GROUND THEOLOGY: A WINDOW
INTO LAND MANAGEMENT PLANNING

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ABSTRACT

An introduction to the qualitative research paradigm current in modern social science is followed by a closer examination of some of the aspects of one of the leading examples of that paradigm, Grounded Theory. Problems and triumphs of the early stages of experimenting with the Grounded Theory model as applied to a case study of first-generation Land Management Planning on the Chattahoochee-Oconee National Forest are discussed. Consideration of some small steps toward the goal of formulating a theoretical construct of the planning process on this forest which will be useful in future rounds of National Forest planning complete the paper.

INTRODUCTION

This paper has a dual focus. I want to discuss a few of the early and tentative results of approximately a year’s research on first-generation Land Management Planning on one of our nation’s national forests. I trust that this subject is timely, since a second round of 10-year plans and revisions is imminent for many of our national forests, at least those that completed an approved Final Plan within a decade or so of the 1976 National Forest Management Act which mandated this new type of comprehensive planning.

My second purpose is more general and more difficult. The methodology that I am learning to use in my research is not widely practiced in the fields of resource economics, management, or planning. I have been advised, therefore, that a preliminary discussion of qualitative research theory and methods may be warranted.

QUALITATIVE PARADIGM

Nature of Social Reality

Qualitative research seeks to discover the nature and meaning of social reality. Social reality, in turn, is viewed as an interactive human construction. Within the qualitative research paradigm, social reality is not an objective set of facts or happenings, but subjective perceptions of those
experiences. Subjective perceptions vary between individuals and across cultures. They also change over time.

It should be recognized that the qualitative research project itself results in another subjective and interactive human construction of social meaning. We may hope this construction is richly and broadly informed by our research efforts. At the same time we need to recognize that it is also necessarily a product of and limited by the consciousness and skills—and, of course, the blindspots and weaknesses—of the researcher.

Insider Approach

Given this interactive and subjective view of social reality, the qualitative researcher finds no advantage in assuming an "outsider" or "objective" point of view towards the research situation. Rather, since the very intent of the researcher is to understand and explicate reality as it is understood and lived by the persons engaged in that social process, he or she seeks not distance from but closeness to and, if possible, immersion in that process. It is not, then, "objectivity" which is required of the qualitative researcher, but a sense of what has been called "empathic neutrality" (Patton 1990).

Empathic Neutrality

The phrase "empathic neutrality" has the ring of an oxymoron. To be "empathic" suggests a sensitivity to and even vicarious experience of the life happenings and emotional responses of other people. Such an ability, I would suggest, requires the inward development and definition of the researcher's personal perspective. It equally requires a well-tuned awareness of cultural bias.

Empathy's counterpart "neutrality," however, is directed outward towards the research situation. Judgments, conclusions, or explications made by the researcher of that situation must be made, perhaps not exclusively but certainly first and foremost, in the terms of the social and cultural milieu in which the situation is lived and experienced.

GROUNDED THEORY

The qualitative methodology I am using is an adaptation of a method called "Grounded Theory" by its founders, Barney Glaser and Anselm Strauss (1967). Grounded Theory is one of the major strands of a variety of qualitative research techniques employed in the social sciences, particularly in Anthropology and Education, but also in Political Science, Psychology, Sociology, Business, and various Health-related fields.

Distinguishing Attributes

In addition to the perspectives which Grounded Theory shares with other qualitative techniques, it has some particular and distinguishing attributes. (Glaser and Strauss 1967; Glaser 1978; Charmaz, 1983) These attributes include, first, the notion that theory "emerges" from the data. Theory is not imposed from the outside in the form of either testable hypotheses or overarching structures.

Secondly, Grounded Theory requires simultaneous data collection and analysis. This strategy forces a conscious focus on the emergence of theory relatively early in the research process. These tentative theoretical formulations become the basis for the direction of further data collection as the researcher seeks to answer questions raised by the emergent theory.

Since a third characteristic of Grounded Theory is the perspective that theory is a process and not an artifact, nothing is lost when an early theoretical formulation is negated or transformed by later
data. Transformation of theory is expected and sought after as the researcher’s knowledge of the process under study moves from the outside to the inside, from the shallower to the deeper.

