

INTRODUCTION

THESIS OVERVIEW

This case study describes an attempt to resolve disputed access to a historic local wildland trail in the Colorado Front Range. A local wildland trail is one that often traverses both public and private wildland and is accessed freely by a local community for non-motorized use, for connection to nature and for social visits. “Historic” implies use as found in the historic record and as reflected in the memories of older and previous residents. Wildlands are landscapes that reveal an abundance of ecological processes significantly surpassing indications of human activity. Wildlands satisfy the longing that urban or rural dwellers carry for experiences in nature. Such connection to nature requires a landscape scale sufficient to offer the experience of solitude. In this case study, the trail dispute served as the basis for testing participatory action research in resolving a localized environmental dispute.

As discovered through the attempted resolution process, the dispute rests in tensions that originate between notions of common pool resources and private property rights. The implications of unresolved trail disputes in the study area and beyond can create lingering effects. These effects may weaken the likelihood of adoption of community-based ecosystem stewardship by non-resource-dependent communities. Without access to a landscape, the emergence of attachment to place, a precursor of stewardship, is jeopardized.

Secondly, these effects may weaken federal agency capacity to manage wildlands. As it is, agency capacity to collaborate effectively is hampered by political forces that are not necessarily representative of the interests of citizens. National level economic forces that seem to hold sway over the appointment of administrators may not have the same level of control over decision-making at the local level.

Thirdly, and of critical social and ecological significance, the amenity and stewardship value of local access trails and their supply will likely deteriorate and dwindle for those that seek to reside in historic or newly forming clustered communities in rural settings. These are the individuals that do currently contribute, and could contribute significantly more under sound agency-collaborative leadership, to the restoration and preservation of wildlands. As a result of under-funded and politically destabilized agency capacity to steward, combined with a possible collapse in local attachment to place, a ripple effect could occur of lost opportunities to protect and restore our remaining viable ecosystems.

Environmental dispute resolution is a critical component of ecosystem preservation in that it administratively and procedurally recognizes the essential value of a communication link to local knowledge, expertise, and volunteer-ship. This thesis asserts that participatory action research (PAR) may enhance conventional environmental dispute-resolution practices because PAR offers the opportunity for locals to empower themselves with knowledge, and pursue stable social outcomes despite disparity between stakeholders.

In this case, participatory action research offered hope through the potential to elucidate the local case of trail closure and by providing intellectual and heartfelt resources for resolving the dispute. Of particular importance to this case, participatory action research validates the contemporary experience of local custom and sense of place. PAR can deepen the quality of information transfer between administrators of natural resources and the people affected by public decision-making processes. Strengthening the communication link between citizens and agency administrators in a range of informal ways is critical to enhancing natural resource policy.

In its commonly used form, participatory action research elucidates local knowledge for local use in relation to outside agencies that seek to provide expertise and financial resources to the community. In those instances, PAR enhances the quality of community decision-making to meet local needs in health care, education, and infrastructure. PAR often supports local people in articulating where and who they are and where and who they might like to be. In a PAR intervention,

community-derived data belongs to the community and not to the researcher or funding organization. That is, the information is shared for everyone's use and understanding, not simply collected for analysis never to be integrated, validated or corroborated by the locals under study.

“Participatory research seeks to break down the distinction between the researchers and the researcher and the subjects and objects of knowledge production through the participation of the people for themselves in the attainment and creation of knowledge. In the process, research is view not only as a means of creating knowledge; it is simultaneously a tool for the education and development of consciousness as well as mobilization for action.”

(Gaventa, 1991)

Power imbalances proved to be a particularly difficult challenge in this trail dispute-resolution process. A key stakeholder would not discuss his choice to close the local historic wildland trail. Land use policy did not serve to remedy this imbalance. For instance, a county mandate might ensure trail easements on existing trails that traverse newly acquired and potentially buildable parcels. Or mediation of trail disputes could be a requirement of the site plan review process that precedes the issuance of a building permit. The subject of local access trail disputes is a newly emergent one. Policy makers do not yet have explicit guidance in this area nor do they have the procedural tools to prevent disputes over trail use. PAR sets up the foundation for mediating or attempting to mediate an environmental dispute of the type presented in this case. Complex environmental and social disputes in a climate of highly differentiated public and private ownership need a great deal of space, time and solid research to resolve.

Participatory action research can address power imbalances by supporting “constructive conflict engagement” (Mayer, 2004:3). Local community members who were initially protagonists became “operationally neutral” actors who sincerely attempted to conduct research to address the interests of all parties. Other community members helped to coordinate the mediation effort. Research that was community-focused and community-powered confirmed and validated a range of individual and mutual interests. PAR fortified the EDR process so that no matter the lack of stakeholder involvement by critical disputants, a fairly clear understanding of the substantive issues could still be derived through focused, community-based research of stakeholders holding similar characteristics, e.g. landowners with trails. This foundation may still serve to resolve the dispute.

