those social groups, whether the place is a town plaza in Costa Rica (Low 1992) or a village compound in Ghana (Pellow 1992).

The cumulative effect of theoretical writings and empirical findings suggest a triadic relationship between place, social processes, and individual behavior. This relationship can be schematically formulated into a general model of place as displayed

in Figure 2-1. The model pertains to social processes that occur relative to a geographic setting. *Social process* is a generic term for any social interaction and its associated outcomes. For instance, a conversation among two individuals is a basic social process. A broad array of possible group outcomes and resulting individual behaviors are generated from social processes.



**Figure 2-1. A general model of place that relates place, social processes, and individual behavior**

In some social processes, like the group-occupied spaces in Minami and Tanaka, group identity is strong and induce individuals to take action to protect their place. In others, like a train station, individuals remain strangers as they go about their personal affairs. The significance of these social processes are cast back upon the setting, giving it meaning as a place. Some places are intimately sentimental for the people who encounter that setting, while others lack significant meaning. Yet other places possess competing meanings reflecting the different social processes that have occurred there. In turn, the geographic setting influences social processes by serving as a forum for bringing people together and providing a source of values that inform how people relate to one another.

In sum, three aspects of place theories are relevant to this paper. 1) Places are fundamental to human experience. Places are repositories of meaning and frames of reference from which people can understand and act in the world. 2) People express their identities through place. People's behaviors are conditioned in part by who they are (or think they are) relative to place. To be somewhere is to be someone. 3) Places affect how people relate to each other. As people encounter one another in a place, the nature and meaning of their interactions is informed by the place. For instance, gathering a group of people in one's home will produce markedly different relationships than convening the same group in an office building. In short, place is a key factor underlying social interaction. Therefore, place may be a key piece to the puzzle of understanding collaboration in natural resource politics.

### 2.3 Ostrom's Core Relationship

Given the fairly extensive research on people-place interactions, there is a surprising lack of investigations into the role of place in *political* contexts. Despite Tip O'Neill's adage, "all politics is local," few scholars have systematically examined the relationship between politics and the places from which it emerges. Among the exceptions is John Agnew, who examines regional variability in political action from a place perspective (Agnew 1992; Agnew 1987). According to Agnew, different places enable different forms of social interaction. From this diversity of interaction arise unique biases, forms of political expression, and motivations for collective action. Variation in place-based social interaction is neither trivial nor isolated to a few communities. They are persistent and observable, and can affect the outcomes of national politics. While Agnew's works mark the first steps towards understanding the role of place in natural resource politics, they do not fully account for the nuances of behavior in place. The development and maintenance of collaborative collective action requires more than simply convening individuals in a common geographic setting. Without a more detailed accounting of *how* and *why* people interact in place, the general model of place is limited in its ability to explain how or why diverse individuals work together to attain common natural resource goals. It is for this reason that Ostrom's "core relationship" is necessary.

In her presidential address to the American Political Science Association (Ostrom 1998), Ostrom underscores collective action as *the* central question in political

science. Yet, for all of the rigorous scholarship on this topic, collective action defies a universal theory. For Ostrom, rational choice theory, the dominant theory in the social sciences, comes reasonably close by capably predicting people's behavior in a variety of competitive collective action situations such as market exchanges or political contests over material benefits or power. However, rational choice predictions frequently fall short because people do not always exhibit self-interested, maximizing behavior – behavior that gives rational choice theory its predictive power. Even in competitive market exchanges or political contests, individuals exhibit a mix of cooperative *and* self-interested behaviors, or what negotiation researchers call “mixed motives” (Pruitt and Carnevale 1993, p. 18). Citing an enormous volume of experimental and field studies, Ostrom contends that people persistently enter into cooperative collective action arrangements, even if it is not in their short-term self-interest. Ostrom calls this gap between rational choice predictions and empirical findings a “lack of a general fit” (Ostrom 1998, p. 4).

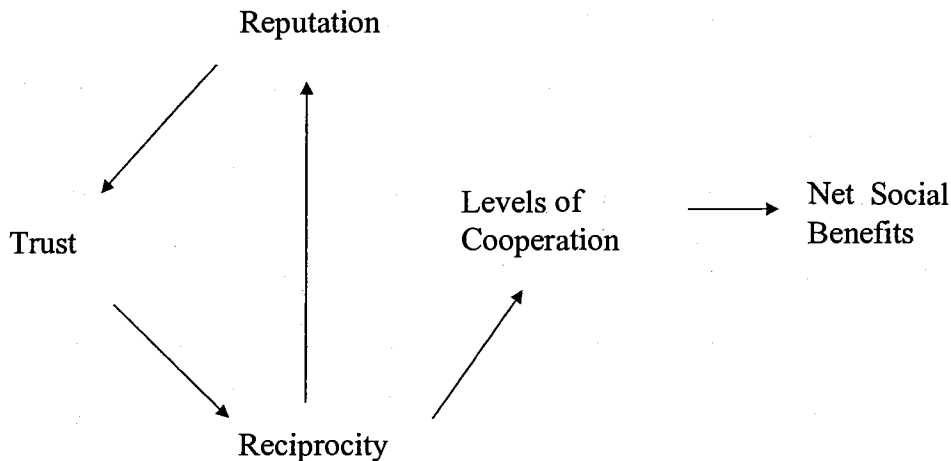
Why do people voluntarily chose cooperation even though the rational choice is for them to pursue their own self-interest? As a starting point, Ostrom maintains that cooperation and self-interest are complementary behavioral strategies; one is not necessarily more dominant than the other across all collective action situations. They are learned at a young age and are refined over the course of thousands of collective action situations spanning all aspects of social life, from family, peers, and community, to business and politics. Rather than maximize self-interest all the time, people adapt their behavioral strategies as collective action situations – competitive or otherwise – unfold. As Ostrom maintains,

“[I]ndividuals...do not calculate a complete set of strategies for every situation they face. Few situations in life generate information about all potential actions that one can take, all outcomes that can be obtained, and all strategies that others can take. In field situations, individuals tend to use heuristics – rules of thumb – that they have learned over time regarding responses that tend to give them good outcomes in particular kinds of situations (Ostrom 1998, p. 9).”

Among the rules of thumb people learn and use are norms that govern what behaviors are appropriate in particular types of situations. Norms are the positive or negative valuations people attach to taking particular types of action. They are essential features of culture and permeate social relationships because they dictate how people are to treat one another. Hence, a self-interested, maximizing strategy may attain the best possible outcome for an individual, but norms may inhibit the individual from applying the strategy because it is not appropriate in *any* social situation. Ostrom’s emphasizes a key class of norms that influences cooperation: reciprocity. Reciprocity refers to the practice of “reacting to the positive actions of others with positive responses, and the negative actions of others with negative responses (Ostrom 1998, p. 10).” In many aspects of everyday life, cooperation emerges and is sustained when individuals respond in kind to each other’s cooperative behaviors. As Ostrom notes, reciprocity norms are so integral to society that subjects in competitive decision-making experiments frequently reciprocate cooperation to achieve mutually-beneficial outcomes, even though the experiments are designed to inhibit cooperation. Figure 2-2 depicts Ostrom’s core relationship which clearly centers on reciprocity as a key factor affecting cooperation in collective action situations.

However, as the figure indicates, reciprocity alone is not sufficient to ensure a high level of cooperation. People do not blindly reciprocate, especially with strangers, because there may not always be assurances that others will respond in kind. Some





**Figure 2-2. Ostrom's "core relationship" which defines cooperation as a function of reciprocity, reputation, and trust**

people reciprocate only if others can be monitored and retribution against non-cooperators is guaranteed. Others demand some form of public commitment from all stakeholders that cooperation will be returned. In short, there must be some level of *trust* that others will return cooperative behavior. Trust refers to a person's expectations about how others' actions will affect his or her choices. When one has a high level of trust in others, the person expects that others will take actions that will have a positive impact on his or her choices. A low level of trust is an indication that others' actions are expected to be detrimental. In Ostrom's estimation, cooperation ensues when individuals trust that others have learned and will use reciprocity norms. The more others are trusted, the less resources each person needs to expend to monitor others and the more likely each person will continue to cooperate.

Where does trust come from? For some, trust that others will cooperate arises only after a guaranteed monitoring and retribution system has been supplied (e.g.,

government regulations). However, Ostrom contends that trust (or lack thereof), like reciprocity norms, is learned over the course of everyday life. Knowing when and who to trust comes from personal experiences, the advice of others, and on stereotypes.

Hence, monitoring and retribution may provide some basic assurances, but the decision to trust someone primarily rests on the person's *reputation* as one who returns cooperative overtures. In turn, if a person wants to gain the benefits of collective action, especially if they are greater than the benefits of going it alone, it is in that person's best interest to invest in a reputation as a trustworthy reciprocator.

Cooperation can stall if no one invests in cultivating a reputation as a reciprocator or if people assume that others will not reciprocate cooperative behavior because of inaccurate stereotypes.

The core relationship is given life through face-to-face communication, for it is by talking with others over repeated interactions that people can determine who and when to trust and, therefore, when to exhibit cooperative behaviors. Each person can also influence how others perceive who and when to trust by exhibiting a reputation as a trustworthy reciprocator in face-to-face interactions. The core relationship has two outcomes. The first is the attainment of net benefits through sustained cooperation. The more people cooperate, the more likely they are to produce a net social benefit that exceeds the sum of individual benefits if each had chosen not to cooperate. The second outcome is the development of social norms. Over the course of collaborating, the participants in the collective action create may engender certain expectations of appropriate behavior. This is particularly significant with respect to natural resources

politics which are generally composed of individuals who have a long history of acrimonious encounters and distrust in one another.

How does Ostrom's core relationship inform the study of natural resources politics? First, it *provides a framework for explaining behavior in collective action independent of any material benefits*, or "payoffs." This is important because the payoffs from natural resources politics are frequently ambiguous. For example, citizens may oppose a nearby timber sale because of the forest's spiritual values. Although a timber company risks losing revenue, the citizens do not experience a corresponding financial gain. By emphasizing the interaction between norms, trust, and reputation, the core relationship enables natural resources politics to be examined as an emerging social context rather than solely as a means for allocating material benefits. Second, the core relationship *reflects a commitment to understanding the social psychological aspects underlying collective action situations*, including natural resource politics. Collective action defies a universal theory because people constantly learn about, adapt, and use different behavioral strategies based on interactions with others. A social psychological perspective can uncover the nuances of these interactions in natural resources politics and provide a means to explain why people exhibit certain behaviors.

#### **2.4 Blending Perspectives: Towards a Place-Based Behavioral Theory of Natural Resource Politics**

Blending Ostrom's Core Relationship and theories of place enables a different perspective of natural resource politics than the ones taken in conventional natural

resource policy analyses. Instead of representing natural resource politics as a competition over material payoffs, it is now possible to understand it as an ongoing collective action situation where people learn about, maintain, and adapt ways of relating to each other with respect to different places. On balance, most natural resources (with the exception of wind and solar energy) occurs in place. One of the key “ways of relating” in natural resource politics is how people collectively create and transform place meanings. As Williams and Patterson (1996) contends:

“The meaning and value of places or ecosystems are not inherent features of the landscape. Rather, potentially divergent meanings of the landscape are subject to continual mediation and modification through social interaction and institutional processes. In this view, public participation, planning, and policymaking must be understood as part and parcel of the creation, negotiation, and destruction of meaning, as ongoing processes that are inseparable from the efforts to map the natural and cultural significance of ecosystems. Thus, intangible meanings can be captured only through constant dialogue among stakeholders and continuous public exercises in mapping the symbolic landscape (Williams and Patterson 1996, p. 517).”

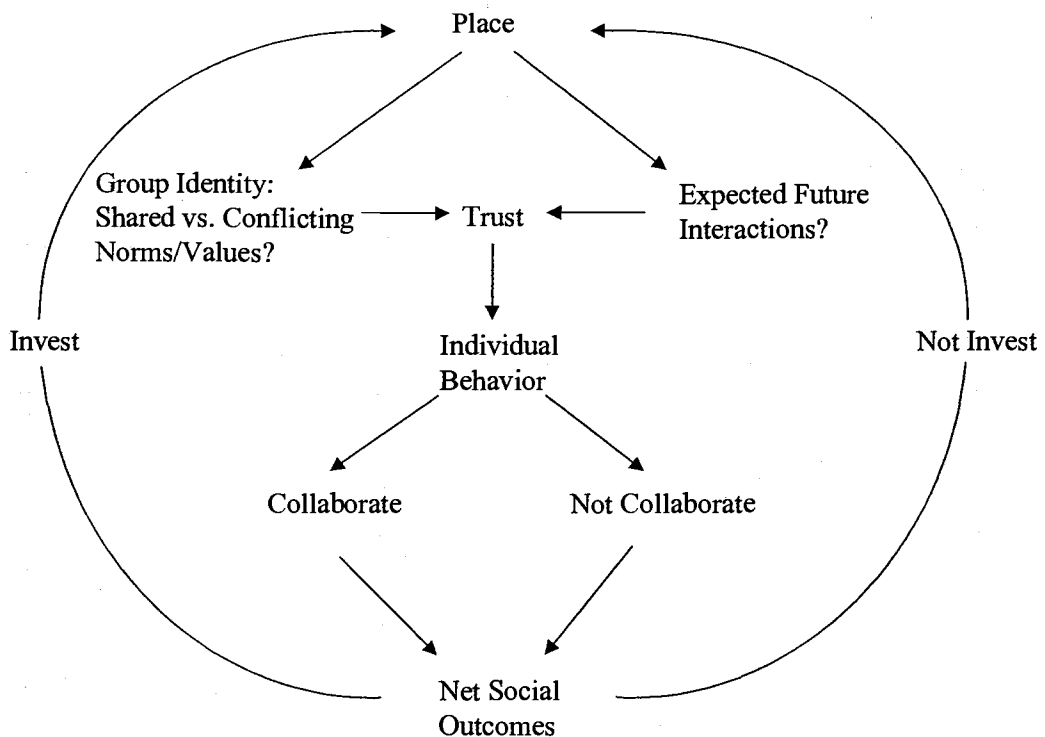
Assigning place meanings can be seemingly innocuous, like foresters calling a parcel of trees a “stand.” However, what might be a stand to foresters may be a sacred site for Native Americans, a favorite hunting grounds for long-time local residents, a critical endangered species nesting habitat to wildlife biologists, or a secret camping spot for weary urbanites. For each of these groups, the parcel means something different. Deciding what happens to this parcel and others like it invokes the expression of contending place meanings as each group attempts to protect what and why they value that particular parcel.

Conceptualizing natural resource politics as an ongoing process of creating, negotiating, and destroying place meanings is significant for two reasons. First, it affirms the notion that people choose behavioral strategies in natural resource politics

based in part on intangible values. Although social scientists in natural resources have understood the importance of intangible natural resource values for decades, there is no coherent framework for relating values to behavior. Second, it locates place meanings as an important class of social values. Indeed, place meanings can be so significant that diverse individuals who have had no prior relationships will join together to protect those meanings. A salient example is the persistent conflict over logging public forest lands in Alaska. Many of the environmentalists lobbying Congress to protect remaining unlogged public forests may never have been to Alaska, may never had any previous working relationships, and will never receive any material benefit for their work. What inspires them collectively may be the *meaning* of Alaska's public forests as an untouched, wild place, or what the Alaska Rainforest Campaign webpage describes as "the best of what remains of America's forest primeval and our historic potential to build sustainable communities based on local natural resources (Alaska Rainforest Campaign 1998)."

By blending the core relationship and the general model of place, it is now possible to explain how place is a variable that mediates behavior in natural resource politics. Taken together, both frameworks converge on the position that *individuals chose their behavioral strategies in natural resource politics based on expectations of how people relate to one another*. These expectations are, in turn, informed by two common factors: group identity and the probability of expected future interactions. Figure 2-3 depicts the resulting theoretical framework, which is essentially a place-based behavioral theory of natural resource politics. Group identity is a psychological strategy for defining oneself and others according to broad social categories (Turner

1982). Group identity has two behavioral effects. First, each individual can discern the intentions and expected actions of others based on the identity they are perceived to project. Second, by expressing a certain group identity, each individual can project their intentions for others to discern without actually verbally disclosing them. In short, group identity is a rule of thumb people can employ to determine how others might behave and, therefore, how to relate to others in a collective action situation. It is akin to Ostrom's reputation variable in the core relationship. Group identity is widely viewed as a behavioral influence in collective action (Dawes, van de Kragt, and Orbell 1988; Dovidio, Gaetner, and Validzic 1998; Jetten, Spears, and Manstead 1996; Kramer 1993; Northrup 1989; Rouhana, O'Dwyer, and Morrison-Vaso 1997).



**Figure 2-3. A proposed place-based theoretical framework for examining natural resource politics**

The behavioral effect of group identity in natural resource politics is evident by the “logger” versus “environmentalist” dichotomy in forest policy debates. However, as the framework in Figure 3 indicates, group categories not only refer to occupational or interest group affiliations, but identify people as having certain relationships to place. As Relph (1976) observes, “[I]t is not just the identity *of* a place that is important, but also the identity that a person or group has *with* that place, in particular whether they are experiencing it as an insider or as an outsider (Emphasis in original, Relph 1976, p. 45).” The case study findings in Brandenburg and Carroll (1995) support Relph’s observation: individuals residing nearest to the case study watershed – the “insiders” – expressed rich and nuanced sentiments, experiences, and values, including a desire not to have it logged, even though many were loggers. By contrast, individuals who did not have enduring experiences in the watershed – the “outsiders” – did not have any personal memories or emotional attachments. The watershed was regarded as part and parcel of broader natural resource management concerns, such as commercial logging or ecological preservation.

In this view, place is at once a repository and a source of meaning, values, and even social norms. For environmentalists fighting to protect Alaska’s public forests, retaining the wild character of those lands is not only consistent with certain ecological principles, but is a powerful expression of how people ought to relate to remaining unlogged public forests in Alaska (and elsewhere). In order to determine whether others can be expected to return collaborative behavior in natural resource politics, people are confronted with the question, “Are you someone who shares my values about

this place?" If the answer is "yes", then there is a premise for people to regard one another as members of the same social group, and a reason to trust others to reciprocate collaboration.

More importantly, place serves as a means to identify an individual as having a legitimate reason to be a part of the debate at all. The provoking question becomes, "Do you even belong here?" This question relates to the legitimacy of people's participation, or "standing," in natural resource decision-making based on their relation to place. Daniels and Walker (1995) describes what is a fairly typical manifestation of place-based standing in a case study of forestry conflict in southwestern Oregon:

"[A] common measure of standing for [timber industry representatives] was the years, in fact generations, that they had lived, hunted, or logged in the area. They greatly resented the environmentalists who were either recent emigrants to the area, or worse yet, lived in Portland or some other city and came down to 'stick their noses in our business.' The environmentalists, on the other hand, argued that this was *national* forest land and that both the legal notion of standing and their knowledge of legal process provided them all the standing they needed (Daniels and Walker 1995, pp. 299-300)."

Although it is often overlooked, the place-based standing of participants is instrumental to whether individuals develop trust in each other, and whether individuals chose to collaborate to address a common natural resource problem.

The second place-based behavioral influence in natural resource politics, the probability of expected future interactions, refers to the likelihood that people will expect to see, talk, and work with each other into the indefinite future. Hence, expected future interaction adds a temporal factor to individuals' choice of behavioral strategies in natural resource politics. If individuals expect to encounter each other over time, as is the case in natural resource politics, there are always opportunities for retribution for uncooperative behavior and rewards for cooperation. Even if the retribution is not



physical or pecuniary, punishments such as ostracization or public humiliation can affect an individual's ability to obtain benefits from others in the future. Expected future interaction has been shown to have a compelling behavioral effect even in highly competitive negotiations (Ben-Yoav and Pruitt 1984; Polzer, Mannix, and Neale 1995; Thompson 1990).

Few conditions affirm a high probability of expected future interaction than inhabiting a place, simply because the alternative is to leave. Leaving frequently involves prohibitively high costs and uncertainty. Furthermore, leaving may mean sacrificing an essential element for a high quality of life – a home place. Regardless of their divergent values, people collaborate to protect or improve a place because the place may have deeply significant symbolic meaning for all. Kemmis (1990) confirms place as a basis for expected future interactions and, therefore, collaboration by citing an example where a pulp mill and a local environmental group eventually found themselves collaborating to address the discharge of the mill's waste into a river.

Kemmis explains the situation in no uncertain terms:

“The pulp mill and the local environmental group were brought to the point of collaboration because both of them had a stake in what happened to a particular place. They had different stakes, and had they been left to themselves, they would have done different things with the place, but in the end it was one and the same place. Neither party wanted to leave the place, and both recognized that what Lester Thurow says of territoriality in such a case is true: neither could gain a decisive or lasting victory over the other (Kemmis 1990, p. 117).”

Once people realize that they can not protect their symbolic values of place without having to interact with one another, and that leaving is not an option, the most logical strategy is collaboration. Even if people chose not to participate at all, they may eventually be confronted with a decline in their place, a decline in the values they hold

dear as a result of inhabiting in the place, and the necessity of taking action with others who share common values. Thus, place mediates natural resource politics by the extent it holds people together over a long period of time. Until inhabitants of a place find it more worthwhile to leave, they will always be confronted with the expectation of interacting with one another. Conversely, individuals from far away may want to participate in decisions affecting a place. In this situation, there is a low probability of expected future interactions and, therefore, a weaker basis for participants to trust one another to collaborate.

To bring the framework together, place mediates individuals' choice of behavioral strategies in natural resource politics by 1) providing a means for people to identify one another as belonging to the same (or different) social group, and 2) affecting the probability that people will interact with one another in the future. As a natural resources debate develops, participants to the debate are confronted with the questions, "Do you even belong here and, if so, are you someone who shares the values I and others like me embrace about this place?" and "Are we likely to interact in the future with respect to this place?" The answers to these questions comprise a person's expectations about how others' actions will affect his or her choices – in a word, trust. In turn, the amount of trust participants have in each other will affect their choice of behavioral strategies – to collaborate or not collaborate. Each strategy produces a social outcome. Collaboration is effectively a collective investment in place. It reflects an agreement among participants that the place meanings they share are legitimate and important. Choosing to not collaborate results in a lack of collective investment in place. Participant retain their contending place meanings and will continue to battle

each other to make sure their place meanings prevail (i.e., the forester's "timber stand" is the primary use of the parcel of trees over all other place meanings). Indeed, choosing not to collaborate, even after initial collaboration, can result in what Ostrom calls a "cascade of negative effects" (Ostrom 1998, p. 14). In short, not collaborating begets more of the same. It can create such a profound cycle of distrusting behavior that regaining collaboration is difficult if not insurmountable.