Canons Denied

A final particular of Grounded Theory gives pause to many social as well as many natural scientists. This particular aspect is that the usual scientific canons of verifiability and replicability are inapplicable to Grounded Theory. This is a bold assertion to defend.

Grounded Theory practitioners view their role in the scientific enterprise as the discovery, not the verification, of theory. As I understand it, the best analogy for the "discovery of theory" notion may be in the mysterious and largely unexplored "intuitive" phase of standard scientific research. A seemingly gratuitous thought, unbidden but welcome, or a "breakthrough" realization on a problem mulled over for months, leads a scientist in a very interesting direction. The thought or the realization, the theory, is discovered by the scientist. Hypotheses concerning this theory can be formulated and tested. Yet the thought, the discovery, is logically prior to verification. Indeed it is the object of verification.

What Grounded Theory attempts to do, it seems to me, is to systematize and perhaps even force the process of intuition and hence the discovery of theory. The process becomes conscious and directed. The theory discovered by this process is subject to testing by any and all means, as is any other theory. But the discovery itself is on the level of intuition, prior to and the object of verification. It is theory.

The question of replicability is more straightforward. Grounded Theory techniques place the researcher as close to and as deep within the research situation as possible. This practice makes the researcher at the very least a quasi-participant in the research setting. The line between researcher and subject is blurred and sometimes wholly erased. In effect, and in practice, the practitioner of Grounded Theory is, of necessity and without apology, both the researcher and the primary instrument of his or her research.

Under these circumstances a demand for replicability is deemed logically impossible. Not only do social processes undergo constant change, no two individuals intently focused on the very same social situation at the very same time will carry away the same impressions, insights, or evaluations. The duty of the Grounded Theorist is to make available and intelligible to others his or her critically perceived reality of that situation. This reality is assumed to be partial and unavoidably subjective. It does not masquerade as "Truth." It does not pretend to be "replicable."

METHODS

More important perhaps than these philosophical and abstract characteristics of Grounded Theory is the usefulness of the model in the "discovery" or construction of social theory. I will try to illustrate this discussion of method with examples of my own struggles and all too occasional triumphs in attempting to apply Grounded Theory to a case study of land management planning on the Chattahoochee-Oconee National Forest in Georgia.

I must stress again that I am a student, not a master, of Grounded Theory. After about a year’s worth of intense and often extremely frustrating work, I feel increasing confidence in both the methodology and in my ability to work with it. I am cautioned, however, by the remembrance of earlier periods of optimism which proved ephemeral.
Overview

Formal land management planning on the Chattahoochee-Oconee began in late 1979 with the appointment of an Interdisciplinary or "ID" Team. A Draft Plan was published in 1984. Following a negotiated settlement to an Appeal filed by a loose coalition of environmental groups led by the Wilderness Society and the Sierra Club, a Final Plan went into effect in 1986. This Plan is viewed by the planners themselves and by other Forest Service personnel I have spoken with as somewhat of a "model plan," particularly in terms of its sensitivity to and involvement by the public in the planning process.

My broad research goal is to examine this public involvement and in particular the involvement of environmental groups in the planning process. I hope to be able to both judge the impact of that involvement on the eventual Plan which was produced and to generate a useful theoretical construct of environmental group involvement in the planning process.

Data Sources

My primary data sources are the hands-on participants in the planning—the members of the ID Team and the Planning Staff of the Chattahoochee-Oconee, Forest Service personnel at the Regional Office level who directly participated in the process on the Chattahoochee-Oconee, and the principal leaders and activists of the various environmental organizations who were directly involved. This "elite sampling" technique is supplemented by a modest "snowball sampling" process in order to include knowledgeable individuals identified in the course of interviewing and study. Secondary data sources, which are becoming more important as the study proceeds, include the Process Papers, ID Team Minutes, internal documents of environmental groups, newspaper articles and court proceedings.

Data Collection

Participants in the study are asked to engage in a one- to two-hour open-ended taped interview. Interviews are conducted in the location and at the time desired by the interviewee. Though I have in mind certain broadly-defined topics I want to discuss and often some specific incidents I wish to explore, my intent in these interviews is to allow as free rein as possible to the respondents, allowing them to discuss the events and ideas which they define as significant. I try to frame my questions in terms of the natural flow of the conversation. I try to keep my interjections to a minimum, to facilitate conversation but not control or direct the pathways taken.