## 2.5 Discussion

The place-based behavioral theory of natural resource politics is an introductory effort to broaden the way natural resource politics is portrayed and, therefore, examined. It draws upon syntheses of three decades of theoretical explorations and empirical research on how people behave in various geographic and collective action contexts. Three implications arise from the place-based behavioral framework. First, *natural resource politics is an emergent social process in which stakeholders choose different strategies for relating to others over the future of particular places*, not simply a competition among powerful interest groups over material benefits or power. These strategies range from maximizing individual self-interest to altruistic collaboration. Predicting when and why people choose a particular strategy is not always feasible because those choices are sensitive to a multitude of factors, not least of which how people perceive their collective relationship to the place in question. Other factors that may affect stakeholders' choice of behavioral strategies include the kind and level of material payoffs, the institutional decision-making rules, and cultural variables, such as

family or ethnic identity ( see especially Bliss and Martin 1989 for examples of forest managers basing management decisions on family and ethnic identity; Kollock 1998). The emergence of place-based collaborations across the U.S. particularly highlights the centrality of place as a potential behavioral variable. Employing a place-based behavioral framework may further uncover the nuances of how people relate to place and how this relationship affects the choice of behavioral strategies in natural resource debates.

Second, natural resource politics occurs at many different levels and at different spatial scales, each of which can inspire different behavioral strategies among stakeholders. Conventional policy analyses tend to focus decision-making processes affecting lands and natural resources at the national scale. For example, John Baden, Richard Stroup, and Randall O'Toole applied concepts from public choice theory to examine the role and efficacy of the US Forest Service in managing all national forest lands (O'Toole 1988; Stroup and Baden 1983). However, as anecdotal evidence from the hundreds of place-based collaborations attest, stakeholders can and do select forums at different levels and spatial scales. Another example is the "home rule" movement – the struggle to increase more local control over federal lands – which involved many counties in the Western U.S. (Conable 1996; Krannich and Smith 1998). As they move from national policy forums to informal groups organized around their local watershed or nearby public forest, stakeholders may choose different strategies of relating to others because they invoke a different way of relating to place. Hence, it is necessary to supplement theories that assume competitive, maximizing behavior with frameworks that account for the behavioral influence of place.

The third implication of the place-based behavioral framework is that *examining natural resource politics requires multiple methods*. Case studies such as Brandenburg and Carroll (1995) and Daniels and Walker (1995) provide valuable examples of how natural resource stakeholders' behaviors are rich, varied, and difficult to uncover with a single research approach. Both studies employed multiple ways of uncovering behaviors and gathering data to be used in analysis. Methods include participant-observation of group interactions, surveys, individual interviews, and content analysis of documents. Ostrom and her colleagues have long used a combination of field case studies and experimental games to unearth and analyze the various ways in which people behave with respect to place-based natural resource problems (Ostrom, Gardner, and Walker 1993).

In conclusion, the place-based behavioral framework demonstrates the value of disciplinary integration. Ostrom's core relationship and theories of place highlight different factors affecting individual behavior in group situations, and both touch on elements of the other as having importance. Yet their strength lies in their intersection. As is often the case in the study of natural resource politics, a single theory rarely encompasses the explanatory or even descriptive power necessary to understand a given situation. Because of its applied nature, natural resource politics lies at the intersection of many different disciplines. While a general theory of natural resource politics lies as a future possibility, the present course may well be to bring together empirical evidence from other fields of study and case studies in natural resource politics under interdisciplinary theoretical frameworks, such as the place-based behavioral theory presented here.

## 2.6 References

- Agnew, J. 1992. Place and politics in post-war Italy: a cultural geography of local identity in the provinces of Lucca and Pistoia. In *Inventing places: studies in cultural geography*, edited by K. Anderson and F. Gale. Melbourne, Australia: Longman Cheshire.
- Agnew, J.A. 1987. *Place and politics: the geographical mediation of state and society*. Boston, MA: Allen and Unwin.
- Agnew, J.A. 1989. The devaluation of place in social science. In *The power of place: bringing together geographical and sociological imaginations*, edited by J. A. Agnew and J. S. Duncan. Boston, MA: Unwin Hyman.
- Alaska Rainforest Campaign. 1999. *Alaska rainforest: the land and its people* 1998 [cited August 24 1999]. Available from <http://www.akrain.org/rainforest/landpeople.asp>.
- Altman, I., and S.M. Low, eds. 1992. *Place attachment*. 12 vols. Vol. 12. New York and London: Plenum Press.
- Anderson, K., and F. Gale. 1992. *Inventing places: studies in cultural geography*: Longman Cheshire; Wiley; Halsted Press.
- Behan, R.W. 1991. Forests and plantations and Potomo-centric statutory fixes. *Forest Perspectives* 1 (1):5-8.
- Ben-Yoav, O., and D.G. Pruitt. 1984. Resistance to yielding and the expectation of cooperative future interaction in negotiation. *Journal of Experimental Psychology* 20 (4):323-335.
- Bliss, J.C., and A.J. Martin. 1989. Identifying NIPF management motivations with qualitative methods. *Forest Science* 35 (2):601-622.
- Brandenburg, A.M., and M.S. Carroll. 1995. Your place, or mine: the effect of place creation on environmental values and landscape meanings. *Society and Natural Resources* 8 (5):381-398.
- Brown, B.B., and D.D. Perkins. 1992. Disruptions in place attachment. In *Place attachment*, edited by I. Altman and S. M. Low. New York, NY: Plenum Press.
- Burnett, P. 1976. Behavioral geography and the philosophy of the mind. In *Spatial choice and spatial behavior: geographic essays on the analysis of preferences and perceptions*, edited by R. G. Golledge and G. Rushton. Columbus, OH: Ohio State University Press.

- Buttimer, A., and D. Seamon, eds. 1980. *The human experience of space and place*. New York, N.Y.: St. Martin's Press.
- Canter, D. 1977. *The psychology of place*. New York, N.Y.: St. Martin's Press.
- Conable, P. 1996. Equal footing, county supremacy, and the Western public lands. *Environmental Law* 26 (9):1263-1286.
- Daniels, S.E., and G.B. Walker. 1995. Managing local environmental conflict amidst national controversy. *International Journal of Conflict Management* 6 (3):290-311.
- Dawes, R.M., A. van de Kragt, and J.M. Orbell. 1988. Not me or thee but we: the importance of group identity in eliciting cooperation in dilemma situations: experimental manipulations. *Acta Psychologica* 68:83-97.
- Dovidio, J.F., S.L. Gaetner, and A. Validzic. 1998. Intergroup bias: status, differentiation, and a common in-group identity. *Journal of Personality and Social Psychology* 75 (1):109-120.
- Duncan, J., and D. Ley, eds. 1993. *Place/culture/representation*. London, England: Routledge.
- Duncan, J.S., and N.G. Duncan. 1976. Housing as presentation as self and the structure of social networks. In *Environmental knowing: theories, research, and methods*, edited by G. T. Moore and R. G. Golledge. Stroudsburg, PA: Hutchinson & Ross, Inc.
- Eyles, J. 1985. *Senses of place*. Warrington, UK: Silverbrook Press.
- Feld, S., and K.H. Basso. 1996. *Senses of place*. Santa Fe, N.M.: School of American Research Press.
- Golledge, R.G., and G. Rushton, eds. 1976. *Spatial choice and spatial behavior: geographic essays on the analysis of preferences and perceptions*. Columbus, OH: Ohio State University.
- Greider, T., and L. Garkovich. 1994. Landscapes: the social construction of nature and the environment. *Rural Sociology* 59 (1):1-24.
- Hirsch, E., and M. O'Hanlon. 1995. *The anthropology of landscape: perspectives on place and space*. London, UK: Clarendon Press and Oxford University Press.
- Jetten, J., R. Spears, and A.S.R. Manstead. 1996. Intergroup norms and intergroup discrimination: distinctive self-categorization and social identity effects. *Journal of Personality and Social Psychology* 71 (6):1222-1233.

- Kaplan, R., and S. Kaplan. 1989. *The experience of nature: a psychological perspective*. Cambridge University Press.
- Kemmis, D. 1990. *Community and the politics of place*. Norman, OK: University of Oklahoma Press.
- Kollock, P. 1998. Social dilemmas: the anatomy of cooperation. *Annual Review of Sociology* 24:183-214.
- Kramer, B. 1995. Classification of generic places: explorations with implications for evaluation. *Journal of Environmental Psychology* 15 (1):3-22.
- Kramer, R.M., P. Pommerenke, E. Newton. 1993. The social context of negotiation: effects of social identity and interpersonal accountability on negotiator decisionmaking. *Journal of Conflict Resolution* 37 (4):633-654.
- Krannich, R.S., and M.D. Smith. 1998. Local perceptions of public lands natural resource management in the rural West: toward improved understanding of the "Revolt of the West". *Society and Natural Resources* 11 (7):677-695.
- Low, S.M. 1992. Symbolic ties that bind: place attachment in the plaza. In *Place attachment*, edited by I. Altman and S. M. Low. New York, N.Y.: Plenum Press.
- Low, S.M., and I. Altman. 1992. Place attachment: a conceptual inquiry. In *Place attachment*, edited by I. Altman and S. M. Low. New York, NY: Plenum Press.
- Miller, B. 1992. Collective action and rational choice: place, community, and the limits of individual self-interest. *Economic Geography* 68:22-42.
- Minami, H., and K. Tanaka. 1995. Social and environmental psychology: transaction between physical space and group-dynamic processes. *Environment and Behavior* 27 (1):43-55.
- Natural Resources Law Center. 1996. *The watershed sourcebook: watershed-based solutions to natural resource problems*. Boulder, CO: Natural Resources Law Center, University of Colorado.
- Northrup, T.A. 1989. The dynamic of identity in personal and social conflict. In *Intractable conflicts and their transformation*, edited by L. Kriesberg, T. A. Northrup and S. J. Thorson. Syracuse, N.Y.: Syracuse University Press.
- Ostrom, E. 1990. *Governing the commons: the evolution of institutions for collective action*. Cambridge, England: Cambridge University Press.
- Ostrom, E. 1998. A behavioral approach to the rational choice theory of collective action. *American Political Science Review* 92 (1):1-22.



- Ostrom, E., R. Gardner, and J. Walker. 1993. Covenants with and without a sword: self-governance is possible. In *The political economy of customs and culture: informal solutions to the commons problem*, edited by T. L. Anderson and R. T. Simmons. Savage, MD: Rowman and Littlefield Publishers.
- O'Toole, R. 1988. *Reforming the Forest Service*. Covelo, CA and Washington, D.C.: Island Press.
- Pellow, D. 1992. Attachment to the African compound. In *Place attachment*, edited by I. Altman and S. M. Low. New York, NY: Plenum Press.
- Polzer, J.T., E.A. Mannix, and M.A. Neale. 1995. Multiparty negotiation in its social context. In *Negotiation as a social process*, edited by R. M. Kramer and D. M. Messick. Thousand Oaks, CA: Sage Publications.
- Proshansky, H.M., A.F. Fabian, and R. Kaminoff. 1983. Place-identity: physical world socialization of the self. *Journal of Environmental Psychology* 3 (1):57-83.
- Pruitt, D.G., and P.J. Carnevale. 1993. *Negotiation in social conflict*. Pacific Grove, CA: Brooks Cole Publishing Company.
- Relph, E. 1976. *Place and placelessness*. London, England: Pion Limited.
- Rodman, M.C. 1992. Empowering place: multilocality and multivocality. *American Anthropologist* 94 (3):640-656.
- Rouhana, N.M., A. O'Dwyer, and S.K. Morrison-Vaso. 1997. Cognitive biases and political party affiliation in intergroup conflict. *Journal of Applied Social Psychology* 27 (1):37-57.
- Sack, R.D. 1992. *Place, modernity, and the consumer's world: a relational framework for geographical analysis*. Baltimore, MD: Johns Hopkins University Press.
- Starrs, P.F. 1994. The importance of places, or, a sense of where you are. *Spectrum: The Journal of State Governments* 67 (3):5-17.
- Stroup, R., and J. Baden. 1983. *Natural resources: bureaucratic myths and environmental management*. San Francisco, CA: Pacific Institute for Public Policy Research.
- Thompson, L. 1990. Negotiation behavior and outcomes: empirical evidence and theoretical issues. *Psychological Bulletin* 108 (3):515-532.
- Tuan, Y.F. 1974. *Topophilia: a study of environmental perception, attitudes, and values*. Englewood Cliffs, N.J.: Prentice-Hall.

- Turner, J.C. 1982. Towards a cognitive redefinition of the social group. In *Social identity and intergroup relations*, edited by H. Tajfel. Cambridge, England: Cambridge University Press.
- Twigger-Ross, C.I., and D.L. Uzzell. 1996. Place and identity processes. *Journal of Environmental Psychology* 16:205-220.
- Western Governor's Association. 1998. *Policy Resolution 98-001: Enlibra: a new shared management doctrine for environmental management* 1998 [cited October 7 1998]. Available from <http://www.westgov.org/wga/initiatives/enlibra.htm>.
- Williams, D.R., and M.E. Patterson. 1996. Environmental meaning and ecosystem management: perspectives from environmental psychology and human geography. *Society and Natural Resources* 9 (5):507-521.
- Williams, E.M., and P.V. Ellefson. 1997. Going into partnership to manage a landscape. *Journal of Forestry* 95 (5):29-33.

**CHAPTER 3: A CASE STUDY ON THE POLITICS  
OF NATURAL RESOURCE COLLABORATION**

Antony S. Cheng

Department of Forest Resources  
Peavy Hall 280  
Oregon State University  
Corvallis, OR 97331  
Phone: (541) 737-2215  
Fax: (541) 737-3049  
e-mail: [Tony.Cheng@orst.edu](mailto:Tony.Cheng@orst.edu)

### 3.0 Abstract

This paper takes the position that place influences how diverse people define and therefore relate to one another in natural resource collaboration. Watershed councils, as a place-based form of natural resource collaboration, are prime examples. Despite the growing numbers and popularity of place-based collaboration in natural resource politics, there is a lack of systematic empirical studies on their functioning and social dynamics. Employing this conception of place as a point of departure, this paper presents findings from a qualitative case study of two watershed council in western Oregon, the McKenzie Watershed Council (McWC) and the Mohawk Watershed Planning Group (MoWPG). Using grounded theory procedures, the case study yielded three key factors affecting the politics of watershed councils: 1) Group identifications related to interests in and values of the watershed; 2) Group identifications related to ways of knowing the watershed; and 3) Group identifications related to social ties within the watershed. Group identifications produced behaviors consistent with the well-known “ingroup-outgroup” effect in social psychology. Policy and theoretical implications are discussed.

**Key words:** collaboration, natural resource politics, place, group identity, qualitative research

### 3.1 Introduction

“Places have a way of claiming people. When they claim very diverse kinds of people, then those people must eventually learn to live with each other; they must learn to inhabit their place together, which they can only do through the development of certain practices of inhabitation which both rely upon and nurture the old-fashioned civic virtues of trust, honesty, justice, toleration, cooperation, hope, and remembrance (Kemmis 1990, p. 119).”

In *Community and the politics of place*, Daniel Kemmis underscores place as a fundamental basis for a valued way of life, for it is *in place* where people discover, cultivate, and invest what they value. Yet, a place is finite; it can accommodate only so many diverse values and activities before conflicts arise. Thus, it is *through place* that diverse people are brought into relationship with each other, because the preservation of what each individual values depends on how well they learn to live with others in relation to place. Kemmis maintains that people, for all their differences, can still discover a shared stake in a place and, as a result, work together to address problems affecting their shared place. To Kemmis, the discovery of a shared place is an important step towards increasing cooperation in politics in particular and in society in general.

In this view, place can be conceptualized as a *mediating social variable*; it influences how diverse individuals relate to one another. In turn, those relationships can be cooperative, adversarial, or a mix of both. This conception of place is useful for examining a recent trend in natural resource politics: the collaboration among diverse individuals to address natural resource problems. Natural resource collaboration is significant for two reasons. First, it typically involve individuals who hold widely divergent perspectives on resource management yet volunteer to work with one another

towards common goals. Second, most collaborations have as an organizing principle a geographic place, such as a watershed or particular landscape. Prominent examples include the Applegate Partnership (Oregon), the Henry's Fork Watershed Council (Idaho), and the Quincy Library Group (California). While these so-called "place-based" collaborations are more prevalent in the Western U.S., there are hundreds of instances of place-based efforts across the U.S., especially in watershed management (Kenney 1999; Natural Resources Law Center 1996; Williams and Ellefson 1997).

Casting natural resource collaboration as a manifestation of Kemmis' "politics of place" broadens the way collaboration is portrayed and, therefore, analyzed. Most explorations treat collaboration as an instrumental means for making decisions that accommodate all parties' interests (Selin and Chavez 1995; Selin, Schuett, and Carr 1997). As a result, researchers are interested in the organization, composition, and procedures that lead to a mutually acceptable decision. However, while consensus on specific issues is important, it may not always be the most significant outcome.

Collaboration can lead to, and result from, a range of social processes such as increased collective knowledge, respectful and meaningful forms of dialogue, discovery of shared values, and the transformation of relationships among the stakeholders (Gray 1989). As Daniels and Walker (1996) maintain, collaboration can "generate technically sound decisions, while simultaneously allowing stakeholders rich and meaningful voice in the process (p. 99)." In this view, place-based collaboration is more than an instrumental means for making decisions. It is a dynamic social process in which diverse individuals make decisions about how they relate to each other with respect to a place.

The purpose of this paper is to identify a set of key factors influencing the politics of natural resource collaboration. The factors were derived from a qualitative case study of two watershed councils in western Oregon. The watershed councils are relevant because they are composed of diverse individuals who voluntarily work through their differences to address problems affecting a geographic place. Moreover, watershed councils in Oregon are held up by federal and state policymakers as models for a new approach to addressing natural resource problems (Western Governor's Association 1998). Hence, the study has applied as well as theoretical relevance. The case study employed a grounded theory approach. Grounded theory is a form of social research that uses a systematic set of procedures to inductively derive explanations about a social phenomenon (Glaser and Strauss 1967; Strauss and Corbin 1990). Instead of testing existing theory in the positivist tradition, explanatory factors are systematically generated from data obtained from research. In short, the explanations are "grounded" in a real social phenomenon rather than based on generalized assumptions. A grounded theory approach is well-suited for the study of place-based natural resource collaboration because, despite their growing numbers and popularity, little is known about their social dynamics. Rather than analyzing behavior relative to *a priori* assumptions, the study was geared towards discovering and examining factors affecting behavior within its real-world context.

This paper is divided into three parts. The first discusses case selection, case background, and methods. The second part presents the key factors affecting the politics of watershed councils. The factors are essentially distinct dimensions of a key theme: group identification. In the case study group identification was the only strategy

common to all individuals in both watershed councils. Each dimension of group identification represents a distinct set of perceptions that influenced behavior among watershed council members, and between council members and non-members. Moreover, each of the group identity dimensions reflects a particular relationship between people and the watershed – the place in question. In this view, place mediates natural resource collaboration by providing a means for people to identify and, therefore, to relate to one another. The section concludes with an assessment of the validity of group identifications as key behavioral factors by drawing upon theoretical and empirical works from similar domains of inquiry. The purpose of this assessment is not to formally reject or accept the behavioral factors, but to examine whether the factors represent theoretically-relevant and valid explanations of behavior in natural resource collaboration.

The fourth and last part considers the implications of the case study findings. As a policy-relevant inquiry, the case study offers some initial insights to the potential and limitations of place-based collaboration in natural resource management. From a theoretical perspective, the study supports the view that behavior in natural resource politics, be it collaborative or competitive, can not be readily deduced from the material benefits at stake. Natural resource politics has an expressive element, for it is often an arena in which people can articulate, argue, and discover shared values in a place.



### **3.2 Case Study Background**

A case study research design was selected because the primary unit of analysis was the watershed council. Taking the watershed council as a whole rather than as an aggregation of individuals reflects an analytical posture rooted in social psychology. Indeed, the case study mirrors the naturalistic approach to group-based research in social psychology (Reis 1983). The watershed councils' social processes were systematically examined through prolonged and repeated interactions with individuals involved in the watershed councils (both members and active non-members) and the council as a whole. A case study approach was further justified due to the limited view surveys provide of natural resource collaboration. Through surveys, much is known about the organizational structure, composition, ground rules, dispute resolution techniques, and decision-making procedures of place-based collaboration (Williams and Ellefson 1997). Surveys also indicate how individuals within collaborative groups generally perceive these structural features (Duram and Brown 1999). Nevertheless, little is known about if or how behaviors are actually influenced by these features, or whether they are conditioned by other factors. An in-depth case study involving multiple methods more likely provides a more nuanced, contextual picture of actual behaviors than surveys.

#### **3.2.1 Case Selection and Background**

The case study presented in this paper encompasses two nested watershed groups in Western Oregon, the McKenzie Watershed Council (McWC) and the

Mohawk Watershed Planning Group (MoWPG)<sup>1</sup>. Table 3-1 summarizes each watershed's land use distribution and ownership distribution. They are nested in the sense that the Mohawk River watershed is a sub-basin of the McKenzie River watershed.

**Table 3-1. Land use and ownership distribution in the McKenzie and Mohawk watersheds.**

	McKenzie Watershed (acres)	Mohawk Watershed (acres)
Total land area	853,000	114,900
Land Use (% of total area)		
Forest	793,290 (93)	96,510 (84)
Agriculture	34,120 (4)	14,940 (13)
Urban*	25,590 (3)	3,450 (3)
Ownership (% of total area)		
Federal	580,040 (68) <sup>@</sup>	27,575 (24) <sup>#</sup>
Industrial Forest	231,250 (25)	70,090 (61)
Large Agriculture	No data	14,935 (13)
Private Individual	51,180 (6)	2,300 (2)

\* Urban land use includes residential, industrial, and commercial uses

<sup>@</sup> Federal lands in the McKenzie watershed are primarily managed by the Forest Service

<sup>#</sup> Federal lands in the Mohawk watershed are exclusively managed by the Bureau of Land Management

Sources: McKenzie Watershed Council World Wide Web homepage (McKenzie Watershed Council 1998) and the Mohawk Watershed Draft Assessment (Natural Resources Conservation Service 1999).

While the McWC is organized around a watershed that encompasses approximately 1,300 square miles (853,000 acres), the MoWPG is organized around a watershed that is approximately 177 square miles (114,900 acres). Physically, both watersheds are heavily forested and dominated by large ownerships. The MoWPG was

<sup>1</sup> In April 1999, the Mohawk Watershed Planning Group changed its name to the Mohawk Watershed Partnership. Since the research was conducted from October 1997 to March 1999,

formed in part to facilitate on-the-ground projects coordinated by the McWC. They share the same overall mission and have similar by-laws and structure.

The two watershed councils were selected for three primary reasons. The first is the relative longevity of both groups. On a relative scale, the McWC is one of the oldest watershed councils in Oregon, established in May 1993. The MoWPG was first convened in June 1996. Thus, both groups have gone through the formative stages, including drafting a charter, mission, and by-laws that formally govern group function. Second, it was necessary to interact with watershed councils on a regular basis and over a relatively long period of time. Because the focus of the study was on behavior as it emerges in context, it was necessary for the investigator to build relationships with watershed council members. The physical proximity of the councils made the McWC and MoWPG ideal candidates. The third and last reason is because of the unique arrangement between the McWC and MoWPG. Even though they share members, missions, and ground rules, they have generated very different individual behaviors and group dynamics. Exploratory observations produced questions about the relationship between the geographic scale of each watershed and the behaviors emanating from the respective watershed councils. These questions corresponded to theoretical propositions in the place literature about how people differentially perceive, organize, and interact with places defined at different geographic scales (Cuba and Hummon 1993; Taylor 1984). Thus, the cases were selected based both on opportunism and on design.

The McWC held its first meeting on June 8, 1993; the MoWPG first convened June 6, 1996. Both were jumpstarted by government agencies which recognized the need to create forums that bring together non-government stakeholders as part of

---

the findings in this paper reflect the group's identity as the MoWPG.

planning and decision processes. The McWC came about through the collective efforts of Lane County commissioners and the Eugene Water and Electric Board, the primary utility that supplies water and power to the City of Eugene. The McWC has 20 members and has an Executive Committee composed of seven members. It has a paid coordinator, assistant coordinator, and an education specialist. It meets monthly in various locations, though mostly in Eugene or Springfield. The MoWPG originated through the efforts of the USDA Natural Resource Conservation Service (NRCS). Working with the East Lane Soil and Water Conservation District, the McWC and key individuals within the community, the NRCS convened the MoWPG with the intent of generating a coordinated resource management plan to primarily address water quality problems in the watershed. The MoWPG has 12 members and a paid coordinator. It meets monthly at Mohawk High School in Marcola, Oregon.

The McWC and MoWPG are outgrowths of policy debates occurring at local, state, and regional levels. At the local level, the close proximity of both watersheds to the urban populations of Eugene and Springfield, Oregon, (approximate combined population of 185,000), make them targets of public concern. Recurring issues include development, forestry practices, recreation, and domestic drinking water quality and supply. Development along the riverbanks, or riparian areas, is especially controversial. In 1992, the Pacific Rivers Council and other local environmental groups initiated a petition drive to strengthen Lane County's riparian protection ordinances. The petition, which failed in the general election, was directly in response to development concerns along the McKenzie River. While the Mohawk does not have the kind of demands

placed on the McKenzie, it nevertheless faces similar development pressures and is a concern for government agencies focusing on enforcing water quality standards.

Both watershed councils are also operating in the midst of a complex, unfolding regional story centered around the Endangered Species Act (ESA) and the Clean Water Act. ESA is directly relevant to watershed councils because it provided the impetus for the Oregon Plan for Salmon and Watersheds (formerly the Coastal Salmon Recovery Initiative and Steelhead Supplement), the primary instrument for recovering salmon and steelhead populations in Oregon that are listed under ESA. Rather than depending on government agencies to establish and enforce land use regulations, the Oregon Plan relies heavily on local, voluntary watershed councils to provide protection measures and conduct on-the-ground restoration activities. The logic behind this reliance is clear: “[G]overnment, alone, cannot conserve and restore salmon across the landscape. The Plan recognizes that actions to conserve and restore salmon must be worked out by communities and landowners, with local knowledge and ownership in solutions (State of Oregon 1997c, p. 1).” Increasing the role of local citizens in natural resource planning has strong support among many policymakers.

While it is not as politicized as the ESA in the Pacific Northwest, the Clean Water Act has been influential in the emergence of watershed councils. The act sets minimum standards for water quality and compels states to take more intensive action to especially address non-point sources of water pollution, such as logging, agriculture, and land use. In Oregon, these actions have centered around a watershed management approach. Beginning in 1987, the state steadily developed its watershed enhancement program by establishing of the Governor’s Watershed Enhancement Board (GWEB),

funding local watershed restoration projects, and developing a model watershed program in 1993. The state's efforts culminated in 1995 when the legislature passed House Bill 3441 (State of Oregon 1995b). This bill expanded the watershed council concept from local pilots to statewide application and directed GWEB to help establish, and steer its efforts through, local watershed councils.

In sum, watershed councils have always been political. As such, they influence and are influenced by natural resource politics at the state, regional, and even national levels. Their existence reflects the ongoing efforts of policymakers, government agencies, and private citizens and groups to craft ways to address natural resource problems.

### **3.2.2 Data Collection**

The case study research occurred between October 1997 and March 1999. The primary data collection methods were: participant observation of council meetings and other group events, semi-structured individual interviews, and content analysis of watershed council reports, newspaper articles, and related documents. The participant-observation and interview methods are especially important because the study focuses on the social processes embedded in watershed councils. Participant-observation of over 65 hours of watershed council meetings generated approximately 180 pages of field notes. Field notes included verbatim statements, observations of individual reactions and interactions during key debates, and observations of general behavior among council members during the course of a meeting.

Data collection ended when the investigator determined that no new data were being generated from the research and that there were sufficient data to build the grounded theory. Semi-structured interviews were conducted of 47 individuals; 18 from the MoWPG and 29 from the McWC. Interview subjects were nonrandomly selected based on three categories: watershed council members, individuals who regularly attended council meetings but are not council members, and individuals to which more than one referral was made. The population of both watershed councils were interviewed (12 from the MoWPG and 20 from the McWC) , including watershed council staff. Eight individuals who were seen attending more than one meeting were interviewed, and 7 individuals were referred to for interviews by either members of the watershed councils or non-council interview subjects. The number of non-council interview subjects was small for two reasons. First, the perceptions and themes from the interviews overlapped among subjects to a high degree. In other words, nothing new was learned with each additional subject except for variations on the same overall themes. Second, the number of non-council individuals with in-depth knowledge of and interactions with the watershed councils was very small. The richness of watershed council perspectives declined rapidly outside this small group of key individuals. 44 interviews were successfully tape recorded and transcribed into a word processor. Conversational notes were taken of the remaining three interviews. Interviews ranged from 30 to 150 minutes, with an average of about 60 minutes.

The interviews revolved around four themes: personal background, perceptions of the state of the watershed, perceptions of the role of the watershed council, and perceptions of the relationships within the watershed council. The goal of the

interviews was to paint a picture of the watershed based on individual narratives, and to provide an overall perspective of what people thought about the purpose of the watershed council in influencing the future of the watershed based on their working relationships. Content analysis of written documents was conducted using Weber (1990) as a template. The documents supplemented the field notes and interviews by providing a third source for how the watershed council is perceived, how it functions, what it has accomplished, and how it defines itself to the broader community. The participant-observation field notes and interview transcripts were coded into Ethnograph 5.0, a computer-assisted qualitative research tool based on grounded theory analytical procedures.

### **3.2.3 Analytical Procedures**

Data were treated and analyzed according to Strauss and Corbin's (1990) grounded theory coding procedures. Three levels of coding and analysis were developed in this study (see Appendix 1). An initial set of 88 *open coding* labels grouped into 11 categories were derived from a line-by-line reading of all interview transcripts, observational field notes, and written documents. The sentence, "I like the way people cooperate in this group," from an interview with a MoWPG participant provides a useful example. Given that the emphasis of the case study was on group dynamics, this statement reflects a positive judgment of the group and was coded as GROUPCOOP+. Individual terms were also coded. The term "like" is a positive direction of judgment, generating the label, "POSITIVEGROUP." The term "cooperate" is an especially key term that was simply labeled as COOPERATE. It also



emphasizes cooperation as a specific type of group interaction and therefore was coded GROUPINTERAXN.

The possible connections between topics were explored and compiled into more general themes using *axial coding* procedures. Axial coding yields general statements that summarize the relationships among categories and essential concepts of certain topics. The process of developing, validating, and revising initial coding labels and subsequent relationships among categories was cyclical. This was done in order to eliminate redundant categories and generate clear, unambiguous thematic statements that relate key categories. 34 thematic statements were produced from this process, which are listed in Table 3-2. Returning to the interview excerpt, coding labels were linked to other labels revolving around the same general topic and were summarized into three thematic statements: “Judgments of council process,” “Interactions among council members,” and “Relationships among council members.”

This iterative process transitioned into another cyclical process of determining the key behavioral factors. This *selective coding* procedure defines key factors, systematically relates key factors to each other, and eliminates redundancies. Four key factors were identified as recurring perceptions individuals had of one another in the interview data (Table 3-3), or as recurring themes resulting from content analysis of field notes and written documents (Table 3-4): self-interest, expectation of future interaction, perceived efficacy, and group identity. To ensure the validity of the emerging key factors, key informants were consulted periodically for feedback, critique, and revisions. These informants were essentially another set of observers and interpreters of the same data. This was a key component of this study since it kept the

**Table 3-2. Axial coding statements from grounded theory coding procedures****Theme 1: Negotiating Expectations**

- Watershed council (WC) as sounding board favored by some agency representatives and all large private property owners
  - WC as information & resource exchange forum from agencies to public favored by remaining agency representatives and non-active, non-council member participants (passive “community members”)
  - WC as advisory body which promotes recommendations for broad range of watershed stewardship and restoration actions to public and private landowners favored by non-agency, non-landowning active council members and active non-council participants (“active community members”)
  - WC as quasi-policy body which develops statements and actively pursues changes in public agencies’ and private landowners’ practices favored by individuals affiliated with environmental group or causes
  - WC as focusing on large-scale data analysis and policy-relevant science favored by technical professionals (“experts”)
- vs.
- WC as focusing on small-scale efforts, building community support for restoration programs and projects, and long-term watershed stewardship actions favored by non-agency, non-large-landowning “community members”

**Theme 2: Negotiating Working Relationships**

- Minimum level of participation: regular meeting attendance (favored by non-active, urban-based council members) versus soliciting feedback and preferences from broader communities (favored by small group of active urban and all non-urban council members)
- Group-level communication and interpersonal relations are influenced by ongoing quandary over “representation” on council
  - Speaking on behalf of formal, recognized organizations favored by agencies and large private landowners
  - Voicing preferences of particular points of view favored by non-agency, “community” members
- Low commitment to action perceived to be associated with over-sensitivity to quandary of “representation”, especially among agency and large forest industry representatives
- High commitment to action perceived to be associated with council participants interacting as “neighbors”
- Level of commitment influenced by perceptions of assurance that all individuals and groups will be accountable; TRUST
- Trust, distrust, and suspicion related to organizational affiliations, primarily agency, forest industry, environmental organizations with histories of protest and litigation;
- Shared on-the-ground experiences, such as field tours and projects, in part influences how council participants relate to one another
- In McWC: Evolution from original WC to present council coincides with shift from informal “representation” and active level of dialogue with broader community to technical professionals representing formal organizations
- In MoWPG: Tendency to self-define and relate to others as “residents” and “neighbors”, in addition to “environmentalist” vs. “logger” stereotypes

**Table 3-2 (Continued)****Theme 3: Negotiating Shared Picture of Watershed**

- Developing common baseline assessment of watershed condition affected by familiarity with technical data and information, and comfort level with jargon
- Developing common baseline assessment of watershed condition affected by differing frames of reference, such as timeframes, pre-settlement ecological conditions, and causes and effects of human impacts
- Developing common baseline assessment of watershed condition affected by standards or criteria of interpretation
- Familiarity with technical data and jargon, types of frames of reference, and criteria for interpretation shaped by TRUST in others to present all sides of issues.
- Trust in others to present all sides of issues is affected by organizational affiliation, whether one is “environmentalist” or “forester”, or agency
- Trust in others to present all sides of issues is low between “community members” and technical professionals
- Trust in others to present all sides of issues is affected by degree of shared ways of knowing the watershed, namely, specific, site-specific knowledge versus abstract, scientific knowledge
- Trust in others to present all sides of issues is affected by degree of shared experiences in the watershed

**Theme 4: Struggling with Next Steps**

- Lack of coherent, agreed-upon directions is affected by lack of time for digestion, in-depth dialogue of complex issues
- Lack of coherent, agreed-upon direction is affected by council participants lack of preparedness prior to decisions., which, in turn, raises questions of commitment to process and group
- Lack of coherent, agreed-upon direction is affected by inability to answer “So What?” questions , e.g., what is the significance of scientific information about the watershed and why?
- Lack of coherent, agreed-upon direction is affected by small group of individuals who feel more accountable to formal organization than to process, the group, or affiliation to watershed
- Lack of coherent, agreed-upon direction is affected by degree of connectedness to broader community, including landowners and non-landowning residents
- Distant connections to community associated with more profound struggles over next step
- Close connections to community is associated with less struggle over next step
- Lack of coherent, agreed-upon direction is affected by persistent, unresolved issues, especially over forest practices on forest industry land
- Lack of coherent, agreed-upon direction is affected by transitioning of new, unfamiliar council participants

**Table 3-3. Frequency of factors affecting collaborative behavior identified in interview transcripts**

Factor affecting collaborative behavior	MoWPG (n = 19)	McWC (n = 28)
Self-interest	.11	.18
Expectation of Future Interaction	.89	.57
Perceived Efficacy	.79	.43
Group Identities	1.00	1.00

**Table 3-4. Relative density of factors affecting collaborative behavior identified in Participant-Observation field notes and written documents**

Factor affecting collaborative behavior	MoWPG	McWC
Self-interest	Very Low	Low
Expectation of Future Interaction	High	Medium
Perceived Efficacy	Medium	Low
Group Identities	Very High	Very High

resulting findings truly “grounded.” The final set of key factors were presented to key informants in the McWC, the MoWPG as a whole, and a third watershed council.

### **3.3 Group Identifications as Key Factors Affecting Collaboration**

One of the dominant themes in the case study is the tendency for individuals to relate to others based on group identifications. Turner (1982, p. 15) defines group identity as a perceived membership to a particular social category. This definition

emphasizes that membership is a purely psychological construct yet is often sufficient for individuals to behave as a group, or behave towards others as if they were members of a particular group. Group identification, then, is a strategy for defining oneself and others according to particular social categories. Group identification also informs how an individual might behave towards others. From participant-observations of council meetings, group identities frequently surfaced when the watershed councils were faced with taking a course of action to address a particular issue. Council members would frequently fall into two group identity-related behaviors: speaking on behalf of their represented organization or interest, or accusing one another of protecting narrow organizational or private interests instead of joining the council in taking action. More significantly, during one-on-one interviews, all individuals defined themselves and other watershed council members according to different dimensions of group identity. Group identification was the only theme expressed by all individuals in both watershed councils.

For these reasons, group identifications were identified as key factors affecting the politics of watershed councils. Furthermore, while a few group identifications are related to broad social categories, such as “liberal” or “conservative,” the group identifications generally reflect a relationship individuals have with the watershed. These watershed-based relationships are particularly relevant because they closely resemble notions of place-based identity found in human geography. As Relph (1976) observes, “[I]t is not just the identity *of* a place that is important, but also the identity that a person or group has *with* that place, in particular whether they are experiencing it as an insider or as an outsider (Emphasis in original, p. 45).” Indeed, most of the group

identifications emanating from the case study embody notions of “insiders” and “outsiders” relative to the watershed.

The three key dimensions of group identifications are: group identities related to interests in and values of the watershed; group identities related to ways of knowing the watershed, and group identities related to ties to communities within the watershed. These dimensions are expanded below using quotations from interview transcripts (to preserve the anonymity of interview subjects, pseudonyms are used). Table 3-5 shows the frequency of expressions of group identification in the interviews.

**Table 3-5. Frequency of Group Identification Dimensions Expressed in Interviews**

Group Identification Dimensions	MoWPG (n = 19)	McWC (n = 28)
<i>Group Identity Related to Interests, Values</i>		
Organizational affiliation	.47	.75
Interest-based affiliation	.79	.50
Shared values	.68	.27
<i>Group Identity Related to Ways of Knowing</i>		
Expert vs. Layperson	.72	.69
Newcomer vs. Long-time Resident	.63	.36
Council member vs. Non-member	.42	.29
Shared Ways of Knowing	.63	.21
<i>Group Identity Related to Ties to Community</i>		
Family	.26	.32
Involvement in Community Organizations	.72	.36
Urban vs. Upriver Resident	.68	.50

### 3.3.1 Group Identity Related to Watershed Interests and Values

Individuals in watershed councils tend to view themselves and others as having particular interests in and values of the watershed. These views centered around notions of what the watershed should and should not be used for, and, therefore who should and

should not be allowed take certain actions. Among McWC members, individuals perceive themselves and others as holding particular watershed interests and values according to organizational affiliation. In fact, McWC members introduce themselves at meetings according to their organizational affiliation: Forest Service, county government, Audubon Society, Weyerhaeuser Company, Eugene Water and Electric Board, and so forth. These organizational identifications are a cause for concern for many since they are perceived to inhibit the watershed council from achieving its potential in affecting substantive change. Harold, one of the few McWC members not formally representing an organization, epitomizes this concern:

“Having so many bureaucrats who play things so close to the vest has resulted in less of a dynamic organization than I want. Players from agencies and local government can’t speak for their bodies. They can make recommendations, but they can not actually decide for those bodies... Like a critic of our group said last week, it is too like-minded. The group lacks radical challenges and is too concerned with maintaining an air of consensus.”

By the same token, members representing a formal organization feel an obligation to speak from their organization’s interests. Simon, an agency employee, relates to the watershed as a technical problem and, therefore, believes that the watershed council should follow the lead of the agency technical specialists:

“I think the focus on the council should be, ‘Why aren’t the fish coming back?’ The council’s technical working group has identified the lower river habitat in the mainstem as major limiting factors to salmon recovery in the McKenzie. These really jive with the number one priorities of our agency and the Corps [U.S. Army Corps of Engineers].”

In the MoPG, members tended to relate to one another according to whether individuals value the watershed for its commodity production or for its aesthetic and ecological values; organizational affiliations were not recurring identifications. The most common group identifications related to watershed values in the MoWPG are

“forester” and “environmentalist,” which evoke strong animosity. Samuel had this to say about some of the group’s members:

“We have these self-proclaimed environmentalists who haven’t been here for very long and think everything is wrong and they have all the answers.”

Carmen shares a similar attitude towards the foresters on the MoWPG:

“We went on this forestry field tour on industry land and they showed us... well, of course, it was the ‘party line.’ And being an environmentalist, I wanted to say, ‘Why did you have to clearcut all of this?’”

As a result, the MoWPG members often lash out towards one another as forestry issues comes to the fore during discussions of key watershed problems, priorities, and potential projects.

Notwithstanding the contending group identities centered around commodity versus aesthetic watershed values, the MoWPG does have a higher number of expressions of shared watershed values than the McWC. One of the best examples of the discovery of shared watershed values among MoWPG occurred between Eddie and Rachel. As one MoWPG member recalls:

“I can remember when Eddie first saw Rachel at the meetings, he told me, ‘I don’t think she’s got my interest in mind.’ But when he’s finally got to working with her, he really liked her. He’s invited her to his house for dinner. He’s one of her strongest voices. I’ve also seen him walk up to Rachel and put his arm around her. He said, ‘I didn’t think I was going to like you very much but you’re all right!’”

Although Eddie, Rachel, and others on the MoWPG may still harbor negative sentiments towards one another based on value-based group identifications, they may have also discovered values they share. These shared values may provide a basis for the emergence of a common group identification among the MoWPG members.



### 3.3.2. Group Identities Related to Ways of Knowing the Watershed

Each watershed council member has varying ways of acquiring and processing information about the history, conditions, and causes and effects of activities in the watershed. These different ways of knowing the watershed influence how watershed members relate to one another. There are four layers of group identifications related to how members know the watershed: expert versus layperson, newcomers versus long-time residents, council member versus non-member, and shared ways of knowing.

#### *Expert versus Layperson*

By far the most common layer of group identifications within this dimension is the distinction between experts and laypersons, although the effect tends to be greater in the McWC. The preponderance of agency technical professionals on the McWC has been a source of tension between members comfortable with scientific jargon and concepts, and laypersons. This tension is reflected in the interview with James, a long-time resident in a lower river rural community:

“There’s a perception that those people coming in with their ‘expertise’ think they know everything. They haven’t seen it, they don’t really know it. They have their charts. It’s so much more important to have a thumb on the pulse of river, at points along the river, day in and day out. Instead of a bunch of charts no one looks at.”

The distrust for experts has created somewhat of an impasse among the McWC as the laypersons feel as if they are being shut out of defining council direction and priorities. This observation was made by Douglas, a former McWC member:

“People on the council don’t have the same knowledge, the same appreciation of each others’ expertise, and therefore, they don’t trust each other. People who do have the same knowledge do it for a living, the agency people.”

Hence, the group identifications relating to ways of knowing the McKenzie watershed are also tied to organizational affiliations. In short, experts are not often trusted by laypersons because they are viewed as serving and protecting their organizations' interests.

### *Newcomer versus Long-time Resident*

Given the lack of technical professionals on the MoWPG, there is not the level of animosity towards experts as in the McWC. Indeed, many MoWPG members have favorable attitudes towards members of their technical team. Rather than an expert-layperson tension, the MoWPG has a tension between residents who have recently moved to the Mohawk watershed and those who have lived in the valley for a long time. Eddie takes exception not to newcomers per se, but the narrow and inaccurate understandings of the watershed that many bring with them:

“These people come out here and think there ought to be a wilderness area. Everything should be clean and natural; city things belong in the city, and here, it's got to be natural. Well, as many people as we've got in this valley, there's got to be some adjustments made.”

For long-time residents like Eddie, what newcomers bring is a very different way of knowing their watershed and a limited receptiveness to appreciating what people Eddie know. In this regard, newcomers are not to be necessarily trusted to decide what should and should not happen in the watershed. Because of this distrust, even long-time residents feel like 'newcomers' and 'outsiders.' As Evelyn notes,

“I've lived here for 25 years – longer than some of those forestry guys – and I still feel like an 'outsider' because I don't believe in clearcutting or the so-called 'science' behind it.”