These interviews are transcribed verbatim—or nearly so, since I have dropped my initial practice of transcribing every "ah" and "ummm" and "er" of the conversation as more distracting than useful. The interviews range in length from about 35 to 70 double-spaced typed pages. The transcriptions, together with the documentary material mentioned above, are the "raw data" of this particular Grounded Theory project.

Analytical Tools

The primary tools of Grounded Theory are coding and memoing. Coding has several forms which are progressive in terms of the level of abstraction sought. The primary forms of coding are termed "Open," "Axial," and "Selective."

Illustration

"Open Coding" is used to fracture the data into "meaningful chunks." In practical terms, this process is accomplished by isolating and abstracting from the data a phrase, a sentence, a paragraph, a page even, which seems to indicate or convey a "meaning" which is of interest to the researcher. For example, I might abstract a sentence from an interview with an environmental activist:
We identified a number of sites in North Georgia and got the resolution passed urging the U.S. Forest Service to manage those sites in a **de facto** wilderness state, so they would not be impaired for wilderness.

I might be interested in understanding just what environmental groups **do**. Since I find that open coding using gerunds seems to help me move from the facts of the statement to a more abstract conceptualization of those facts, I might code this chunk simply as "Acting." "Acting" is something environmental groups **do**, like "Meeting" or "Fundraising" or "Partying".

Having coded this passage "Acting," I could immediately give some dimension to it as a potential or emergent category. The category "Acting" would include the following elements from this code--"identifying sites," "passing resolutions," and "urging Agency action." This data segment also includes a causal context for Acting, "sites in a **de facto** wilderness state," and a strategic concern, "management without impairment."

I am now sensitized to the concept of "Acting." As I proceed through this and subsequent data sets, it is likely that I will find other "chunks" whose "meaning" is also, in my mind, "Acting." The aspects, dimensions, and contexts of this emergent category will expand. Conditions and consequences will appear. The category may subdivide: "Individual Acting," "Group Acting," "ID Team Acting," "Acting Under Pressure," "Acting Against Interest," any number of tags or codes might fit.

What happens in this process is that the particular given, the "fact" of the data segment, is abstracted and conceptualized. The movement is from the particular to the general, from direct experience to theoretical explication. Since, however, the "theory," the concept, emerges from the experiential data itself, it is "grounded" in that data. The method of Grounded Theory, which is also called "Constant Comparison," attempts to insure that such "grounding" in the data is not broken by means of continuous contact with and analytical comparison of conceptually interrelated data fragments.

**Axial and Selective Coding**

Open coding is clearly insufficient for the production of comprehensive theory. Thus a process termed "Axial Coding" is used to assist in the reassembly of the fragmented data. This reassembly is accomplished by the introduction of a conceptual framework which structures individual categories in terms of phenomena, context, causes, strategies, actions, and consequences. The goal of Axial Coding is to lay bare the "inner workings" of individual categories and reformulate them on a higher, more comprehensive conceptual level.

A third coding procedure called "Selective Coding" is used to examine categories in terms of their relationships to a single, emergent "Core Category." This "Core Category," as its name implies, emerges in the analytical process as the key element in the social process under investigation. Its influence is felt in most or all of the other categories. Selective coding is used to trace and make apparent that influence. It is through the process of Selective Coding that the Core Category is transformed into the sought-after comprehensive theoretical formulation.

**Coding in Practice**

In practice, the various codings are used simultaneously and interactively. A new data set introduced months into the data analysis will be "Open Coded" to be sure to accomplish fragmentation, but those codes will be pre-informed by the earlier Open, Axial, and even Selective Coding which has gone before. It is for this reason that data collection and analysis are simultaneous. Once a conceptual framework has begun taking form it guides and informs in dialectical fashion the course of additional data collection.

Coding is an intense and absorbing enterprise, particularly in the early stages of data reduction when totally unstructured and exploratory Open Coding predominates. Codes build rapidly as
fragment after fragment is closely scrutinized and assigned meaning. As each data fragment is
compared to other fragments in terms of meaning, patterns in the data and the codes begin to emerge.
These patterns themselves may be assigned codes, subsuming and incorporating whole blocks of
earlier codes, transforming them into aspects or indicators of emerging categories.