### *Council member versus Non-member*

Members in both the McWC and MoWPG have developed a type of collective identity vis-à-vis non-members over what constitutes valid information about the watersheds. As a result, an underlying animosity has developed between council members and non-members. Non-members are more aware of this collective identity, or what non-member Phil called “like-minded” behavior. Phil was especially dissatisfied with what he perceived to be a masking of water quality problems in the McKenzie watershed by the McWC:

“There was a wake-up call in the 1996 storms when turbidity shot up from a background level of 2 or 3 to 2,200. But a few months later, the McWC was saying that the McKenzie River had the highest quality water. I started getting frustrated at the gap between my version of reality and their version of reality. I tried to highlight the fact that turbidity shot up so high is probably from landslides coming from intensely managed areas, like timber harvest.”

The perceived “gap” between the council’s and non-members’ “version of reality,” especially the versions of environmental non-members, has resulted in a lack of willingness of many within the environmental community to become involved in the McWC.

This gap also exists between the MoWPG and non-members. Similar to Phil’s statement, Lisa expressed a frustration over what she perceived as a lack of valid information in the MoWPG process:

“One of the things we lack in this watershed and in the MoWPG are clear, irrefutable facts about the condition of the watershed. Not that they don’t exist, but they’re not presented in a way that is easy for people to digest and understand and embrace and come to some conclusion about. If that information can be put forward in a non-biased, non-emotional factual way, I think we can do a lot to help people come to the reality of the situation.”

Challenges from non-members like Phil and Lisa have prompted council members to unite around what they consider valid information about the watershed and potential courses of action as a result of the given information. Moreover, they consider non-members information and proposed actions in the watershed to be exaggerated or veiling a personal agenda. To Ryan, a MoWPG member, non-members have a necessary but limited role in the council process:

“We’ve got some audience members who have their agendas and would like the MoWPG to be their advocate or springboard. We’re fighting that all the time. I mean, who sits at the table? Well, the planning group sits at the table. We don’t need as many interruptions as we get from the audience. It breaks down real fast if somebody from the community comes in with a specific problem. Well, I don’t know if this group is the group to handle problems like that.”

### *Shared Ways of Knowing the Watershed*

Despite the prevalent group identifications related to different ways of knowing the watershed, there were strong indications within the MoWPG had formed a common group identification around shared ways of knowing. Without exception, all MoWPG members identified a recent forestry field tour as a “turning point” in how group members related to one another. The tour had a noticeable effect to Ryan who had previously regarded many on the group with distrust:

“I go back to that field day where we could all be in a van, driving up into the forest, talking about the watershed. We’ve come a long way from there, with maybe more respect for each other and each others’ views. I think we work better, close together.”

To Nick, the value of the one field tour exceeded what a year’s worth of meetings, which was having a common frame of reference from which to build common understandings of the watershed:

“What the field tour did was give us with some common ground to look at, to start talking about real-life problems. You need to have common ground and understanding about what it is you’re talking about. Sitting in a room discussing things, and people have different concepts in their minds what it is you’re talking about, then maybe people are in left field, right field, or out of the stadium. Until you get on the ground and looking at something, you don’t have a common place to start from.”

Participant-observation of meetings also provided evidence of shared understandings among MoWPG members. When describing specific examples of watershed conditions or potential project sites, council members would engage in a dialogue over the precise location by citing road names, landmark trees, the name of the property owner, certain bends in the road, or bridges. Although such discussions took more time than necessary, MoWPG members express their satisfaction of knowing that others share a similar frames of reference. By contrast, the lack of group experiences and knowledge in the watershed is identified by many among the McWC as a barrier to developing a common group identity around shared understandings. According to Shorna,

“Some people have never been up in the watershed. Even if you just recreate, you get a real myopic view. The knowledge and the dialogue just does not happen.”

Thus, merely taking a field tour is not sufficient to develop a sense of shared understanding. Council members need to engage in a dialogue from a wide variety of geographic frames of reference is necessary to make progress as a group. Unlike the drawn-out descriptions of specific watershed locations in the MoWPG, many McWC are not aware of the general geography of the watershed. Norm asserts a very similar criticism as Shorna:

“The thing you got to do with council members is just get them out into the watershed looking at real-life problems. It's hard for them to even comprehend problems in their office. But people are so busy, it's hard to get people out in the

watershed, looking at problems. Probably one of our weaknesses. You can't have the richness of discussion you need to have with the council unless you have everyone cognizant of what the problem is. The discussion becomes richer.”

That shared ways of knowing a place is a factor affecting conflict and collaboration among diverse individuals is supported by works in wide variety of fields, including environmental psychology (Buttimer 1976; Cantrill 1998), human geography (Tuan 1974), sociology (Greider and Garkovich 1994), community planning (Starrs 1994), and natural resources (Williams and Patterson 1996). As Moore (1976) states,

“The degree to which individuals have similar experiences, and the degree to which knowledge and impressions about the environment are communicated among individuals, is the degree to which knowledge will be held in common among various social and cultural groups. Reciprocally, there is no doubt that communication and coming to have shared impressions of the world influences how each one of us structures our own individual world (p. 141).”

Sharing experiences and knowledge of the watershed not only has potential effects on how individuals relate to one another, but has possible impacts on how each individual understands and therefore acts in the watershed. Both are important group outcomes.

### **3.3.3. Group Identities Related to Social Ties Within the Watershed**

Both the McKenzie and Mohawk watersheds encompass social communities in which people work, pursue leisure activities, and form lasting relationships. The ties council members have formed within the watersheds' communities are important bases for how watershed council members identify, and relate to, one another and non-members. The importance of watershed-based social ties corresponds to empirical findings from research on collective place attachments (Agnew 1987; Altman and Low 1992; Mesch and Manor 1998; Pellow 1992). “Attachment to a place,” writes Pellow (1992), “derives from the meanings it holds, and those in turn are tied to how people *act*

with one another within the place (p. 189, Emphasis in original).” Group identifications attributed by watershed council members to one another were related to three layers of social ties: family, involvement in community organizations, and relationship to non-urban, upriver residents.

### *Family Identity*

Family identity was particularly instrumental to improving relationships between long-timer residents like Eddie and other MoWPG members. Rachel, who had personal disputes with Eddie over old-growth logging, came to recognize the value of having long-standing families in the watershed, for they provide a sense of history and understanding that others may lack:

“Who can possibly tell us more about how this watershed works than someone who played in it as a little kid and whose father fished in it? He knows the river. And when you reach out to him, he’ll tell you about.”

Even Evelyn, an outspoken environmentalist, shares with members like Eddie the value of being able to raise and keep a family in the watershed:

“People are beginning to see what we might be getting at. Really old-timers are saying, ‘We want to raise our kids here, too.’ Instead of, ‘Well, you guys are trying to stop me from doing what I want to do with my land.’”

In contrast, McWC members do not express values of long-standing families. Even though long-standing, well-respected families inhabit the McKenzie watershed, the McWC has not made any efforts to take advantage of their social ties and status as community opinion leaders. During the interviews, individuals from prominent McKenzie families like the Helrich’s, the Pruitt’s, and the Rennie’s would mention their awareness that a watershed council exists, but they could not define the council’s

purpose or priorities. To James, the long-time lower river resident, the McWC has missed a great opportunity:

“There’s so much history up there, these old families with deep connections to the river. They know the river, they’ve made their living off the river. People listen to them and respect them. I do, I’ve learned so much from just floating down the river, about the fish, about biology. Not in any scientific terms but things like, ‘That green bug only comes out when the water’s real cold, slow, and clear.’ The watershed council really needs to reach out to those folks.”

### *Involvement in Community Organizations*

Nearly three-quarters of the individuals interviewed from the MoWPG had prior relationships through their involvement in community organizations such as the schools, churches, the community council (which primarily serves as a mediator between local citizens and the county land use planning agency), Neighborhood Watch, and the volunteer fire department. Furthermore, there is only one community in the watershed, Marcola, with one high school, one restaurant, one post office, and two stores. Perhaps more than any other community organization, the local high school ties people together in the valley. Even during the heated conflicts over logging old-growth forests in the 1980’s, Rachel felt that she was still highly regarded among community members with ties to the forest products industry because of her involvement in Mohawk High School.

The school was also the site of one of the first MoWPG projects, an arboretum landscaping project. Although the arboretum project involved a very small parcel of land and affected a short segment of a tributary to the Mohawk River, it catalyzed individuals who would normally not collaborate to work together because it involved the high school. A similar central organizing force does not exist in the McKenzie, or



among McWC members. Indeed, very few McWC live outside of the urban areas of Eugene and Springfield. A handful of members belong to community groups within the watershed. However, on the whole, involvement in community organizations is low.

### *Urban versus Upriver Resident*

This layer of group identification is a factor primarily affecting the McWC. The dominance of urban residents on the McWC has had a marked impact on how McWC members relate to one another, and how non-council members relate to McWC members. Although Springfield is technically within the boundaries of the McKenzie watershed, upriver residents do not consider McWC members from either city “watershed residents.” The distinction between “upriver” and urban residents is primarily voiced by residents living within the watershed. The sentiments many McWC members from upriver harbor towards McWC members from the cities are not simply about a perceived difference in interests, values, or ways of knowing. For most of the upriver residents, urban McWC members are perceived to treat the watershed as something to be used or preserved. They have few if any social ties within the watershed and, therefore, are perceived to feel no sense of obligation to account for the welfare of its residents in developing priorities or taking action.

For upriver McWC members like Roger, this lack of connection is the McWC’s greatest weakness and potential downfall:

“The McWC is isolated both physically and socially. We are really doing a poor job getting upriver residents to believe in what we’re doing. Part of my voice is to hopefully improve that. I want to get landowners and homeowners to feel empowered and part of a process and to help them make a difference. Change is not going to happen from the McWC; change comes from the grassroots.”

For Douglas, a former McWC member, the McWC is a evolved from a group of individuals committed to developing community support for McWC actions into a group of elites who have little connection to the broader watershed community:

“As a council partner, it’s not just a job to come to meetings. You must go out to people and get feedback. That’s been broken because there’s not enough people on the council that are from the community. It’s predominated by agency people, elected officials from Eugene and Springfield – people are just sharing information among an elite group.”

The sentiments of Roger and Douglas are echoed by upriver residents themselves. Veronica, a community organizer in an upriver community, contests the idea that upriver residents’ concerns are adequately represented by an agency representative to the McWC who happens to work upriver:

“He doesn’t even live here, he lives in Eugene. He commutes to work and doesn’t have any feel for the community. He doesn’t shop here and doesn’t go to the restaurants. It’s just a job. How is he supposed to know what’s going on here?”

Frasier, a long-time resident of Vida ( about 30 miles upriver of Springfield), regards the McWC as having little or no social connection to watershed residents:

“Most people living up and down the river don’t have a good idea of what they’re (the McWC) doing, what they’re trying to do. They (the McWC members) need to be more visual, take things to more groups like the Lion’s Club. Make them more aware of what’s happening to the river, improvements that can be made, and preserving for the future.”

Simon justifies the lack of focus on developing social relationships with upriver because the McWC is strictly focused on the technical aspects of restoring the McKenzie watershed:

“It would be nice to have representation from every section of the river and have it function as a democratic type of approach. If it was a law-making body, that would work. But this is an advisory body to facilitate restoration of the watershed. In that respect, you don’t want – you shouldn’t have – a cross-section of the population represented. Or else we’d get tangled up dealing with problems with this boat ramp or that road construction or what happens to

recreation revenues when the Corps (U.S. Army Corps of Engineers) drop the water levels of the reservoirs (Cougar and Blue River reservoirs).”

Hence, there is not only a physical distance between the urban and upriver communities, but a significant social distance. The negative attitudes of many upriver residents toward the urban-dominated McWC is mirrored by the apathy of many McWC members (and urban residents concerned with the watershed) for developing connections with upriver residents.

### **3.3.4. Theoretical Relevance and Validity of Group Identity**

Taken together, the many layers of group identification that watershed council members draw from to relate to one another (and to non-council members) coincide with the “ingroup-outgroup” effect in social psychology. In general, ingroup-outgroup is the tendency of people to express positive attitudes and behaviors towards individuals with whom they perceive a shared group identity, and to exhibit negative attitudes and behaviors towards individuals who are perceived to be members of opposing groups (Brewer 1979). Ingroups and outgroups are essentially mental artifacts and are not necessarily bona fide groups with definable structures or boundaries.

Moreover, individuals typically possess multiple layers of group identity. For example, Roger of the McWC is at once an agency employee, a scientist, an avid outdoor recreationist, an active member of a community organization, and a private landowner. The salience of any one of these group identifications – and corresponding ingroups and outgroups – can change with the social context. Frequently, individuals must chose among multiple group identities, which can be frustrating, as Roger contends:

“It’s a tough line to walk. A lot of issues that get discussed are natural resources oriented. Sometimes I have lot of knowledge about them, but I have to think, ‘Where can I step in with my expertise but still represent residents of river?’ I have to be really careful on that. Professional and personally I’m one, but representing the residents’ association, I have to back off a little. It’s always in my mind when I’m in decision-making mode. Sometimes I would just not weigh in on natural resource-oriented issues. I’ll let others do it. I see my role more as a conduit between residents of the valley and what the McWC is doing.”

This “situational salience”, as defined by Turner (1982, p. 19), can be manipulated. In a classic experimental study (see Brewer 1979), subjects who were randomly assigned group distinctions (e.g., “blue” group and “green” group) exhibited ingroup-outgroup behaviors at a higher rate than subjects who were not assigned a group distinction. By the same token, a common ingroup can arise among individuals who previously had perceived one another by outgroup identifications. The transformation of ingroup and outgroup identifications to a common ingroup is particularly evident among the MoWPG. Despite the split between environmentalists and the foresters on the group, Fran has noticed the emergence of some strong commonalities:

“We all tend to cluster a bit. Rachel, Stephanie, and Carmen are all on this end of the valley and all part of the ‘environmental’ group. And there’s the guys down on McKenzie View Drive who work in forestry. But the river is the connection for all of us. I think it’s appropriate that we’re all concerned about it, thinking about it, and wanting to help it. It’s a little funny that what the women do up there can really affect the guys down below! So, there’s definitely some connections.”

The transformation of ingroup-outgroup identifications to a common ingroup was also expressed by Eddie:

“I had reservations about some of the people being on the group, and they certainly had reservations about me. But we’ve gotten better acquainted and I think a lot different of those people than I did before. Some of those folks I called the ‘tree huggers’ and they probably called me the ‘land baron’ or something. There’s some good understanding built between us now about

what's good for the land, the river and this valley. And, anyway, we can't be too picky, because we all got to live together."

The emergence of a common group identification within the MoWPG around their watershed may eventually lead to sustained collaborative relationships.

Experimental findings in group decision-making consistently point to common group identity as a dominant factor affecting increased cooperation rates (Dawes, van de Kragt, and Orbell 1988; Dovidio, Gaetner, and Validzic 1998; Gaertner et al. 1994; Kramer 1993; Kramer and Brewer 1984). Common group identification has also emerged in field studies as a key factor in sustaining cooperative collective action (Kelly and Breinlinger 1996). The potential for a common place-based group identity is further supported by empirical studies by Agnew (1992) and Minami and Tanaka (1995).

In sum, group identifications are theoretically relevant and valid explanatory factors influencing the politics in watershed councils. Case study findings are consistent with the body of scholarship in ingroup-outgroup effects. Furthermore, the emergence of a common place-based group identity provides a valid basis for explaining collaborative behaviors, especially in the MoWPG. As geographer Byron Miller (1992) contends, "Individuals who come to share domains of particular places must necessarily confront the meaning of such interactions... [I]ndividuals may come to see commonalities in their experience. They may come to consider themselves members of a community and view themselves in collective terms (Miller 1992, p. 32)."

### 3.4. Discussion and Conclusions

The key factors affecting the politics of watershed councils center on a fundamental aspect of human behavior – defining and relating to others based on group identifications. Group identification is not unique to natural resource politics. It permeates all kinds of social relationships from race relations at the national level to the ways in which we interact with one another in our communities or places of work. They are also transitory, changing with social and physical context. In natural resource politics, place mediates group identifications by providing a basis upon which people can define and, therefore, behave towards one another. In light of these features of group identity and the manifestations of group identification in the watershed councils, what can be said about the promise and perils of collaboration in natural resource politics? While the limited nature of the case study does not permit direct generalizations to all forms of place-based natural resource collaboration, the study does hold three key lessons.

First, collaborative watershed planning is a dynamic social process that bears little resemblance to the prescriptive models of watershed planning in textbooks and policies (Brooks et al. 1991, ch. 12; State of Oregon 1995a). Prescriptive models of watershed planning propose an iterative, step-wise process in which planning participants:

1. Assess watershed conditions and identify problems and priorities
2. Formulate objectives and strategies based on the assessment
3. Identify alternative courses of actions to implement strategies
4. Appraise and evaluate potential impacts of alternatives

5. Rank and recommend or select alternatives

6. Implement selected alternative and monitor results

In the case study watershed councils, members' interactions persistently turned upon the steps *preceding* the prescribed planning process, such as whose data was being used, who determines the validity of the data, and who can decide what defines a problem or a priority. In other words, the prescriptive model was not realized due to group identifications.

In this regard, collaborative watershed planning is as much about managing the meanings people assign to the watershed as it is about processing technical information about the watershed's biophysical features. Conveners of collaborative watershed planning processes, then, are faced with a great challenge. On the one hand, they desire a product that integrates scientifically valid information with the viewpoints and values of diverse watershed stakeholders. On the other hand, they must convene and cultivate working relationships among those stakeholders who have different ways of relating to the watershed and to one another. Cultivating these working relationships is a time-consuming process. At a minimum, stakeholders should be given the opportunity to repeatedly interact with one another from diverse geographic frames of reference within the watershed. It also takes great skill to manage these interactions so that stakeholders are allowed to fully express their perspectives, interests, and values from their multiple group identities (e.g., as an agency employee, wildlife biologist, resident, landowner, recreation enthusiast).

Allowing an open, yet directed discussion about issues in a particular geographic place may not engender an immediate agreement or action, but with repeated experiences in working with others to develop a common understanding of the

watershed's problems, it is possible that the stakeholders may come to see themselves in common terms, as a community of place (Brandenburg and Carroll 1995). The importance of have stakeholders view one another as members of a community has been recognized in other studies of collaborative watershed planning (Griffin 1999; McGinnis, Woolley, and Gamman 1999). The protection and restoration of watersheds like the McKenzie and Mohawk rest largely on the ability of diverse people to sustain working relationships over the long term because no one entity can mandate and enforce regulations across all land ownerships and communities.

Second, the geographic scale of the landscape in question can affect how participants in collaborations relate to one another and how they might take on-the-ground action. In the case study, common group identifications were discerned among watershed council members addressing the smaller watershed, the Mohawk. From the interviews and participant-observation, the MoWPG members perceived a "closeness" to one another virtue of the size of their watershed. The watershed is regarded by many as their collective "backyard" and many spend their free time exploring the forest and volunteering in community organizations. As a result, there are overlaps in how members experience and understand the watershed, and in their social relationships. By contrast, many participants in the McWC live in Eugene and Springfield, or otherwise very far apart. In one-on-one interviews, many McWC members articulated a general perception that the McKenzie watershed was something "out there" that people went to for recreation or that produced certain commodities and services, like timber, hydroelectric power, and real estate. Especially for the urban residents on the McWC, the watershed was not described in terms that invoked a sense of strong attachments.



There was virtually no overlap in McWC members' experience in the watershed, except for camping or fishing, or in members' involvement in community organizations.

The effect of geographic scale on natural resource collaboration is rarely recognized at a program or policy level. For example, the Oregon Watershed Enhancement Board, which is the primary funding entity for Oregon's watershed councils, and federal agencies like the Environmental Protection Agency tend to award grants to the large-scale watershed councils because they are perceived to have a greater effect on restoring watersheds and, therefore, salmon populations. This makes sense since substantial resources are necessary to develop and maintain large databases and monitoring projects. To this end, the McWC has received over \$2 million since 1993. However, funding agencies have been less consistent in providing support for smaller watershed groups like the MoWPG. Even though the watershed coordinator had fostered a collaborative environment among MoWPG members and watershed residents, funding for her position was terminated in Fall 1998. If watershed restoration ultimately depends on the collaboration among citizens to conduct on-the-ground projects, then policymakers should devote sufficient resources to small-scale watershed councils in order to realize their social and on-the-ground potential, or what social scientists ostensibly call "social capital."

The third lesson from the study is that people have a strong desire for forums in which they can have a voice in natural resource decisions affecting their local place. Many people have a concern for natural resources issues, for they strongly correspond with a high quality of life; indeed, healthy public forests, abundant wildlife, and clean water consistently rank highly in public opinion polls as desired policy priorities

(Dunlap 1992; Kempton, Boster, and Hartley 1995). However, the process of translating these priorities into policy occurs primarily in Washington, D.C., or in what Behan (1991) calls “Potomo-centric” forums. Potomo-centric forums have had spurred the emergence of place-based collaboration in three ways. First, they tend to turn social values of natural resources into dispassionate abstractions, such as forest land allocation units, critical nesting habitat for wildlife, and total maximum daily loads for water pollution. Second, using Relph’s (1976) terms, Potomo-centric forums have amounted to a dominance of “outside” perspectives on how natural resources in local places should be managed. Third, Potomo-centric forums are inaccessible to most citizens. Other than letter-writing campaigns, calling one’s congressional representatives, and contributing to an interest groups, citizens rarely if ever have the opportunity to learn and express their values about natural resource policy priorities.

Place-based collaboration reflects a deep-seated desire on the part of citizens to participate in natural resource politics as an “insider” – to learn about, argue, and be a part of the process of shaping natural resource decisions affecting their local place. The response to the Oregon Plan is indicative of this deep-seated desire; over 80 watershed councils throughout Oregon have formed and are struggling through the process of watershed planning just as the MoWPG and McWC have (State of Oregon 1999). Furthermore, it is not solely the opportunity to affect natural resource decision-making that holds people together. A local watershed is more than critical habitat for salmon or a source for clean drinking water; it is a “culturally meaningful construct because of the associations, relationships, and partnerships that can be created (McGinnis, Woolley, and Gamman 1999, p. 3).” In sum, place is where an individual can discover and

develop a relationship between oneself, one's community, and the environment, and to play a role in shaping how this relationship develops in the future. By participating in forums like place-based collaborations one can develop a sense of place and express geographic imaginations about what that place could and should be.

### 3.5. References

- Agnew, J. 1992. Place and politics in post-war Italy: a cultural geography of local identity in the provinces of Lucca and Pistoia. In *Inventing places: studies in cultural geography*, edited by K. Anderson and F. Gale. Melbourne, Australia: Longman Cheshire.
- Agnew, J.A. 1987. *Place and politics: the geographical mediation of state and society*. Boston, MA: Allen and Unwin.
- Altman, I., and S.M. Low, eds. 1992. *Place attachment*. 12 vols. Vol. 12. New York and London: Plenum Press.
- Behan, R.W. 1991. Forests and plantations and Potomo-centric statutory fixes. *Forest Perspectives* 1 (1):5-8.
- Brandenburg, A.M., and M.S. Carroll. 1995. Your place, or mine: the effect of place creation on environmental values and landscape meanings. *Society and Natural Resources* 8 (5):381-398.
- Brewer, M.B. 1979. In-group bias in the minimal intergroup situation: a cognitive-motivational analysis. *Psychological Bulletin* 86 (2):307-324.
- Brooks, K.N., P.F. Ffolliott, H.M. Gregersen, and J.L. Thames. 1991. *Hydrology and the management of watersheds*. Ames, IA: Iowa State University Press.
- Buttimer, A. 1976. Exploring the social dimensions of environmental knowing: a commentary. In *Environmental knowing: theories, research, and methods*, edited by G. T. Moore and R. G. Golledge. Stroudsburg, PA: Dowden, Hutchinson & Ross, Inc.
- Cantrill, J.G. 1998. The environmental self and a sense of place: communication foundations for regional ecosystem management. *Journal of Applied Communication Research* 26:301-318.
- Cuba, L., and D.M. Hummon. 1993. A place to call home: identification with dwelling, community, and region. *Sociological Quarterly* 34 (1):111-131.
- Daniels, S.E., and G.B. Walker. 1996. Collaborative learning: improving public deliberation in ecosystem-based management. *Environmental Impact Assessment Review* 16:71-102.

- Dawes, R.M., A. van de Kragt, and J.M. Orbell. 1988. Not me or thee but we: the importance of group identity in eliciting cooperation in dilemma situations: experimental manipulations. *Acta Psychologica* 68:83-97.
- Dovidio, J.F., S.L. Gaetner, and A. Validzic. 1998. Intergroup bias: status, differentiation, and a common in-group identity. *Journal of Personality and Social Psychology* 75 (1):109-120.
- Dunlap, R.E. 1992. Trends in public opinion toward environmental issues: 1965-1990. In *American environmentalism: the U.S. environmental movement, 1970-1990*, edited by R. E. Dunlap and A. G. Mertig. Philadelphia, PA: Taylor and Francis.
- Duram, L.A., and K.G. Brown. 1999. Assessing public participation in U.S. watershed planning initiatives. *Society and Natural Resources* 12 (5):455-467.
- Gaertner, S.L., M.C. Rust, J.F. Dovidio, B.A. Bachman, and P.A. Anastano. 1994. The contact hypothesis: the role of a common ingroup identity on reducing intergroup bias. *Small Group Research* 25 (2):224-249.
- Glaser, B.G., and A.L. Strauss. 1967. *The discovery of grounded theory: strategies for qualitative research*. New York: Aldine Publishing Company.
- Gray, B. 1989. *Collaborating: finding common ground for multiparty problems*. San Francisco, CA: Jossey-Bass, Inc.
- Greider, T., and L. Garkovich. 1994. Landscapes: the social construction of nature and the environment. *Rural Sociology* 59 (1):1-24.
- Griffin, C.B. 1999. Watershed councils: an emerging form of public participation in natural resource management. *Journal of the American Water Resources Association* 35 (3):505-518.
- Kelly, C., and S. Breinlinger. 1996. *The social psychology of collective action: identity, injustice, and gender*. London: Taylor & Francis, Ltd.
- Kemmis, D. 1990. *Community and the politics of place*. Norman, OK: University of Oklahoma Press.
- Kempton, W., J.S. Boster, and J.A. Hartley. 1995. *Environmental values in American culture*. Cambridge, MA: MIT Press.
- Kenney, D.S. 1999. Historical and sociopolitical context of the Western watersheds movement. *Journal of the American Water Resources Association* 35 (3):493-503.
- Kramer, R.M., P. Pommerenke, E. Newton. 1993. The social context of negotiation: effects of social identity and interpersonal accountability on negotiator decisionmaking. *Journal of Conflict Resolution* 37 (4):633-654.

- Kramer, R.M., and M.B. Brewer. 1984. Effects of group identity on resource use in a simulated commons dilemma. *Journal of Personality and Social Psychology* 46 (5):1044-1057.
- McGinnis, M.V., J. Woolley, and J. Gamman. 1999. Bioregional conflict resolution: rebuilding community in watershed planning and organizing. *Environmental Management* 24 (1):1-12.
- McKenzie Watershed Council. 1998. McKenzie watershed council homepage 1998 [cited March 3 1998]. Available from <http://www.pond.net/~mwc>.
- Mesch, G.S., and O. Manor. 1998. Social ties, environmental perception, and local attachment. *Environment and Behavior* 30 (4):504-519.
- Miller, B. 1992. Collective action and rational choice: place, community, and the limits of individual self-interest. *Economic Geography* 68:22-42.
- Minami, H., and K. Tanaka. 1995. Social and environmental psychology: transaction between physical space and group-dynamic processes. *Environment and Behavior* 27 (1):43-55.
- Moore, G.T. 1976. Theory and research on the development of environmental knowing. In *Environmental knowing: theories, research, and methods*, edited by G. T. Moore and R. G. Golledge. Stroudsburg, PA: Dowden, Hutchinson & Ross, Inc.
- Natural Resources Conservation Service. 1999. Draft Mohawk watershed assessment. Portland, OR: USDA Natural Resources Conservation Service.
- Natural Resources Law Center. 1996. The watershed sourcebook: watershed-based solutions to natural resource problems. Boulder, CO: Natural Resources Law Center, University of Colorado.
- Pellow, D. 1992. Attachment to the African compound. In *Place attachment*, edited by I. Altman and S. M. Low. New York, NY: Plenum Press.
- Reis, H.T., ed. 1983. *Naturalistic approaches to studying social interaction*. San Francisco, CA: Jossey-Bass.
- Relph, E. 1976. *Place and placelessness*. London, England: Pion Limited.
- Selin, S., and D. Chavez. 1995. Developing a collaborative model for environmental planning and management. *Environmental Management* 19 (2):189-195.
- Selin, S.W., M.A. Schuett, and D.S. Carr. 1997. Has collaborative planning taken root in the national forests? *Journal of Forestry* 95 (5):25-28.
- Starrs, P.F. 1994. The importance of places, or, a sense of where you are. *Spectrum: The Journal of State Governments* 67 (3):5-17.

- State of Oregon. 1995a. Guidelines for watershed councils. Salem, OR: Oregon Watershed Health Program, State of Oregon.
- State of Oregon. 1995b. Oregon's watershed health program, Volume 1. Salem, OR: Oregon Watershed Health Program, State of Oregon.
- State of Oregon. 1997. The Oregon Plan for Salmon and Watersheds: Coastal Salmon Restoration Initiative - Executive Summary Overview 1997 [cited November 1 1997]. Available from <http://www.oregon-plan.org/FExec.html>.
- State of Oregon. 1999. The Oregon Plan for Salmon and Watersheds: annual report 1999. Salem, OR: Governor's Natural Resource Office, State of Oregon.
- Strauss, A., and J. Corbin. 1990. Basics of qualitative research: grounded theory procedures and techniques. Newbury Park, CA: Sage Publications.
- Taylor, P.J. 1984. Geographical scale and political geography. In Political geography: recent advances and future directions, edited by P. Taylor and J. House. London, England: Croom Helm.
- Tuan, Y.F. 1974. Topophilia: a study of environmental perception, attitudes, and values. Englewood Cliffs, N.J.: Prentice-Hall.
- Turner, J.C. 1982. Towards a cognitive redefinition of the social group. In Social identity and intergroup relations, edited by H. Tajfel. Cambridge, England: Cambridge University Press.
- Weber, R.P. 1990. Basic content analysis. 2nd ed. Newbury Park, CA: Sage Publications.
- Western Governor's Association. 1998. Policy Resolution 98-001: Enlibra: a new shared management doctrine for environmental management 1998 [cited October 7 1998]. Available from <http://www.westgov.org/wga/initiatives/enlibra.htm>.
- Williams, D.R., and M.E. Patterson. 1996. Environmental meaning and ecosystem management: perspectives from environmental psychology and human geography. *Society and Natural Resources* 9 (5):507-521.
- Williams, E.M., and P.V. Ellefson. 1997. Going into partnership to manage a landscape. *Journal of Forestry* 95 (5):29-33.

## SUMMARY

The research presented in this dissertation is significant from both a practical and a theoretical perspective. From a practical perspective, the case study highlights the fundamental importance of *designing appropriate forums* in natural resource politics. Policy stakeholders in formal, centralized forums – such as legislatures, agency regulatory planning processes, or courtrooms – may be motivated by economic incentives, political power, or fear of sanctions and interact competitively. These same stakeholders may respond quite differently to forums organized around places in which they and their families live. Despite their divergent interests, the stakeholders may share affiliations to the place. In sharing common affiliations to place, they may be able to collectively define and work towards common natural resource goals.

In a similar vein, forums organized around large geographic scales can engender quite different group identifications and, therefore, behaviors than forums organized around small geographic scales. As indicated in the case study, the small-scale watershed council had closer social ties to watershed residents than the large-scale council, and was able to leverage those ties to implement on-the-ground projects. However, the large-scale council was more effective in addressing policy-related problems because they were able to leverage resources for watershed-wide scientific studies. The question may not be large- versus small-scale decision processes, but to have many different forums functioning towards an overarching policy goal, such as salmon recovery or watershed enhancement.



The case study findings lend support to the Western Governors' Association's (1998) "Enlibra" doctrine of environmental policy. In general, Enlibra proposes that broad environmental policy objectives should be set at the federal level, such as clean water standards and endangered species protection. However, how those objectives should be realized should be left to multi-state regional compacts, states, and even local entities. The underlying principle of Enlibra is that the attainment of environmental policy goals rests on sustained public support for these goals. Creating diverse local forums for affected and interested publics to deliberate how to best attain broad environmental objectives is a key strategy to sustaining public support for those objectives. Theoretical and empirical studies from other policy domains support the movement towards diversifying decision-making forums in order to sustain public support for difficult policy decisions (Elster 1992; Ostrom 1991). Vincent Ostrom (1991) defines this arrangement as "polycentricity."

At a theoretical level, the three manuscripts converge on a central theme: natural resource politics is a multi-layered, social psychological environment in which people exhibit a range of behavioral strategies, from neighborly collaboration to rigid positional bargaining to outright protest. Employing a behavioral approach to policy analysis, this dissertation identifies and systematically examines the social psychological factors affecting behavior place-based collaboration. In sum, this dissertation centers on the notion that behavior in natural resource politics is a function of how participants perceive themselves, one another, and the situation at hand. This a notable departure from conventional natural resource policy analyses, which tend to theorize behavior as a function of institutional rules, incentives, organizational factors,

population attitudes, and socio-economic indicators. There is extremely high value in exploring the importance of these factors. Small changes in institutional incentives or the organizational structure of an agency can have profound changes in how natural resource policy objectives are achieved. Small investments in public education and technical assistance programs can yield significant changes in attitudes.

Nevertheless, the theoretical premise underlying this dissertation is that behavior is influenced by factors other than incentives and information, such as group identity and affiliations to place. This premise, and the case study findings supporting it, are consistent with a growing body of empirical field research on collaborative collective action in natural resource management (Bromley 1992; Ostrom 1990; Tang 1992; White and Runge 1995). Experimental studies of social dilemmas, negotiation games, and group decision-making have consistently challenged theoretical models that predict behavior solely from material payoffs or from preferences of decision stakeholders (see Ostrom 1998, for review of these studies). The behavioral perspective is firmly grounded in political science, negotiation, conflict management, and other fields of inquiry concerned with how diverse individuals collectively make decisions and take action.

In conclusion, this dissertation contributes to the development of a behavioral theory of natural resource politics, one that rests upon empirically validated generalizations of human behavior. As the body of empirical findings grows, it will be possible to rigorously challenge and revise the theory with formal hypothesis-testing studies, as well as grounded theory-based field research. Institutional rules and incentives, organizational factors, public attitudes, socio-economic status, and other

non-situational social variables will continue to be central in the study of natural resource politics. However, policies that rely solely on these factors to achieve natural resource goals may fall short. A key challenge to natural resource policy analysts is to develop theories of behavior in response to natural resource policies that are realistic and empirically grounded. As Ostrom, Gardner, and Walker (1994) contend, “A policy is only as good as the theory underlying it (p. 319).” Developing theories that have been rigorously challenged through sound empirical methods may improve the design and implementation of natural resource policies.

## BIBLIOGRAPHY

- Adams, B., L. Lundquist, and J.A. Kitzhaber. 1997. Memorandum regarding the Oregon Plan for Coastal Salmon Restoration Initiative and Healthy Streams Partnership: <http://www.oregon-plan.org/letter.html>.
- Agnew, J. 1992. Place and politics in post-war Italy: a cultural geography of local identity in the provinces of Lucca and Pistoia. In *Inventing places: studies in cultural geography*, edited by K. Anderson and F. Gale. Melbourne, Australia: Longman Cheshire.
- Agnew, J.A. 1987. Place and politics: the geographical mediation of state and society. Boston, MA: Allen and Unwin.
- Agnew, J.A. 1989. The devaluation of place in social science. In *The power of place: bringing together geographical and sociological imaginations*, edited by J. A. Agnew and J. S. Duncan. Boston, MA: Unwin Hyman.
- Alaska Rainforest Campaign. 1999. *Alaska rainforest: the land and its people* 1998 [cited August 24 1999]. Available from <http://www.akrain.org/rainforest/landpeople.asp>.
- Altman, I., and S.M. Low, eds. 1992. *Place attachment*. 12 vols. Vol. 12. New York and London: Plenum Press.
- Anderson, K., and F. Gale. 1992. *Inventing places: studies in cultural geography*: Longman Cheshire; Wiley; Halsted Press.
- Atkinson, A.B., and J.E. Stiglitz. 1980. *Lectures on public economics*. New York, N.Y.: McGraw-Hill.
- Behan, R.W. 1991. Forests and plantations and Potomo-centric statutory fixes. *Forest Perspectives* 1 (1):5-8.
- Bemelmans-Videc, M., R.C. Rist, and E. Vedung, eds. 1998. *Carrots, sticks, and sermons: policy instruments and their evaluation*. New Brunswick, N.J.: Transaction Publishers.
- Ben-Yoav, O., and D.G. Pruitt. 1984. Resistance to yielding and the expectation of cooperative future interaction in negotiation. *Journal of Experimental Psychology* 20 (4):323-335.
- Bliss, J.C., and A.J. Martin. 1989. Identifying NIPF management motivations with qualitative methods. *Forest Science* 35 (2):601-622.

- Brandenburg, A.M., and M.S. Carroll. 1995. Your place, or mine: the effect of place creation on environmental values and landscape meanings. *Society and Natural Resources* 8 (5):381-398.
- Brewer, M.B. 1979. In-group bias in the minimal intergroup situation: a cognitive-motivational analysis. *Psychological Bulletin* 86 (2):307-324.
- Bromley, D.W., ed. 1992. *Making the commons work: theory, practice, and policy*. San Francisco, CA: Institute for Contemporary Studies.
- Brooks, K.N., P.F. Ffolliott, H.M. Gregersen, and J.L. Thames. 1991. *Hydrology and the management of watersheds*. Ames, IA: Iowa State University Press.
- Brown, B.B., and D.D. Perkins. 1992. Disruptions in place attachment. In *Place attachment*, edited by I. Altman and S. M. Low. New York, NY: Plenum Press.
- Burnett, P. 1976. Behavioral geography and the philosophy of the mind. In *Spatial choice and spatial behavior: geographic essays on the analysis of preferences and perceptions*, edited by R. G. Golledge and G. Rushton. Columbus, OH: Ohio State University Press.
- Buttimer, A. 1976. Exploring the social dimensions of environmental knowing: a commentary. In *Environmental knowing: theories, research, and methods*, edited by G. T. Moore and R. G. Golledge. Stroudsburg, PA: Dowden, Hutchinson & Ross, Inc.
- Buttimer, A., and D. Seamon, eds. 1980. *The human experience of space and place*. New York, N.Y.: St. Martin's Press.
- Canter, D. 1977. *The psychology of place*. New York, N.Y.: St. Martin's Press.
- Cantrill, J.G. 1998. The environmental self and a sense of place: communication foundations for regional ecosystem management. *Journal of Applied Communication Research* 26:301-318.
- Clark, J. 1997. Watershed partnerships: a strategic guide for local conservation efforts in the West. Denver, CO: Western Governors' Association.
- Conable, P. 1996. Equal footing, county supremacy, and the Western public lands. *Environmental Law* 26 (9):1263-1286.
- Cuba, L., and D.M. Hummon. 1993. A place to call home: identification with dwelling, community, and region. *Sociological Quarterly* 34 (1):111-131.
- Cubbage, F.W., J. O'Laughlin, and C.S. Bullock. 1993. *Forest resource policy*. New York, N.Y.: John Wiley & Sons, Inc.

- Daniels, S.E., and G.B. Walker. 1995. Managing local environmental conflict amidst national controversy. *International Journal of Conflict Management* 6 (3):290-311.
- Daniels, S.E., and G.B. Walker. 1996. Collaborative learning: improving public deliberation in ecosystem-based management. *Environmental Impact Assessment Review* 16:71-102.
- Dawes, R.M., A. van de Kragt, and J.M. Orbell. 1988. Not me or thee but we: the importance of group identity in eliciting cooperation in dilemma situations: experimental manipulations. *Acta Psychologica* 68:83-97.
- Dombeck, M. 1997. Sustaining the health of the land through collaborative stewardship. Message to all Forest Service employees from Mike Dombeck on his first day as Chief, January 6, 1997. Washington, D.C.: Forest Service, US Department of Agriculture.
- Dovidio, J.F., S.L. Gaetner, and A. Validzic. 1998. Intergroup bias: status, differentiation, and a common in-group identity. *Journal of Personality and Social Psychology* 75 (1):109-120.
- Duncan, J., and D. Ley, eds. 1993. *Place/culture/representation*. London, England: Routledge.
- Duncan, J.S., and N.G. Duncan. 1976. Housing as presentation as self and the structure of social networks. In *Environmental knowing: theories, research, and methods*, edited by G. T. Moore and R. G. Golledge. Stroudsburg, PA: Hutchinson & Ross, Inc.
- Dunlap, R.E. 1992. Trends in public opinion toward environmental issues: 1965-1990. In *American environmentalism: the U.S. environmental movement, 1970-1990*, edited by R. E. Dunlap and A. G. Mertig. Philadelphia, PA: Taylor and Francis.
- Duram, L.A., and K.G. Brown. 1999. Assessing public participation in U.S. watershed planning initiatives. *Society and Natural Resources* 12 (5):455-467.
- Elder, C.D., and R.W. Cobb. 1983. *The political uses of symbols*. New York, N.Y.: Longman.
- Elster, J. 1992. Local justice: how institutions allocate scarce goods and necessary burdens. New York, N.Y.: Russell Sage Foundation.
- Environmental Conservation Organization. 1997. The consensus con. *Multiple Land Use Review* (July):23.
- Eyles, J. 1985. *Senses of place*. Warrington, UK: Silverbrook Press.

- Feld, S., and K.H. Basso. 1996. *Senses of place*. Santa Fe, N.M.: School of American Research Press.
- Francis, J.G. 1990. Natural resources, contending theoretical perspectives, and the problem of prescription: an essay. *Natural Resources Journal* 30 (2):263-282.
- Gaertner, S.L., M.C. Rust, J.F. Dovidio, B.A. Bachman, and P.A. Anastano. 1994. The contact hypothesis: the role of a common ingroup identity on reducing intergroup bias. *Small Group Research* 25 (2):224-249.
- Glaser, B.G., and A.L. Strauss. 1967. *The discovery of grounded theory: strategies for qualitative research*. New York: Aldine Publishing Company.
- Golledge, R.G., and G. Rushton, eds. 1976. Spatial choice and spatial behavior: geographic essays on the analysis of preferences and perceptions. Columbus, OH: Ohio State University.
- Gray, B. 1989. Collaborating: finding common ground for multiparty problems. San Francisco, CA: Jossey-Bass, Inc.
- Greider, T., and L. Garkovich. 1994. Landscapes: the social construction of nature and the environment. *Rural Sociology* 59 (1):1-24.
- Griffin, C.B. 1999. Watershed councils: an emerging form of public participation in natural resource management. *Journal of the American Water Resources Association* 35 (3):505-518.
- Hirsch, E., and M. O'Hanlon. 1995. *The anthropology of landscape: perspectives on place and space*. London, UK: Clarendon Press and Oxford University Press.
- Jetten, J., R. Spears, and A.S.R. Manstead. 1996. Intergroup norms and intergroup discrimination: distinctive self-categorization and social identity effects. *Journal of Personality and Social Psychology* 71 (6):1222-1233.
- Johnson, J.B., and R.A. Joslyn. 1995. *Political science research methods*. 3rd ed. Washington, D.C.: Congressional Quarterly Press.
- Kaplan, R., and S. Kaplan. 1989. *The experience of nature: a psychological perspective*. Cambridge University Press.
- Kelly, C., and S. Breinlinger. 1996. The social psychology of collective action: identity, injustice, and gender. London: Taylor & Francis, Ltd.
- Kemmis, D. 1990. *Community and the politics of place*. Norman, OK: University of Oklahoma Press.
- Kempton, W., J.S. Boster, and J.A. Hartley. 1995. *Environmental values in American culture*. Cambridge, MA: MIT Press.

- Kenney, D.S. 1999. Historical and sociopolitical context of the Western watersheds movement. *Journal of the American Water Resources Association* 35 (3):493-503.
- Kitzhaber, J.A. 1996. We Oregonians, working together, can save our salmon. *The Oregonian*, August 6, 1996, B7.
- Kitzhaber, J.A. 1998. Western Governor's Association Enlibra speech: Governor's Office, State of Oregon.
- Knetsch, J.L. 1995. Assumptions, behavioral findings, and policy analysis. *Journal of Policy Analysis and Management* 14 (1):68-78.
- Kollock, P. 1998. Social dilemmas: the anatomy of cooperation. *Annual Review of Sociology* 24:183-214.
- Kramer, B. 1995. Classification of generic places: explorations with implications for evaluation. *Journal of Environmental Psychology* 15 (1):3-22.
- Kramer, R.M., P. Pommerenke, E. Newton. 1993. The social context of negotiation: effects of social identity and interpersonal accountability on negotiator decisionmaking. *Journal of Conflict Resolution* 37 (4):633-654.
- Kramer, R.M., and M.B. Brewer. 1984. Effects of group identity on resource use in a simulated commons dilemma. *Journal of Personality and Social Psychology* 46 (5):1044-1057.
- Krannich, R.S., and M.D. Smith. 1998. Local perceptions of public lands natural resource management in the rural West: toward improved understanding of the "Revolt of the West". *Society and Natural Resources* 11 (7):677-695.
- Low, S.M. 1992. Symbolic ties that bind: place attachment in the plaza. In *Place attachment*, edited by I. Altman and S. M. Low. New York, N.Y.: Plenum Press.
- Low, S.M., and I. Altman. 1992. Place attachment: a conceptual inquiry. In *Place attachment*, edited by I. Altman and S. M. Low. New York, NY: Plenum Press.
- McCloskey, M. 1996. The skeptic: collaboration has its limits. *High Country News* 28 (9):7.
- McGinnis, M.V., J. Woolley, and J. Gamman. 1999. Bioregional conflict resolution: rebuilding community in watershed planning and organizing. *Environmental Management* 24 (1):1-12.
- McKenzie Watershed Council. 1998. *McKenzie watershed council homepage* 1998 [cited March 3 1998]. Available from <http://www.pond.net/~mwc>.