Memoing
The memoing process which accompanies the coding provides a means of maintaining control
over the data and the analysis. Memos, which may be one sentence or ten pages long, act to focus the
researcher’s concentration, to provide a record of insights and transformations, to track or bracket
emerging researcher bias, to define new codes and categories, to remind the researcher of loose ends
to tie up or new avenues to explore, and any number of tasks from rote bookkeeping to theoretical
musings.

The Rule-of-Thumb for memoing, much easier to say than to do, is "Stop Everything". Day
or night, coding or reading a novel, waking or sleeping, driving the car or arguing with your spouse--
Stop and Memo. As I have learned repeatedly, and unfortunately continue to learn on an all too
frequent basis, an insight or idea which is not memoed is lost and probably lost forever.

DISCUSSION

Phase I
The initial phase of my work on the Chattahoochee-Oconee Plan involved a series of six
interviews. Three Forest planners, including the ID Team leader and the Forest Planning Officer, were
interviewed. Interviews with three environmental group activists followed, including the two people
consistently mentioned by the Forest planners as the key figures in the process.

These interviews were subjected to intense and exhaustive scrutiny, coded and recoded and
bashed and battered almost beyond recognition. I initiated what I called a "write hard" technique in
which a selected code would be traced within a given interview and then across all six interviews in
an attempt to lay bare all its aspects and ramifications.

I learned a lot from this process. One of the things I learned, after tracing just two of the 38
major categories comprising several hundred individual codes that I had at the time, was that my
lifetime was too short and my braincells too few to carry on this "writing hard" technique which, quite
frankly, I had hoped would provide a breakthrough shortcut and perhaps even major advance in
Grounded Theory methodology. Not too bright, I'm afraid. I now call this period that of
"immersion"--necessary, perhaps, in order to become completely sensitized to the data and aware of its
possibilities--but also a near impossible state in which to work, constantly awash in a sea of words.

Phase II
Phase II of this little project began with a round of coding for which no name exists, insofar
as I know, in the Grounded Theory literature. It follows the fundamental thrust of the methodology,
however, in that the coding is dictated by a felt need, emerging from the data, for a structure in which
to fit a complex process which occurred over at least a 30-year time span.

My initial concern and questioning focused on the 7-10 years of actual planning plus a couple
of years of implementation, 1979 to 1986-89. The interview data shows, however, that the process I
am looking at begins on the Chattahoochee-Oconee in about 1959 and continues in fits and starts
through tomorrow.
Thus I coded the initial data again, this time isolating each coded segment in all six interviews according to Speaker, six Time Frames, and 12 Subject categories chosen from across the data sets to provide a very coarse screen which would allow for the retention of all the data but still achieve a degree of useful fragmentation.

This recoding took over four weeks to complete, but at the end I was able to construct a 6 X 12 matrix by Speaker in terms of Time Frame and Subject. Detailed analysis of this Time/Subject matrix eventually produced a conceptualization of the inner-workings of the planning process on the Chattahoochee-Oconee which looks something like that shown in Figure 1.

Figure 1: Coincident Development Schema

In this schema, Public Involvement and Planning are part of a Coincident Development relationship which expresses itself over time in a dialectical action/reaction spiral. The focus of both Public Involvement and Planning might be seen as a struggle for the retention of Options, which are primarily addressed in terms dictated by the historical concern of the Forest Service, the Timber resource. Questions of Timber Management on the Forest--the how, the why, the cost, the in-whose-interest questions--are confronted in the planning process and between the environmental groups and the Forest planners in terms of Clearcutting, Wilderness, and Roads, with Roads also the primary link between the issues of Clearcutting and Wilderness designation.

On the Planning side of the Coincident Development dichotomy is a major factor clearly linked directly to the Options notion but only indirectly linked to Public Involvement. I call that factor Power Struggle. It essentially denotes a struggle between the traditional top-down line-officer chain-of-command authority structure of the Forest Service, here identified by Hierarchy, and an insurgent, tentative, bottom-up source of power released by the legal requirements of the land management planning process itself. This power gained expression through the rank-and-file ID Team and Planning Staff of the Forest, and is here denoted Teamwork. The primary interactions between Hierarchy and Teamwork are expressed in a major subject category, Discord.