- Mesch, G.S., and O. Manor. 1998. Social ties, environmental perception, and local attachment. *Environment and Behavior* 30 (4):504-519.
- Miller, B. 1992. Collective action and rational choice: place, community, and the limits of individual self-interest. *Economic Geography* 68:22-42.
- Minami, H., and K. Tanaka. 1995. Social and environmental psychology: transaction between physical space and group-dynamic processes. *Environment and Behavior* 27 (1):43-55.
- Moore, G.T. 1976. Theory and research on the development of environmental knowing. In *Environmental knowing: theories, research, and methods*, edited by G. T. Moore and R. G. Golledge. Stroudsburg, PA: Dowden, Hutchinson & Ross, Inc.
- Mueller, D.C. 1989. *Public Choice II*. Cambridge, England: Cambridge University Press.
- Natural Resources Conservation Service. 1999. Draft Mohawk watershed assessment. Portland, OR: USDA Natural Resources Conservation Service.
- Natural Resources Law Center. 1996. The watershed sourcebook: watershed-based solutions to natural resource problems. Boulder, CO: Natural Resources Law Center, University of Colorado.
- Neuman, W.L. 1994. Social research methods: qualitative and quantitative approaches. 2nd ed. Boston, MA: Allyn and Bacon.
- Northrup, T.A. 1989. The dynamic of identity in personal and social conflict. In *Intractable conflicts and their transformation*, edited by L. Kriesberg, T. A. Northrup and S. J. Thorson. Syracuse, N.Y.: Syracuse University Press.
- Oregon Revised Statutes. 1995. Chapter 541, Section 345 to 400.
- Ostrom, E. 1990. Governing the commons: the evolution of institutions for collective action. Cambridge, England: Cambridge University Press.
- Ostrom, E. 1998. A behavioral approach to the rational choice theory of collective action. *American Political Science Review* 92 (1):1-22.
- Ostrom, E., R. Gardner, and J. Walker. 1993. Covenants with and without a sword: self-governance is possible. In *The political economy of customs and culture: informal solutions to the commons problem*, edited by T. L. Anderson and R. T. Simmons. Savage, MD: Rowman and Littlefield Publishers.
- Ostrom, E., R. Gardner, and J. Walker. 1994. *Rules, games, and common-pool resources*. Ann Arbor, MI: The University of Michigan Press.

- Ostrom, V. 1991. *The meaning of American federalism: constituting a self-governing society*. San Francisco, CA: Institute of Contemporary Studies Press.
- O'Toole, R. 1988. *Reforming the Forest Service*. Covelo, CA and Washington, D.C.: Island Press.
- Pampush, G. 1997. Plan's worth a try. *The Oregonian*, March 26, 1997, B11.
- Pellow, D. 1992. Attachment to the African compound. In *Place attachment*, edited by I. Altman and S. M. Low. New York, NY: Plenum Press.
- Polzer, J.T., E.A. Mannix, and M.A. Neale. 1995. Multiparty negotiation in its social context. In *Negotiation as a social process*, edited by R. M. Kramer and D. M. Messick. Thousand Oaks, CA: Sage Publications.
- Proshansky, H.M., A.F. Fabian, and R. Kaminoff. 1983. Place-identity: physical world socialization of the self. *Journal of Environmental Psychology* 3 (1):57-83.
- Pruitt, D.G., and P.J. Carnevale. 1993. *Negotiation in social conflict*. Pacific Grove, CA: Brooks Cole Publishing Company.
- Reich, R.B. 1985. Public administration and public deliberation: an interpretive essay. *Yale Law Journal* 94 (7):1617-1642.
- Reis, H.T., ed. 1983. *Naturalistic approaches to studying social interaction*. San Francisco, CA: Jossey-Bass.
- Relph, E. 1976. *Place and placelessness*. London, England: Pion Limited.
- Rodman, M.C. 1992. Empowering place: multilocality and multivocality. *American Anthropologist* 94 (3):640-656.
- Rouhana, N.M., A. O'Dwyer, and S.K. Morrison-Vaso. 1997. Cognitive biases and political party affiliation in intergroup conflict. *Journal of Applied Social Psychology* 27 (1):37-57.
- Sack, R.D. 1992. Place, modernity, and the consumer's world: a relational framework for geographical analysis. Baltimore, MD: Johns Hopkins University Press.
- Schneider, A., and H. Ingram. 1990. Behavioral assumptions of policy tools. *Journal of Politics* 52 (2):510-529.
- Selin, S., and D. Chavez. 1995. Developing a collaborative model for environmental planning and management. *Environmental Management* 19 (2):189-195.
- Selin, S.W., M.A. Schuett, and D.S. Carr. 1997. Has collaborative planning taken root in the national forests? *Journal of Forestry* 95 (5):25-28.

- Shafritz, J.M., and A.C. Hyde, eds. 1997. *Classic of public administration*. 4th ed. Fort Worth, TX: Harcourt Brace College Publishers.
- Simon, H.A. 1976. *Administrative behavior: a study of decisionmaking processes in administrative organization*. Third ed. New York, N.Y.: The Free Press, division of Macmillan Publishing Company, Inc.
- Starrs, P.F. 1994. The importance of places, or, a sense of where you are. *Spectrum: The Journal of State Governments* 67 (3):5-17.
- State of Oregon. 1995a. Guidelines for watershed councils. Salem, OR: Oregon Watershed Health Program, State of Oregon.
- State of Oregon. 1995b. Oregon's watershed health program, Volume 1. Salem, OR: Oregon Watershed Health Program, State of Oregon.
- State of Oregon. 1996. The Governor's Coastal Salmon Restoration Initiative - executive summary. Salem, OR: Governor's Natural Resource Office, State of Oregon.
- State of Oregon. 1997a. Governor's Watershed Enhancement Board program status, 1995-1997. Salem, OR: Governor's Watershed Enhancement Board, State of Oregon.
- State of Oregon. 1997. *The Oregon Plan for Salmon and Watersheds: Coastal Salmon Restoration Initiative* 1997b [cited November 1 1997]. Available from <http://www.oregon-plan.org/>.
- State of Oregon. 1997. The Oregon Plan for Salmon and Watersheds: Coastal Salmon Restoration Initiative - Executive Summary Overview 1997c [cited November 1 1997]. Available from <http://www.oregon-plan.org/FExec.html>.
- State of Oregon. 1998. The Oregon Plan for Salmon and Watersheds: Supplement I Steelhead - executive summary. Salem, OR: Governor's Natural Resource Office, State of Oregon.
- State of Oregon. 1999. The Oregon Plan for Salmon and Watersheds: annual report 1999. Salem, OR: Governor's Natural Resource Office, State of Oregon.
- Strauss, A., and J. Corbin. 1990. Basics of qualitative research: grounded theory procedures and techniques. Newbury Park, CA: Sage Publications.
- Stroup, R., and J. Baden. 1983. *Natural resources: bureaucratic myths and environmental management*. San Francisco, CA: Pacific Institute for Public Policy Research.
- Tang, S.Y. 1992. *Institutions and collective action: self-governance in irrigation*. San Francisco, CA: Institute for Contemporary Studies.

- Taylor, P.J. 1984. Geographical scale and political geography. In *Political geography: recent advances and future directions*, edited by P. Taylor and J. House. London, England: Croom Helm.
- Thompson, L. 1990. Negotiation behavior and outcomes: empirical evidence and theoretical issues. *Psychological Bulletin* 108 (3):515-532.
- Tuan, Y.F. 1974. *Topophilia: a study of environmental perception, attitudes, and values*. Englewood Cliffs, N.J.: Prentice-Hall.
- Turner, J.C. 1982. Towards a cognitive redefinition of the social group. In *Social identity and intergroup relations*, edited by H. Tajfel. Cambridge, England: Cambridge University Press.
- Twigger-Ross, C.I., and D.L. Uzzell. 1996. Place and identity processes. *Journal of Environmental Psychology* 16:205-220.
- US Department of the Interior. 1999. *An ecosystem management approach to fish and wildlife conservation* US Fish and Wildlife Service, US Department of the Interior, 1998 [cited February 5 1999]. Available from <http://bluegoose.arw.r9.fws.gov/NWRSfiles/HabitatMgmt/concept.html>.
- US Environmental Protection Agency. 1996. Watershed approach framework. Washington, D.C.: Office of Water, US Environmental Protection Agency.
- Weber, R.P. 1990. *Basic content analysis*. 2nd ed. Newbury Park, CA: Sage Publications.
- Western Governor's Association. 1998. *Policy Resolution 98-001: Enlibra: a new shared management doctrine for environmental management* 1998 [cited October 7 1998]. Available from <http://www.westgov.org/wga/initiatives/enlibra.htm>.
- White, R. 1995. *The organic machine: the remaking of the Columbia River*. New York, N.Y.: Hill and Wang.
- White, T.A., and C.F. Runge. 1995. The emergence and evolution of collective action: lessons from watershed management in Haiti. *World Development* 23 (October):1683-1698.
- Williams, D.R., and M.E. Patterson. 1996. Environmental meaning and ecosystem management: perspectives from environmental psychology and human geography. *Society and Natural Resources* 9 (5):507-521.
- Williams, E.M., and P.V. Ellefson. 1997. Going into partnership to manage a landscape. *Journal of Forestry* 95 (5):29-33.

- Xu, Z., and D.N. Bengston. 1997. Trends in national forest values among forestry professionals, environmentalists, and the news media. *Society and Natural Resources* 10 (1):43-59.
- Yaffee, S.L., A.F. Phillips, I.C. Frentz, P.W. Hardy, S.M. Maleki, and B.E. Thorpe. 1996. *Ecosystem management in the United States*. Washington, D.C.: Island Press.
- Yanow, D. 1996. How does a policy mean? Interpreting policy and organizational actions. Washington, D.C.: Georgetown University Press.

## **APPENDIX 1: CASE STUDY METHODOLOGY**

### **A.1 Introduction**

The case study presented in this dissertation is written as a journal article submission. As a result, the methodology discussion is abbreviated and assumes that the reader (e.g., a journal reviewer) has a working knowledge of qualitative research methods. The purpose of this appendix is to remove this assumption and present a detailed discussion of the methodology employed in the case study. The goal of this discussion is to offer readers unfamiliar with qualitative research methods a better understanding of how I conducted the case study and how inferences were made from the data collected. This discussion is divided into three sections: 1) Case study selection process; 2) Data gathering: participant observation techniques and interview protocol and sampling; and 3) Data analysis: grounded theory coding procedures and content analysis of written documents

### **A.2 Case Study Selection Process**

According to Yin (1984), “A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used (p. 23).” Yin asserts three criteria for determining whether to employ a case study approach to social research (Yin 1984, p. 16): 1) when “how” or “why” questions are being posed; 2) when the investigator has little control over actual

behavioral events; and 3) when the focus of the study is on contemporary (opposed to historical) social phenomena.

In light of these criteria, I elected to employ a case study approach due to three factors. First, the research question underlying this inquiry was: "Why do individuals chose to collaborate in natural resource planning groups?" I was primarily interested in how the social context of collaborative natural resource planning groups affect and is affected by individual strategies. The units of analysis are both the individual and the group. Second, I had little control over the behavior of individuals in collaborative natural resource planning groups, thereby precluding my ability to conduct decision-making experiments. Third, collaborative natural resource planning groups are ongoing, contemporary social phenomena that are relatively novel and, therefore, have not been systematically examined.

The research question could be addressed in part using survey or questionnaire techniques. However, collaboration is fundamentally a social process (Gray 1989); individual strategies emerge from and, in turn, shape group dynamics. As such, these strategies can not be examined in isolation through remote sensing social research techniques such as a survey. A richer understanding of how individuals' strategies are shaped and transformed can be garnered by conducting an in-depth investigation of the real-life social context in which those individuals are embedded. The justification for using a case study approach is further strengthened because of the existing survey research on natural resource collaboration. Several surveys have been conducted to examine the organizational structure and composition of natural resource collaborations (Natural Resources Law Center 1996; Williams and Ellefson 1997), and perceptions of



participants in those collaborative groups (Duram and Brown 1999). While these surveys introduce collaborative natural resource planning groups to readers, they do not capture the nuances and richness of the social processes that give collaborative groups life.

The two cases that were eventually chosen, the McKenzie Watershed Council (McWC) and the Mohawk Watershed Planning Group (MoWPG), were selected from a larger pool of potential cases. The pool of potential cases was developed from a catalog of collaborative natural resource groups in the Western U.S.. The Western U.S. was chosen because of the longevity of such groups and the diversity of ownerships encompassed by collaborative groups. Among the premier current natural resource policy challenges is how ecosystem management principles are to be operationalized in mixed ownership landscapes. The draft pool of potential cases included: the Delta/Montrose Public Lands Partnership (Colorado); the Flathead Forest Partnership (Montana); the Marys River Watershed Council (Oregon); the McKenzie Watershed Council (Oregon); the Mid-Coast Watershed Council (Oregon); the Ponderosa Pine Partnership (Colorado); the South Santiam Watershed Council (Oregon); and the Upper Deschutes River Watershed Council.

The groups outside Oregon were eliminated from consideration for two reasons. The first was logistical in nature. Because the case study required repeated contact with a collaborative group over a long period of time, it would have been necessary to live within the community most closely associated with the group's landscape of concern. Financial and time constraints made these options infeasible. Second, gaining entrance into many of these groups depended on cultivating relationships with key informants –

individuals who are active participants in the phenomenon in question and who willingly assist the investigator with background information, access to meetings, and introductions to other participants. Although I gained some level of confidence and trust of key informants in the Delta/Montrose, Flathead, and Ponderosa Pine groups, there was not an explicit, outward signal of willing assistance to establish my research project.

Of the potential case study watershed councils in Oregon, only the McWC worked in tandem with an established “sub-basin” group such as the MoWPG. I did, however, attend meetings of the Marys River and South Santiam watershed councils, and held regular meetings with coordinators of those councils to discuss my research findings. These repeated contacts served as validity checks as the project developed.

### **A.3 Data Collection**

Three techniques were used to gather data in the case study: participant-observation; semi-structured individual interviews; and content analysis of written documents – or “archival analysis” in the terminology of qualitative research. Each technique has a unique set of procedures, considerations, and limitations. Data collection ended when I determined that no new data were being generated and that there were sufficient data to analyze and from which to draw inferences.

### A.3.1 Participant Observation

Participant-observation (P-O) refers to methods of generating data by immersing oneself in a research setting and systematically observing dimensions within that setting, such as interactions, relationships, actions, types of behaviors, and events (Marshall and Rossman 1989, p. 60). P-O was employed in the case study because the social dimensions of natural resource collaboration are not universal and vary from group to group. Moreover, few empirical studies of natural resource collaboration systematically examine their social dimensions. Through P-O techniques, I was able to *discover* the social dimensions of each watershed council without any hard-and-fast preconceived notions. P-O records served as a main source of data for the case study.

Due to the relatively small size of each watershed council, it was not possible to be an anonymous observer. Self-introductions are routine at the beginning of council meetings, and I immediately revealed myself as a graduate student in the Department of Forest Resources at Oregon State University. I did not, however, initially reveal my intentions; I merely stated that I was interested in watershed councils and other forms of collaborative natural resource planning groups. For five meetings, from October 1997 to February 1998, I remained an “interested observer.” I also spoke to many council and non-council members at meetings about specific issues and about my interests, when asked. After the fifth meeting, I approached the council coordinators, with whom I had developed good working relationships as key informants, about interviewing all council participants. I wrote letters to each council participant and made announcements at the March 1998 MoWPG meeting and the May 1998 McWC of my

intent to call the participants for individual interviews. It is fair to say that after I informed the councils of my intent, my “cover was blown” as a researcher.

Observations were recorded by longhand and transcribed into a word processor immediately after each meeting. I attended and recorded observations of over 65 hours of McWC and MoWPG meetings from October 1997 to March 1999. I observed and recorded eleven types of dialogue or events with varying levels of detail, ranging from “low” to “very high.” Table A-1 summarizes how I recorded different types of dialogue or events. The level of detail was determined by a single question: does the dialogue or event affect how council participants relate to one another? Much of the watershed councils’ time is spent announcing or discussing of events, activities, or decisions that may be of interest to meeting participants, but do not have a direct bearing on the watershed or the watershed councils’ interactions. However, I began to notice early on that discussions, or more significantly, heated debates, shaped how council participants related to one another in subsequent interactions. I record individuals’ statements verbatim for “High” and “Very High” levels of detail. The reason for verbatim accounts of group interactions is to capture the nuances and richness of interactions among individuals, including non-verbal communication such as facial expressions and gestures. Having a record over 16 months of watershed council meetings allowed me to observe not only interactions over particular issues or events, but how those interactions changed (or did not change) as relationships among individuals developed. An excerpt from P-O transcriptions is provided in Table A-2.

**Table A-1. Level of detail of participant-observation recording according to type and nature of dialogue or event among watershed council meeting participants**

Type of Dialogue/Event	Nature of Dialogue	Level of Detail
Information only	Announcements for events, actions, decisions, workshops, articles	Low; one-sentence descriptor
Non-watershed-related clarification discussion	Discussion concerning events or activities that do not involve the watershed or watershed council directly	Low; one-sentence descriptor
Non-watershed-related debate	Discussion concerning a contentious issue outside the watershed or watershed council	Medium; summaries of individual statements
Watershed-related clarification discussion	Discussion concerning activities in or condition of the watershed	High; verbatim recording of individual statements
Watershed-related debate	Discussion concerning contentious activities in or condition of the watershed	Very High; verbatim recording of individual statements, including non-verbal cues (e.g., gestures, facial expressions)
WC-related clarification discussion	Discussion concerning functioning, performance, or organization of watershed council	High; verbatim recording of individual statements
WC-related debate	Discussion concerning contentious issues about watershed council functions, performance, or organization	Very High; verbatim recording of individual statements, including non-verbal cues (e.g., gestures, facial expressions)
Watershed-related discussion/debate using maps	Watershed-related discussion of issues using maps	Medium; summaries of individual statements
Watershed-related discussion/debate using photos	Watershed-related discussion of issues using photos	Medium; summaries of individual statements
Question & answer with presenter: clarification	Clarification of presenters' information	Medium; summaries of individual statements
Question & answer with presenter: debate	Debate over presenters' information	High; verbatim recording of individual statements

**Table A-2. Excerpt of observation notes from MoWPG meeting<sup>1</sup>****V. CONTINUED DISCUSSION OF INITIAL ASSESSMENT AND DEVELOPMENT OF ACTION PLAN**

(Lorna wrote on a flip chart so everyone could read what was being suggested)

- \* Lorna: We did not go over the fisheries and socio-economic conditions. How about going through the socio-economic conditions, since we have a pretty start on fisheries with Jim Stark's letter. Hal Gordon did the socio-economic part.
- \* Linda: I was surprised that we grew less than Oregon.
- \* Lorna: Yeah, there are some discrepancies in the data. There's a comparison of Lane County vs. Oregon, then the Mohawk Valley vs. Lane County. If you look at the Mohawk, we are growing faster than Lane County. I don't want to bad-mouth the NRCS...
- \* Diane: A lot of the information is for Lane County, and not for the Mohawk.
- \* Penny: People who campaigned for SLED have some population figures for the Mohawk Valley.
- \* Lorna (on flipchart): Request that we need data specific to the Mohawk.
- \* Tony: In my own research, it's been hard to track down data specific to the Mohawk, because it is lumped in with Lane County or Springfield.
- \* Penny: I don't know about how socio-economic data tells us what's affecting the watershed, but it seems there are two groups -- maybe three, that have created some interesting forces in the valley. The people who live traditional land use, the back-to-the-land hippie types, and the new "Willamettans" who use the Mohawk as a bedroom.
- \* Diane: There's some bad math with the breakdown of land uses vs. total land area. Doesn't add up! Where did the acreage go?
- \* Chuck: Wondered how Hal defined the breakdown between valley and upland vegetation.
- \* Lorna (on flipchart): What was his source for vegetation data?
- \* Ayala: I appreciate that they took the trouble to ask what we thought of the assessment. I'm grateful they actually asked what we thought.
- \* Lorna: I found it odd that they mentioned the Weyco assessment, but nothing about Willamette Industries timberland.
- \* Chuck, Pat, and Ken: Also Guistina Timberlands and Guistina Resources, Koozer Bros., Bob Holmes, Cliff Everett = large timberland owners.
- \* Penny: Misleading school district data; included us in Eugene school district. Doesn't pertain.
- \* Diane: I wanna know where the campgrounds are that he mentions. (Shotgun? Mabel?)
- \* Chuck: He also mentions recreation-based income to many small businesses? Where are these businesses? (Speaking specifically about hunting and fishing; people mentioned cottage industries, but not related to tourism or recreation in Mohawk).
- \* Pat: How did he come up with criteria for how to value land? High, medium, low? What does this mean? What was the criteria?

<sup>1</sup> Pseudonyms are *not* used because watershed council meetings are open to the public

### **A.3.2 Semi-structured Individual Interviews**

The purpose of semi-structured individual interviews is to generate data using the language, terminology, and non-verbal cues of individuals embedded in a social phenomenon. “Semi-structured” refers to the informal, open-ended nature of the interchange between interviewer and interview subject. Indeed, the interviews were more like conversations than question-answer sessions. As the investigator, I had four general topics I wanted to know about, but I did not have a set list of questions that I would check off. The nature of my questioning depended on who I was interviewing. Some individuals are willing “talkers” and do not require any prompting for discussion. Others require prompting for every topic.

Before I conducted the interviews, I first had to obtain approval of my interview protocol from the Oregon State University Institutional Review Board (IRB). IRB approval required an interview protocol that included an opportunity for interview subjects to grant an “informed content” to be interviewed using an Informed Consent Form for all subjects to sign. The Informed Consent Form (Table A-3) includes a guarantee of anonymity for interview subjects and provides the subjects contact information should there be a complaint against my use of interview information. All subjects read and signed the Informed Consent Form per IRB protocol. I furnished each subject with their own copy of the consent form.

The interviews revolved around four themes: personal background, perceptions of the state of the watershed, perceptions of the role of the watershed council, and perceptions of the relationships within the watershed council. The themes are expanded

**Table A-3. Informed Consent Form for individual interviews****INFORMED CONSENT FORM**

A project is being conducted to research citizen participation in collaborative watershed planning groups. The purpose of this project is to learn how individual citizens value and interact in planning processes that address issues in watersheds they care about. The goal is to provide policymakers and practitioners information on citizens' needs and expectations in crafting collaborative planning processes. This project is supported by the Department of Forest Resources at Oregon State University, Corvallis, OR. Researchers involved in this project include: Dr. Steve Daniels, professor, and Tony Cheng, graduate research assistant.

Information is being gathered from both personal interviews and observation in group activities. The interviews are expected to take approximately one to one-and-a-half hours. Personal interviews will be taped recorded with the participant's permission, in order to provide the researcher with accurate notes and an opportunity to fully concentrate on the discussions.

Benefits and risks to participants in this project are minimal. Associated benefits include having the opportunity to communicate experiences and views about issues facing their local watershed. The interviews are also a time for participants to provide feedback to the watershed council process while remaining anonymous. Associated risks include using up leisure time, revealing one's personal thoughts, or fatigue.

To minimize any risks, the participants are assured the following rights:

- All participation in this project is entirely voluntary
- Any questions maybe refused to be answered at any time
- Participants are free to withdraw from the project at any time
- All information obtained from this project will be kept strictly confidential and will be available only to the members of the research team.

Excerpts from interviews may be made part of the final research report, but under no circumstances will participants' names or identifying characteristics be included in this report. The following signature states that the participant has read and understands the contents of this form.

SIGNATURE: \_\_\_\_\_

NAME (printed): \_\_\_\_\_

DATE: \_\_\_\_\_

Thank you for your participation. Questions about the research or participant's rights should be directed to Dr. Steve Daniels at (541) 737-3055.

**Further Information**

The Informed Consent Form is required under guidelines set forth by the Institutional Review Board for the Protection of Human Subjects (IRB) at Oregon State University. This project has been approved by the IRB for its assurances to protect human subjects (e.g., interviewees). A copy of the approval document can be provided upon request. If you feel that your confidentiality has been breached or are concerned about the methods by which information for the research has been collected and treated, you may contact Mary Nunn at the IRB at (541) 737-0670, e-mail: [nunnm@ccmail.orst.edu](mailto:nunnm@ccmail.orst.edu) (Mailing address: IRB, 312 Kerr Administration, Oregon State University, Corvallis, OR 97331).

If you have any questions, concerns, or comments about the project, you may contact me:

Tony Cheng  
 (541) 753-8154 (home)  
 (541) 737-2215 (office and voice mail)  
[chengt@ccmail.orst.edu](mailto:chengt@ccmail.orst.edu)



in Table A-4. The goal of the interviews was to paint a picture of the watershed based on individual narratives, and to provide an overall perspective of what people thought about the purpose of the watershed council in influencing the future of the watershed based on their working relationships.

47 individuals were interviewed; 18 from the MoWPG and 29 from the McWC. Interview subjects were selected using a nonrandom, selective sampling procedure. Subjects were selected from three categories: watershed council members; individuals who regularly attend council meetings but are not council members; and individuals who were referred to by more than two subjects from the first two categories. The population of both watershed councils were interviewed (12 MoWPG members and 20 McWC members), plus paid council coordinators. Interview subjects were notified and contacted using three approaches. First, I included a letter with their monthly pre-meeting packets announcing my desire to interview all active and interested parties. The letter I drafted was included in the March 1998 pre-meeting packet for the MoWPG and the May 1998 pre-meeting packet for the McWC. Second, I made a public announcement expressing my desire to interview watershed council participants and interested individuals. The announcements at both watershed councils' meetings were well-received and positive. Third, I called each subject by telephone to arrange an interview time and place. All subjects responded positively.

Eight individuals who were seen attending more than one meeting were also interviewed, and 7 individuals who were referred to by both council members and non-members gave interviews. The number of non-council interview subjects was small for

**Table A-4. Interview questions and key themes****Personal background:**

- Occupation or profession
- Number of years living or involved in the watershed
- Attention to and activity in natural resource issues

**Perspectives on the watershed:**

- Describe the watershed in as many ways that is personally meaningful to you, including the biophysical features, human features, and personal experiences.
- If you were to make a documentary of the watershed, how would you do it? What would it focus on? Where would you personally fit in?

**Perspectives on the watershed council or group:**

- Describe your personal involvement in the group. What were your expectations initially, how have they changed, and what are your current perceptions?
- Describe how the council or group functions. What are the key processes and procedures? Do they contribute to the council's operations, actions and tasks? How can they be improved? What would be the trade-offs?
- What are some of the major achievements and outcomes of the council?
- What have been some of the big pitfalls? How could they have been avoided or improved? What would be the trade-offs?
- Where do think watershed councils fit in the whole scheme of things?

**Perspectives on people with concerns for the watershed, either in or outside the watershed council:**

- Describe some the relationships you see in the council or group. How have things changed from the past?
- Describe how well you think the group functions as a whole. Could things be improved? How? What would be the trade-offs?
- Describe the relationship between the council and people outside the council or group. Could things be improved? How? What would be the trade-offs?

**Perspectives on natural resource politics and policy in general:**

- Describe the current state of affairs. How could things be changed? What would be the trade-offs?
- Where do think watershed councils fit in the whole scheme of things?

two reasons. First, the perceptions and themes from the interviews overlapped among subjects to a high degree. In other words, nothing new was learned with each additional subject except for variations on the same overall themes. Second, the number of non-council individuals with in-depth knowledge of and interactions with the watershed councils was very small. The richness of watershed council perspectives declined rapidly outside this small group of key individuals. 44 interviews were successfully tape recorded and transcribed into a word processor. Conversational notes were taken of the remaining three interviews. Interviews ranged from 30 to 150 minutes, with an average of about 60 minutes. Interestingly, all but one MoWPG interview was conducted in the subject's private residence or a coffee shop. By contrast, 22 of 29 McWC interviews were conducted in places of occupation. The 7 remaining interviews were of individuals who were not members of or active participants in the McWC and were conducted in private residences.

### **A.3.3 Written Documents**

Approximately 1,800 pages of written documents were collected to complement the P-O and interview data. Table A-5 lists the 16 sources of written documents used in the case study. The written documents were acquired through six sources: 1) watershed council archives; 2) watershed council coordinators files; 3) individual watershed council members; 4) the McKenzie Watershed Council website (<http://www.pond.net/~mwc>); 5) University of Oregon library; and 6) Springfield City Library. All documents were readily accessible and open to the public. No confidential documents were used.

**Table A-5. Written documents used in case study**

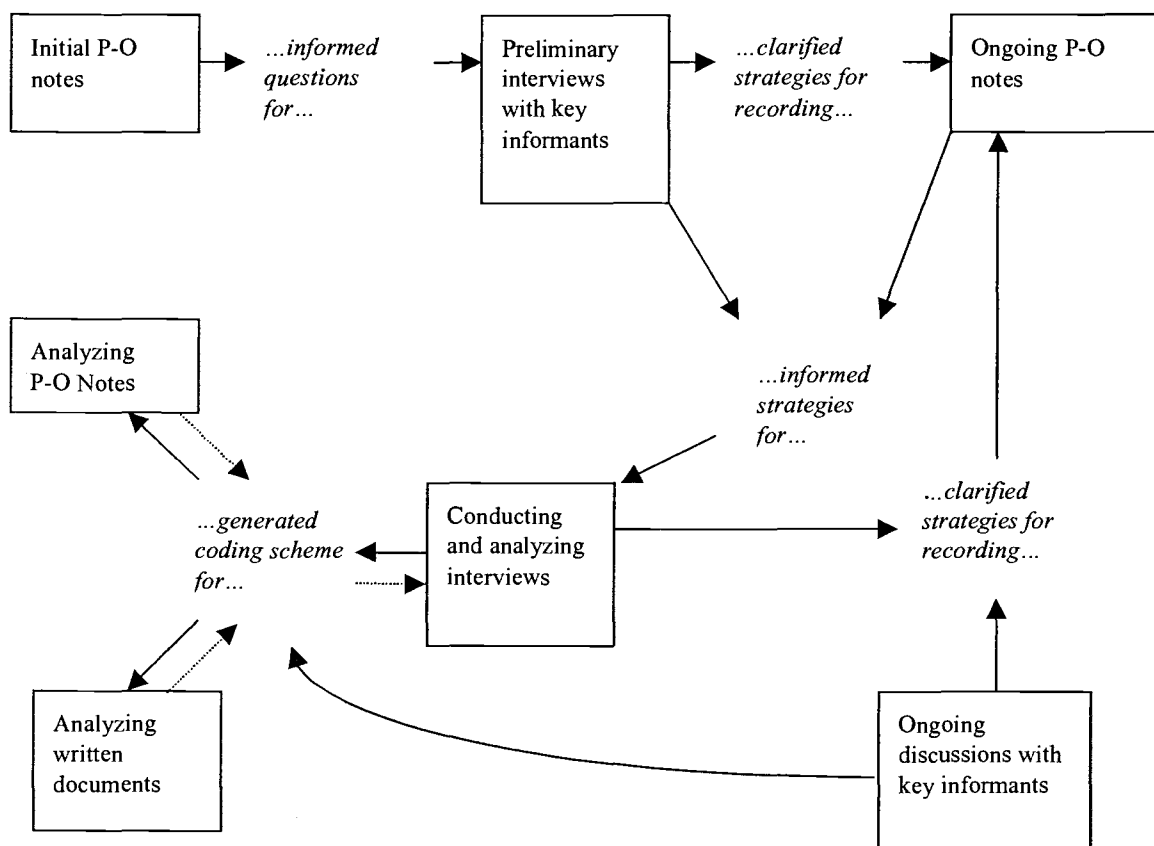
1. Official meeting minutes of McWC (June 1993-March 1999)
2. Official meeting minutes of MoWPG (June 1996-March 1999)
3. Memorandums to the watershed councils from various sources
4. Articles from the Eugene *Register-Guard* and Springfield *Springfield News* newspapers
5. Bureau of Land Management. 1995. *Mohawk/McGowan watershed analysis*. Eugene, OR: Bureau of Land Management, Eugene District.
6. Committee for the Economic Development of the McKenzie River Valley. 1986. *Abundant resources, abundant opportunities: McKenzie River valley economic development project final report*.
7. Eugene Water & Electric Board. 1992. *Scoping report for an integrated McKenzie Watershed program*. Eugene, OR: Eugene Water & Electric Board and Lane County.
8. Lane Council of Governments. 1995a. *How the McKenzie Watershed Council got started*. Eugene, Or. : Lane Council of Governments.
9. Lane Council of Governments. 1995b. *McKenzie Watershed Council primer: perspectives on water quality, human habitat, and fish and wildlife*. Presented to the Council partners May 1994 to April 1995. Eugene, OR: Lane Council of Governments.
10. Lane Council of Governments. 1996a. *McKenzie Watershed Council: action plan for water quality and fish and wildlife habitat*. Eugene, OR: Lane Council of Governments.
11. Lane Council of Governments. 1996b. *McKenzie Watershed Council: technical report for water quality and fish and wildlife habitat*. Eugene, OR: Lane Council of Governments.
12. Lane Council of Governments and Lane County. 1997. *McKenzie Watershed Council: Action plan for recreation and human habitat*. Eugene, OR: Lane Council of Governments and Lane County Land Management Division.
13. Lane County, City of Eugene, and Eugene Water & Electric Board. 1994. *Integrated McKenzie watershed management program: a proposal for planning and study funding and progress report*.
14. Natural Resource Conservation Service. 1999. Draft Mohawk watershed assessment. Prepared for the East Lane Soil & Water Conservation District. Portland, OR: Natural Resources Conservation Service.
15. Polley, L.E. 1984. *A history of the Mohawk Valley and early lumbering*. (assisted by Sue Bailey). Marcola, Or. : Polley Publishing.
16. Rolph, D. 1996. *A comparative study of three watershed partnerships in Oregon: a revised copy of a master's thesis for community and regional planning*. Eugene, OR: Dept. of Planning, Public Policy and Management Program, School of Architecture and Allied Arts, University of Oregon

#### A.4 Data Analysis

The analytical procedures conducted for the case study were informed primarily by writings on qualitative social research by Glaser and Strauss (Glaser and Strauss 1967; Strauss and Corbin 1990) and, to a lesser extent, selected chapters in Denzin and Lincoln's (1998) *Collecting and interpreting qualitative materials*. The analytical posture for the case study is rooted in grounded theory (G-T), which is a general set of procedures for generating theory from empirical data (Glaser and Strauss 1967, p. 1). G-T is most often used for phenomena for which little systematic research has been conducted. Rather than testing pre-determined hypotheses using quantitative statistical procedures, theory is generated through a systematic process of induction. G-T has been most commonly employed for small organizational units, such as hospital wards (Strauss and Corbin 1990), classrooms (Bogdan and Biklen 1998; Goetz 1984), and urban neighborhoods (Evans 1988; Jackson 1988).

Central to G-T is comparative analysis. Comparative analysis is a continuous, iterative process of systematically collecting and analyzing data. From a grounded theory perspective, data collection and analysis are not separate activities, but co-emergent. As data are collected and analyzed, patterns are detected and grouped into conceptual categories according to their properties. Based on these categories, the investigator collects and analyzes more data. Hence, the collection and analysis of preliminary data guides the direction of subsequent data collection and analysis efforts. Given the iterative process of comparative analysis, the data gathered from P-O of

group events, individual interviews, and written documents were not analyzed in sequence. Figure A-1 shows the approximate steps by which data was collected and analyzed for the case study.



**Figure A-1. Comparative analysis steps for collecting and analyzing data**

The process of detecting and grouping data into conceptual categories is called coding. The coding scheme generated and applied to the analysis of the case study closely followed procedures prescribed in Strauss and Corbin's (1990) *Basics of qualitative research: grounded theory procedures and techniques*. The following

sections lay out the coding schemes for analyzing the individual interviews, P-O field notes, and written documents. The coding scheme proceeded in three steps: open coding, axial coding, and selective coding or story line generation.

#### **A.4.1 Open Coding**

Open coding refers to the initial process of breaking down, examining, comparing, conceptualizing, and categorizing data. The open coding process required reading line-by-line each page from interview transcripts and P-O notes, and written documents. Approximately 2,200 pages were read and coded over a 14 week period. The starting point for the open coding was the individual interviews. The analysis was initiated at interviews for two reasons. First, P-O of watershed council meetings and collection of written materials persisted after the individual interviews were complete. Initial codes from the interview data were constantly referenced against ongoing observations. Second, the data generated from the interviews were dense and multilayered. They were expected to generate the richest set of codes from which analysis of P-O notes and written documents could draw.

The first step in open coding is to assign labels to words, sentences, or paragraphs. The labels generated from the interview data conceptualize the perceptions and experiences of individuals in watershed councils, and how those perceptions and experiences may influence their strategies for relating to one another. Generating labels was an evolutionary process: as more and more interviews were read and analyzed, the more concise the labels became as patterns began to emerge across a growing number of interviews. Although the labeling process began with arbitrary

labels, it transformed into a systematic comparative analysis that generated well-specified, justifiable labels at the end of the coding process. It was not uncommon for a sentence or paragraph in an early interview to be re-labeled three or four times as subsequent interviews touched in similar themes. Table A-6 demonstrates the labeling of a selected interview excerpt. Note the multiple labels assigned to a single sentence or paragraph.

**Table A-6. Example of Open Coding labeling of individual interview (from transcript #mg0415b)**

Line #	[Label]
1 Respondent (R): The MoPWG is an	• WCDescribe (lines 1-6: general description of watershed council)
2 interesting mix of people. I think that's	• GroupCoop- (lines 3-6: negative evaluation of group's ability to cooperate)
3 what makes it so important, but it also	• WCActionEffective (lines 3-6: perceived effectiveness of council)
4 means it's going to struggle to get hands-on	• GroupReIns+ (lines 11-14: perception of positive group relations)
5 stuff going on. We're being pulled in	• INDIVIDPerception+ (lines 13-16: positive perception of specific individuals)
6 different directions.	• INDIVIDTransform (lines 14-16: transformation of specific individual within group)
7	
8 Interviewer (I): I don't think there will ever	
9 be a time where you'll be best pals...	
10	
11 R: I don't think so. But the fact we are	
12 even o.k. working together has spoken a lot	
13 for ____ and ____ for getting the whole	
14 group together. ____ has turned out to be	
15 kind of a conduit among the various	
16 factions.	

88 open coding labels were generated for the interviews and were conceptually grouped into 11 separate categories (Table A-7). P-O notes and written documents were broken down and grouped into summary themes. The P-O notes and written



**Table A-7. Code book for Open Coding labels and categories**

<p><b>SELF (Perspectives on self)</b></p> <ul style="list-style-type: none"> <li>Background <ul style="list-style-type: none"> <li>Age</li> <li>Where from <ul style="list-style-type: none"> <li>Native</li> <li>Otherplace</li> </ul> </li> </ul> </li> <li>Education</li> <li>Occupation</li> <li>Experience (narratives of personal experiences in watershed) <ul style="list-style-type: none"> <li>SpecificLongTerm: Detailed accounts over long time period</li> <li>SpecificShortTerm: Detailed accounts over short time period</li> <li>GeneralLongTerm: Non-detailed accounts over long time period</li> <li>GeneralShortTerm: Non-detailed accounts over short time period</li> </ul> </li> <li>Philosophy (General political or environmental philosophies) <ul style="list-style-type: none"> <li>Pro-enviro (Support strong environmental protection, regulation)</li> <li>Pro-property (Support of property rights, limited regulation)</li> <li>Pro-govt (Support strong government role in environment)</li> <li>Anti-govt (Support limited/no government role in environment)</li> </ul> </li> <li>Identity (Ways of describing self)</li> </ul>
<p><b>WS-PERSP (General perspectives on the watershed)</b></p> <ul style="list-style-type: none"> <li>History (narrative of historical watershed conditions) <ul style="list-style-type: none"> <li>HistoryGeneral</li> <li>HistorySpecific</li> </ul> </li> <li>CausalGeneral (Cause-and-effect of activities in watershed) <ul style="list-style-type: none"> <li>CauseEffect+</li> <li>CauseEffect-</li> </ul> </li> <li>Describe (words or phrases to describe watershed) <ul style="list-style-type: none"> <li>General: Broad, abstract descriptions</li> <li>Specific: Identifying specific locations</li> <li>OtherPlace: Compare with other places</li> </ul> </li> </ul>
<p><b>WS-ISSUE (Perspectives of issues affecting the watershed)</b></p> <ul style="list-style-type: none"> <li>BioThreat (threats to biophysical features of watershed)</li> <li>SocThreat (threats to social fabric, culture, lifestyle)</li> <li>EconThreat (threats to economy)</li> <li>Backyard (problems in specific locations, well-defined places)</li> <li>BigPic (problems in watershed in general)</li> <li>Fish (focus on fish issues, salmon)</li> <li>Timber (focus on forestry issues)</li> <li>Water (focus on water quality or quantity issues)</li> <li>Growth (focus on land use and development issues)</li> </ul>
<p><b>WS-SOCIAL (Perspectives of the people in the watershed)</b></p> <ul style="list-style-type: none"> <li>PeopleDescribe (words or phrases describing people in watershed) <ul style="list-style-type: none"> <li>PeopleGroupID (identifying people in watershed by group identities)</li> </ul> </li> <li>PeopleValues (perception of what people value in watershed)</li> <li>SocialRelations, organizations</li> <li>Economy</li> <li>PeopleHistory</li> </ul>

**Table A-7 (Continued)**

<p>WC-PERSP (Perspectives on the watershed council)</p> <p>WCDescribe (words or phrases describing the watershed council)</p> <p>WCGroupID (identifying people in watershed council by group identities)</p> <p>WCPurpose (perceived mission, purpose, expectations of watershed council)</p> <p>Social (oriented towards people, community issues)</p> <p>Fish (oriented to protecting fish and fish habitat)</p> <p>Water (oriented to protecting water quality)</p> <p>Timber (oriented to dealing with forestry issues)</p> <p>Policy (relationship to broader policy issues)</p> <p>Process (perceptions of meeting, decision-making processes)</p> <p>Consensus (words, phrases about consensus decision rule)</p> <p>Evaluation+ (positive evaluations of watershed council)</p> <p>GroupCoop+ (specific, positive evaluations of group's ability to cooperate)</p> <p>GroupRelations+ (specific, positive evaluation of ongoing group relations)</p> <p>Evaluation- (negative evaluations of watershed council)</p> <p>GroupCoop- (specific, negative evaluations of group's ability to cooperate)</p> <p>GroupRelations- (specific, negative evaluation of ongoing group relations)</p>
<p>WC-WS (Perception of how the watershed council as a whole describes, relates to the watershed)</p> <p>InDepthKnow (in-depth, place-specific descriptions)</p> <p>AbstractKnow (abstracted descriptions)</p>
<p>WC-ACTION (Expected and actual actions taken by the watershed council)</p> <p>Describe (words or phrases to describe actions by watershed)</p> <p>OnGround (on the ground actions by watershed council)</p> <p>Effective (perceived effectiveness, accomplishments)</p> <p>Future (what the watershed council should do in the future)</p> <p>Past (what the watershed council had done in the past)</p>
<p>WC-COMMUN (Perception of relations between watershed council and community)</p> <p>CloseTies</p> <p>DistantTies</p> <p>Perception+</p> <p>SharedValues (perception of shared values, positive interaction)</p> <p>Perception-</p> <p>ConflictValues (conflicting values between council and community)</p>
<p>GROUP (Perceptions of group dynamics, relations)</p> <p>GroupID (words or phrases describing individuals on watershed council by group affiliation)</p> <p>GroupCommit (perceived commitment among group members)</p> <p>GroupInterAct (words or phrases describing interaction on watershed council)</p> <p>GroupCoop+ (positive statements about group cooperation)</p> <p>GroupCoop- (negative statements about group cooperation)</p> <p>GroupRelns (words or phrases describing relationship among watershed council participants)</p> <p>GroupTransform (transformation of group interactions, relationships, identifications)</p>
<p>COORDIN (Perceptions of the watershed council coordinator)</p> <p>Evaluation+ (positive evaluations)</p> <p>Evaluation- (negative evaluations)</p> <p>Leadership (specific perceptions of leadership qualities)</p>
<p>INDIVID (Perceptions of specific individuals in council or active in council processes)</p> <p>PriorRelation (Prior relationships with individual)</p> <p>GroupID (words or phrases describing individual by group affiliation)</p> <p>Transform (transformation in relationship, interpersonal interactions with individual)</p> <p>Perception+ (positive perceptions of individual)</p> <p>Perception- (negative perceptions of individual)</p>

documents were coded together because they both encompass the watershed councils' group processes and outcomes, whereas interview transcripts focus only on individual perceptions and experiences. The categories are used solely for organizing the enormous amount of text. In reality, many of the labels are cross-referenced with each other, for many words, sentences, and phrases convey meaning in a broader context. As the following subsection explains, the Axial Coding process organizes these categories with reference to broader contexts.