It is this basic structure that I am at present tracing through its development and changes. Additional interviews and much secondary material has been added to the data base, with more to come. My coding now is dictated by an alphanumerical scheme incorporating eight elements. These
elements are tracked on a computerized relational database called Paradox which is proving to be of
great assistance in managing and asking questions of the data.

RESULTS

Other elements of some interest became apparent in the matrix analysis. It became clear, for
elementary, that involvement by environmental groups was strongest by far in the Preplan time frame,
prior to the official "beginning" of land management planning. In order to look at this era more
closely, I divided the time frame into three fuzzy-edged and overlapping periods. I identify them in
terms of environmental group perspective as (1) the "Individual Resistance" period of about 1960-
National/Act Local/RARE II" period, 1977-78.

The titles of these sub-periods hint at a major or dominant aspect of the Planning/Public
Involvement dichotomy. Over these sub-periods the Clearcutting and Wilderness issues are explored,
defined, and defined again as court challenges to clearcutting and an expanding legal definition of
wilderness restructure the Options available to the contending parties. The legal challenges to
clearcutting and changes in wilderness law are matched by the quantity and quality of scientific
scrutiny on both subjects. This scrutiny solidifies environmental concern and increases interaction
with the Forest.

The matrix analysis indicates, ironically, that the formal public involvement process mandated
by NEPA and the NFMA coincides with a near-total cessation of organized environmental group
pressure on the Forest. It picks up again slightly following the court-mandated remand of the National
RARE II EIS to the individual Forests in 1982, and again very strongly with publication of the Draft
Plan in 1984.

In the interim, it appears, the planners on the Chattahoochee-Oconee turned almost totally
inward as they wrestled with a land management planning process which may well be historically
unprecedented in its complexity. For much of 1981 and 1982, for example, difficulties with the
primary analytical tool used in the planning process, the FORPLAN computer program, consumed
most of the planning time on the Forest. In 1982 and part of 1983, the Discord between the Forest
and the Regional Office over the question of alternatives to clearcutting became the paramount factor
in the daily lives of the Forest planners.

Teasers

I am not ready to either draw conclusions or advance theories concerning this planning
process. I will, however, advance a couple of "teasers" which are indicated by the data analysis thus
far. The first addresses the issue of clearcutting, the second that of wilderness. Both concern
problems of consciousness and communication which relate strongly to the upcoming round of
National Forest planning.

The issues of this second round of planning seem to be an order or two of magnitude more
complex than those of the first round. Ecosystem management questions reduce problems with an
overreliance on a controversial timber harvest method to near insignificance. Landscape scale
planning over bioregions crossing political and administrative boundaries and taking account of
activities on surrounding private land diminishes arguments over whether or not a 30-year old
abandoned logging road "disqualifies" an otherwise rugged ridge from wilderness designation.

It is sobering, then, to hear Forest planners speaking in the present as well as of the past,
discuss environmental group concern over clearcutting in purely aesthetic terms: "They think it is

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ugly." Environmentalists, on the other hand, mention the aesthetics of clearcutting simply in passing, and usually not at all. Environmental concern over clearcutting on the Chattahoochee initially was directed at the near-total lack of scientific data that the Forest could produce concerning the biological, ecological, and hydrological effects of clearcutting on the land, and the fact that without that data the Forest rapidly accepted clearcutting as virtually its sole method of timber management.

When the data concerning the effects of clearcutting began to accumulate, environmental concern informed by that data solidified and escalated into demands for modification and/or cessation of the practice. Yet the Forest planners cling to an "It's a good tool" justification for clearcutting while trivializing environmental concerns as being uninformed reactions to temporary ugliness.

A somewhat similar situation exists over perceptions of the wilderness issue. The Forest planners see the question almost entirely in terms of the use-value of wilderness as an outlet for dispersed recreation. Environmentalists share this concern, but to them it is minor compared to the threat of an irretrievable loss of something whose true "value" in biological, ecological, spiritual, or even economic terms was and continues to be largely unknown.

I have discovered little evidence to date on this one National Forest that a shared consciousness on the contentious but, in today's terms, relatively simple issues of clearcutting and wilderness has emerged between Forest planners and environmentalists. Without the growth of a shared consciousness on at least these precursor issues and both the scientific and ethical concerns which drive them, the next round of National Forest planning certainly promises to be interesting.

LITERATURE CITED