#### **A.4.2 Axial Coding**

Axial Coding is a synthesizing process that systematically puts data back together after Open Coding. The idea behind this process is to specify an Open Coding category (a social phenomenon) in terms of the conditions that give rise to it, the context in which it is embedded, the ways in which people respond to it, and the consequences of those strategies. For the case study data, Axial Coding connects the perceptions and experiences of watershed council participants to the broader social processes occurring within the watershed council. In short, it synthesizes individual-level data (categories derived from interviews) with group-level data (categories derived from P-O notes and written documents).

Instead of a single word, like Open Coding labels, Axial Coding generates a series of statements that provide the *context*, *conditions*, *properties*, and *dimensions* of a particular category in relation to a range of social *consequences*. To generate Axial Coding statements, Open Coding categories from interview transcripts are revisited to determine their relationship with other categories. For example, all 12 MoWPG

members provided positive evaluations of the group's ability to cooperate that were similar in terminology and tone, and were categorized under the label "GroupCoop+." However, these positive evaluations were associated with a recent forest field tour – an important *context* and *condition* that shaped these evaluations. Although the field tour was a separate Open Coding category – "WCActionOnGround" – its effect or *consequence* gave rise to the positive group evaluations. An example of Axial Coding statements according to their relevant Open Coding categories appears in Table A-8.

In general, the Axial Coding statements were directed towards reconstructing the conditions and contexts that give rise to certain individual behaviors and group outcomes (e.g., social consequences) within the watershed councils' group settings. As a result, Axial Coding reflects a certain level of induction; it is essentially an interpretation of an observed social phenomenon. The statements are not merely summaries of what happened where, when, and to whom, but *how* and *why* it happened to certain individuals at certain times. Validating my interpretations was an important part of the research process. To this end, I would debrief with the watershed council coordinators after every meeting and would also talk briefly with key informants who were active participants on the council. This was particularly important when group dynamics would be "put to the test" by a contentious issue or interaction and individuals' strategies to collaborate or not collaborate with others would become apparent. In short, collaborative and non-collaborative behaviors were typically emergent and episodic, spurred by particular events, issues, or interactions. Immediately after particular contentious episodes, I would seek out my key informants within the council and debrief – what happened, why did it happen, why did certain

**Table A-8. Derivation of an Axial Coding statement from Open Coding label**

<b>Axial Coding statement:</b> WC as focusing on large-scale data analysis and policy-relevant science favored by technical professionals (“experts”) vs. WC as focusing on small-scale efforts, building community support for restoration programs and projects, and long-term watershed stewardship actions favored by non-agency, non-large-landowning “community members”	
<b>Open Coding labels:</b>	
SELFExperience	WC-Purpose
WS-PERSPCausalGeneral	WC-Process
WS-ISSUE	WC-COMMUNCloseTies
WS-SOCIALPeopleValues	WC-COMMUNDistantTies
WS-SOCIALSocialRelations	WC-COMMUNPerception+
WC-Describe	WC-COMMUNPerception-
<b>Quotes supporting significance of tension in watershed council priorities</b>	
(from transcript #mc0617a) “There’s two ways to approach it, and the McWC has struggled with this. If you look at the watershed and you look at the problems and do it scientifically, you’ll work in a certain area and do certain things. If you want to work with the people, and educate the people and do demonstration projects and wait for the groundswell of people to think, ‘This is the right thing’, then you work with a different set of people. The two sets don’t criss-cross too much.”	
<b>Quotes supporting councils as focusing on large-scale data analysis</b>	
(from transcript #mc0617b) “I have reservations about community projects generating quality information and something that can be used, but is something amenable to citizen volunteers. There is some value in getting volunteers in the watershed and making them feel like they contribute. But some projects may be heading down the wrong road. If the scientific community and technical people on the ground can’t agree, we can’t be seen as endorsing these methods.”	
(from transcript #mc0629a) “ It would be nice to have representation from every section of the river, a balanced heavy emphasis on lower river versus upper river communities, and have it function more as a democratic type of approach. If it was law-making body, that would work. But this is an advisory body to facilitate restoration of the McKenzie watershed. In that respect, don’t want – shouldn’t have – a cross-section of the population represented.”	
<b>Quotes supporting councils as focusing on small-scale efforts, building community support</b>	
(from transcript #mg0428a) “You need to have common ground and understanding about what it is you’re talking about. Sitting in a room discussing things in the abstract – people have such different concepts in their minds what it is you’re talking about... Until you get on the ground and looking at something specific, you don’t have a common place to start from.”	
(from transcript #mc0617c) “[It] is so important to have a thumb on the pulse of the river, at different points along the river. Instead, we have a bunch of charts that no one looks at.”	

individuals become involved in the debate rather than others, and the potential consequences. These debriefings informed the Axial Coding process and provided a richer context to how and why certain perceptions and behaviors would become manifest among watershed council participants.

In sum, 34 Axial Coding statements were derived from the Open Coding categories and were grouped into four primary themes: Negotiating Expectations, Negotiating Working Relationships, Negotiating a Shared Picture of the Watershed, and Struggling the Next Steps (Table A-9). The choice of the term “negotiation” is strategic, for it implies a social process in which individuals must interact with others to accomplish their objectives (Thompson 1990). Negotiation is increasingly employed to describe collaborative watershed management (McGinnis, Woolley, and Gamman 1999; Rhoads et al. 1999). Negotiation is also useful because it has become a subject of interdisciplinary inquiry. Experimental and real-life empirical studies of negotiation have converged upon the behavioral perspective of collective action, group decision-making, and conflict resolution (Neale and Bazerman 1992; Thompson and Hastie 1990). Hence, characterize watershed council group processes as negotiation processes opens the possibility for theoretically-informed conceptualizations of individual- and group-level behaviors.

#### **A.4.3 Selective Coding**

The integration of Axial Coding statements into “core categories” denotes the final step in the coding process: selective coding. Selective coding involves yet another

**Table A-9. Axial Coding Statements Grouped into Four Primary Themes****Theme 1: Negotiating Expectations**

- Watershed council (WC) as sounding board favored by some agency representatives and all large private property owners
  - WC as information & resource exchange forum from agencies to public favored by remaining agency representatives and non-active, non-council member participants (passive “community members”)
  - WC as advisory body which promotes recommendations for broad range of watershed stewardship and restoration actions to public and private landowners favored by non-agency, non-landowning active council members and active non-council participants (“active community members”)
  - WC as quasi-policy body which develops statements and actively pursues changes in public agencies’ and private landowners’ practices favored by individuals affiliated with environmental group or causes
  - WC as focusing on large-scale data analysis and policy-relevant science favored by technical professionals (“experts”)
- vs.
- WC as focusing on small-scale efforts, building community support for restoration programs and projects, and long-term watershed stewardship actions favored by non-agency, non-large-landowning “community members”

**Theme 2: Negotiating Working Relationships**

- Minimum level of participation: regular meeting attendance (favored by non-active, urban-based council members) versus soliciting feedback and preferences from broader communities (favored by small group of active urban and all non-urban council members)
- Group-level communication and interpersonal relations are influenced by ongoing quandary over “representation” on council
  - Speaking on behalf of formal, recognized organizations favored by agencies and large private landowners
  - Voicing preferences of particular points of view favored by non-agency, “community” members
- Low commitment to action perceived to be associated with over-sensitivity to quandary of “representation”, especially among agency and large forest industry representatives
- High commitment to action perceived to be associated with council participants interacting as “neighbors”
- Level of commitment influenced by perceptions of assurance that all individuals and groups will be accountable; TRUST
- Trust, distrust, and suspicion related to organizational affiliations, primarily agency, forest industry, environmental organizations with histories of protest and litigation;
- Shared on-the-ground experiences, such as field tours and projects, in part influences how council participants relate to one another
- In McWC: Evolution from original WC to present council coincides with shift from informal “representation” and active level of dialogue with broader community to technical professionals representing formal organizations
- In MoWPG: Tendency to self-define and relate to others as “residents” and “neighbors”, in addition to “environmentalist” vs. “logger” stereotypes

**Table A-9 (Continued)****Theme 3: Negotiating Shared Picture of Watershed**

- Developing common baseline assessment of watershed condition affected by familiarity with technical data and information, and comfort level with jargon
- Developing common baseline assessment of watershed condition affected by differing frames of reference, such as timeframes, pre-settlement ecological conditions, and causes and effects of human impacts
- Developing common baseline assessment of watershed condition affected by standards or criteria of interpretation
- Familiarity with technical data and jargon, types of frames of reference, and criteria for interpretation shaped by TRUST in others to present all sides of issues.
- Trust in others to present all sides of issues is affected by organizational affiliation, whether one is “environmentalist” or “forester”, or agency
- Trust in others to present all sides of issues is low between “community members” and technical professionals
- Trust in others to present all sides of issues is affected by degree of shared ways of knowing the watershed, namely, specific, site-specific knowledge versus abstract, scientific knowledge
- Trust in others to present all sides of issues is affected by degree of shared experiences in the watershed

**Theme 4: Struggling with Next Steps**

- Lack of coherent, agreed-upon directions is affected by lack of time for digestion, in-depth dialogue of complex issues
- Lack of coherent, agreed-upon direction is affected by council participants lack of preparedness prior to decisions., which, in turn, raises questions of commitment to process and group
- Lack of coherent, agreed-upon direction is affected by inability to answer “So What?” questions , e.g., what is the significance of scientific information about the watershed and why?
- Lack of coherent, agreed-upon direction is affected by small group of individuals who feel more accountable to formal organization than to process, the group, or affiliation to watershed
- Lack of coherent, agreed-upon direction is affected by degree of connectedness to broader community, including landowners and non-landowning residents
  - Distant connections to community associated with more profound struggles over next step
  - Close connections to community is associated with less struggle over next step
- Lack of coherent, agreed-upon direction is affected by persistent, unresolved issues, especially over forest practices on forest industry land
- Lack of coherent, agreed-upon direction is affected by transitioning of new, unfamiliar council participants

process of induction that reveals the depth and complexity of a social phenomenon.

The result is a series of “story lines” which, taken together, provides an overall

interpretation of the phenomenon. The selective coding stage is basically a theorizing

process where the data, categories, and themes are compared to existing theories of



collective action, which includes theoretical perspectives from negotiation, group decision-making, and social dilemmas. Four alternative theories of behavior have emerged in this body of literature.

**1. *Behavior is Explained by Self-Interest:*** The traditionally dominant theoretical perspective of collective action is the rational choice theory of collective action as proposed by Mancur Olson (Olson 1965). Behavior consistent with Olson's theory would be indicated by words or phrases in the transcripts, P-O field notes, and written documents to the effect that individuals are overtly and primarily concerned about protecting personal interest, property, and investments against government intrusion. Collaborative behavior is primarily in response to direct financial benefits accrued from participating in the watershed council.

**2. *Behavior is Explained by Expectation of Future Interaction:*** In the early-1980's, negotiation researchers examined how the behavior of individuals were influenced by how other parties in the negotiation process were faring (Ben-Yoav and Pruitt 1984a; Ben-Yoav and Pruitt 1984b). The underlying premise of this line of inquiry was that individuals should have some level of concern for others in the negotiation process if outcomes are to be truly mutually beneficial. If one party suffers, it is likely that others in the negotiation process will not attain good individual and collective outcomes. This "dual concern" model was supported by experimental evidence that suggested that individuals who expected to have ongoing future interactions with one another were more likely to cooperate than individuals who had little or no expectation of future interaction. Expectations of future interaction meant that individuals always had opportunities to ensure all parties' objectives are satisfied.

The behavioral influence of expectations of future interaction would be indicated by words or phrases in the transcripts, P-O field notes, and written documents to the effect that individuals recognize that they all live in the same watershed; they have to work together in order to achieve individual and shared goals; and they can only solve problems together, not individually.

*3. Behavior is Explained by Perceived Effectiveness of Collective Action:* A rational choice perspective to collective action is able to predict behavioral outcomes for some situations, but not others. Indeed, when it comes to providing and protecting environmental goods, is quite irrational for individuals to collectively take action because the costs to each individual far outweigh the benefits. Plus, there is the risk of “free riders” – individuals who benefit from an environmental good , but who do not pay for its protection or provision. Why, then, are there so many individuals and groups who collectively act to protect the environment? Russell Hardin (1982) offers an alternative perspective to collective action that takes into account what he calls “extrarational” motivations (Hardin 1982, p. 101). An important extrarational motivation is that a small group of individuals may convince themselves that they have the necessary institutional presence and power to affect change. Empirical findings from social dilemma-type experiments support the importance of perceptions of effectiveness as an influencing variable in group decision processes (Kerr 1989; Kerr 1992; Kollock 1998; van de Kragt, Orbell, and Dawes 1983). Evidence of these behaviors in the case study would be indicated by words or phrases in the transcripts, P-O field notes, and written documents to the effect that individuals believe that the information they have accumulated about the watershed – and the resources they can

collectively assemble – can influence landowners and other citizens to change their practices, influence policy makers and resource managers, and generally improve on-the-ground conditions.

**4. *Behavior is Explained by Group Identifications:*** Group identity is a psychological strategy for defining oneself and others according to broad social categories (Turner 1982). Group identity has two behavioral effects. First, each individual can discern the intentions and expected actions of others based on the identity they are perceived to project. Second, by expressing a certain group identity, each individual can project their intentions for others to discern without actually verbally disclosing them. In short, group identity is a rule of thumb people can employ to determine how others might behave and, therefore, how to relate to others in a collective action situation. Group identity is widely viewed as a behavioral influence in collective action (Dawes, van de Kragt, and Orbell 1988; Dovidio, Gaetner, and Validzic 1998; Jetten, Spears, and Manstead 1996; Kramer 1993; Northrup 1989; Rouhana, O'Dwyer, and Morrison-Vaso 1997). Evidence of group identity-related behaviors would be indicated by words or phrases in the transcripts, P-O field notes, and written documents revealing how individuals perceive themselves and each other with regard to specific watershed issues and during watershed council interactions.

The original texts and coding schemes were re-analyzed to determine how closely the data corresponded with the four alternative theories. A frequency count of open coding categories from each interview transcript was generated for each theory (Table A-10). A relative measure of density of theoretical correspondence from the P-O field notes and written document supplemented the frequency count (Table A-11). Of

the four alternative theories explaining behavior within the watershed councils, the group identity perspective emerged as clearly dominant. Upon re-examination of the texts from the group identity perspective, three “core categories” of group identification emerged: group identification related to organizational affiliation and interests; group identification related to ways of knowing the watershed; and group identification related to social ties within the watershed. The frequency of interview transcripts with words or phrases referring to group identification are depicted in Table A-12. These group identity emerged as the key variable affecting behavior, and the three core categories related to group identification formed the significant findings from the case study.

**Table A-10. Frequency of factors affecting collaborative behavior identified in interview transcripts**

Factor affecting collaborative behavior	MoWPG (n = 19)	McWC (n = 28)
Self-interest	.11	.18
Expectation of Future Interaction	.89	.57
Perceived Efficacy	.79	.43
Group Identities	1.00	1.00

**Table A-11. Relative density of factors affecting collaborative behavior identified in Participant-Observation field notes and written documents**

Factor affecting collaborative behavior	MoWPG	McWC
Self-interest	Very Low	Low
Expectation of Future Interaction	High	Medium
Perceived Efficacy	Medium	Low
Group Identities	Very High	Very High

**Table A-12. Frequency of Group Identification Dimensions Expressed in Interviews**

Group Identification Dimensions	MoWPG (n = 19)	McWC (n = 28)
<b><i>Group Identity Related to Interests, Values</i></b>		
Organizational affiliation	.47	.75
Interest-based affiliation	.79	.50
Shared values	.68	.27
<b><i>Group Identity Related to Ways of Knowing</i></b>		
Expert vs. Layperson	.72	.69
Newcomer vs. Long-time Resident	.63	.36
Council member vs. Non-member	.42	.29
Shared Ways of Knowing	.63	.21
<b><i>Group Identity Related to Ties to Community</i></b>		
Family	.26	.32
Involvement in Community Organizations	.72	.36
Urban vs. Upriver Resident	.68	.50

## A.5 References

- Ben-Yoav, O., and D.G. Pruitt. 1984a. Accountability to constituents: a two-edged sword. *Organizational Behavior and Human Performance* 34 (3):283-295.
- Ben-Yoav, O., and D.G. Pruitt. 1984b. Resistance to yielding and the expectation of cooperative future interaction in negotiation. *Journal of Experimental Psychology* 20 (4):323-335.
- Bogdan, R.C., and S.K. Biklen. 1998. *Qualitative research for education: an introduction to theory and methods*. 3rd ed. Boston, MA: Allyn and Bacon.
- Dawes, R.M., A. van de Kragt, and J.M. Orbell. 1988. Not me or thee but we: the importance of group identity in eliciting cooperation in dilemma situations: experimental manipulations. *Acta Psychologica* 68:83-97.
- Denzin, N.K., and Y.S. Lincoln, eds. 1998. *Collecting and interpreting qualitative materials*. Thousand Oaks, CA: Sage Publications.
- Dovidio, J.F., S.L. Gaetner, and A. Validzic. 1998. Intergroup bias: status, differentiation, and a common in-group identity. *Journal of Personality and Social Psychology* 75 (1):109-120.
- Duram, L.A., and K.G. Brown. 1999. Assessing public participation in U.S. watershed planning initiatives. *Society and Natural Resources* 12 (5):455-467.
- Evans, D. 1988. Social interaction and conflict over residential growth: a structuration perspective. In *Qualitative methods in human geography*, edited by J. E. a. D. M. Smith. Cambridge, England: Polity Press.
- Glaser, B.G., and A.L. Strauss. 1967. *The discovery of grounded theory: strategies for qualitative research*. New York: Aldine Publishing Company.
- Goetz, J.P. and M.D. LeCompte. 1984. *Ethnography and qualitative design in educational research*. Orlando, FL: Academic Press, Inc.
- Gray, B. 1989. *Collaborating: finding common ground for multiparty problems*. San Francisco, CA: Jossey-Bass, Inc.
- Hardin, R. 1982. *Collective action*. Baltimore, MD: Johns Hopkins University, for Resources for the Future.
- Jackson, P. 1988. Definitions of the situation: neighborhood change and local politics in Chicago. In *Qualitative methods in human geography*, edited by J. E. a. D. M. Smith. Cambridge, England: Polity Press.

- Jetten, J., R. Spears, and A.S.R. Manstead. 1996. Intergroup norms and intergroup discrimination: distinctive self-categorization and social identity effects. *Journal of Personality and Social Psychology* 71 (6):1222-1233.
- Kerr, N. 1989. Illusions of efficacy: the effects of group size on perceived efficacy in social dilemmas. *Journal of Experimental Social Psychology* 25:287-313.
- Kerr, N. 1992. Efficacy as a causal and moderating variable in social dilemmas. In *Social dilemmas: theoretical issues and research findings*, edited by W. B. G. Liebrand, D. M. Messick and H. A. M. Wilke. Oxford, England: Pergamon.
- Kollock, P. 1998. Social dilemmas: the anatomy of cooperation. *Annual Review of Sociology* 24:183-214.
- Kramer, R.M., P. Pommerenke, E. Newton. 1993. The social context of negotiation: effects of social identity and interpersonal accountability on negotiator decisionmaking. *Journal of Conflict Resolution* 37 (4):633-654.
- Marshall, C., and G.B. Rossman. 1989. *Designing qualitative research*. Newbury Park, CA: Sage Publications.
- McGinnis, M.V., J. Woolley, and J. Gamman. 1999. Bioregional conflict resolution: rebuilding community in watershed planning and organizing. *Environmental Management* 24 (1):1-12.
- Natural Resources Law Center. 1996. *The watershed sourcebook: watershed-based solutions to natural resource problems*. Boulder, CO: Natural Resources Law Center, University of Colorado.
- Neale, M.A., and M.H. Bazerman. 1992. Negotiator cognition and rationality: a behavioral decision theory perspective. *Organizational Behavior and Human Decision Processes* 51 (2):157-175.
- Northrup, T.A. 1989. The dynamic of identity in personal and social conflict. In *Intractable conflicts and their transformation*, edited by L. Kriesberg, T. A. Northrup and S. J. Thorson. Syracuse, N.Y.: Syracuse University Press.
- Olson, M. 1965. *The logic of collective action: public goods and the theory of groups*. Cambridge, MA: Harvard University Press.
- Rhoads, B.L., D. Wilson, M. Urban, and E.E. Herricks. 1999. Interaction between scientists and nonscientists in community-based watershed management: emergence of the concept of stream naturalization. *Environmental Management* 24 (3):297-308.
- Rouhana, N.M., A. O'Dwyer, and S.K. Morrison-Vaso. 1997. Cognitive biases and political party affiliation in intergroup conflict. *Journal of Applied Social Psychology* 27 (1):37-57.

- Strauss, A., and J. Corbin. 1990. *Basics of qualitative research: grounded theory procedures and techniques*. Newbury Park, CA: Sage Publications.
- Thompson, L. 1990. Negotiation behavior and outcomes: empirical evidence and theoretical issues. *Psychological Bulletin* 108 (3):515-532.
- Thompson, L., and R. Hastie. 1990. Judgment tasks and biases in negotiation. *Research on Negotiation in Organization* 2:31-54.
- Turner, J.C. 1982. Towards a cognitive redefinition of the social group. In *Social identity and intergroup relations*, edited by H. Tajfel. Cambridge, England: Cambridge University Press.
- van de Kragt, A., J. Orbell, and R.M. Dawes. 1983. The minimal contributing set as a solution to public goods problems. *American Political Science Review* 77:112-122.
- Williams, E.M., and P.V. Ellefson. 1997. Going into partnership to manage a landscape. *Journal of Forestry* 95 (5):29-33.
- Yin, R.K. 1984. *Case study research: design and methods*. Beverly Hills, CA: Sage Publications.