In this case, a cycle of PAR and subsequent action research redirected community discontent into a deeper understanding of the interests involved and options available to resolve the dispute. PAR opened a psychological space for patience and perseverance rather than escalated emotions over a perceived injustice. PAR constructively de-escalated the local trail dispute and gave locals time to focus on the substantive issues as they suspended judgment and released the need for stereotypical, people-focused attributions. This space for reflection offers the greatest hope we have for resolving many of the troubling environmental challenges we face.

This case study explains the potential role of PAR in remedying stakeholder disparity, in creating incentives to negotiate, in supporting community empowerment, in building relationships around complex social and ecological issues and in building capacity to resolve dispute. In this case, PAR may lead to increased awareness about opportunities for local involvement in ecosystem stewardship. Private property-owner control grounded in a full understanding of the issues, combined with stable local customs, might serve to prevent or resolve trail use disputes on local trail systems and even on trails that traverse public land.

THE DISPUTE

The dispute occurred in Gold Hill, Colorado. Gold Hill is situated within the Southern Rockies Eco-region. Gold Hill is nine miles west of Boulder, Colorado. Gold Hill is the site of the

first gold strike of the Nebraska Territory in 1859. The community of just over three hundred persons resides for the most part in the original platted town site. The town site is now a National Historic District. Other residents live in either a subdivision of four to five acre parcels or in homes situated on larger parcels among the surrounding forests. Some homes are individually situated on mining claims staked during the Gold Rush of the 1860s.

In the last fifteen years, the proximity of Gold Hill to Boulder has drawn bicyclists to Gold Hill's previously uncharted trails. An increase in recreational demand by mountain bicyclists, Off Road Vehicle (ORV) and dirt bike enthusiasts, and the growing number of new homes built in the surrounding montane forests have created tension between landowners and trail users. Previously trail use mostly involved locals/neighbors who were familiar to landowners, and was an integral part of community social life. Similar tensions have emerged across the Front Range of Colorado.

The catalyzing incident for testing an EDR/PAR intervention involved a dispute over restriction in access to a local trail that winds through public and private lands. The change in use on this trail was not accepted by some local residents and soon, heated reactions off trail lead to escalated encounters on trail. The trail access dispute was triggered by the "outsider" purchase of land across which a segment of the trail traversed. When the trail segment was subsequently closed to local access, neighbors expressed concern over a potential threat to their lifestyle. When efforts to talk with the "outsider" failed, these individuals mobilized others in the community to act in defense of trail use by locals. This mobilization effort raised awareness of the issue in the community and precipitated a dispute-resolution process to address concerns at a community-wide level. Several other local trail disputes emerged while conducting the participatory action research and are discussed in Chapter Three.

Two maps of the study area are presented in the appendix. The two maps are the result of the Trails Committee's mapping activities. Both an aerial photo and a topographical map were prepared using Geographic Positioning System data on trails and Boulder County's existing Geographic Information System's data on land ownership. (The Gold Hill mapping project is described in Chapter Three). The study area is adjacent to and east of designated wilderness in the Indian Peaks and is located fourteen miles - as the crow flies - from Rocky Mountain National Park. Because of the vast undeveloped landscape and low population density, the forests and meadows surrounding Gold Hill offer opportunities for solitude and the wilderness experience.

Local access trails often traverse multiple ownership boundaries. Previously, local access trails provided technologically passive trajectories on foot or horseback through wilderness for locals seeking either to socialize or work. In this case, the "North Trail" originates on the northern outskirts of Gold Hill's Historic District and connects outlying homes and other communities to the town site's cluster of homes. Gold Hill's North Trail typifies low-volume, historically open, local access trails along the Front Range. For a quick overview of the differing types of trails on public lands, please refer to Appendix One-A, "Glossary of Trail Terms". For the specifics of multiple ownership of trail segments in this case, please refer to Map 1. "Gold Hill Trails Map-Topographic Version" and Table 20. "Stakeholder and Place Name Codes and Descriptions."

THE INTERESTS OF THE PARTIES

This trail dispute is unique because of the socio-cultural characteristics of the local population and the community-based beginnings of the mediation process. In addition, divergent natural resource interests are central to the dispute. Primary among the interests are private property rights and access to the landscape. Interests also reflect the region's environmental history, residential development patterns, and recreational demand. Another even broader interest lies in wilderness protection standards in the area's montane forest landscape.

Private property owners with trails are concerned about protecting the investment value of their property. Property Owners tend to be risk averse and seek to minimize depreciation of property value due to trail easements. They also seek to minimize liability exposure and subsequent financial risk for lawsuits that may be brought against them. A trail traversing private land can represent a

significant liability risk exposure. In addition, property owners may seek to experience their land without intrusion or encumbrance. Property owners may seek to avoid the nuisance factors associated with public access to trails on their land and may be particularly affected by non-local, high volume bicycle or motorized vehicle use. A property owner's response may naturally be to close access when the trail poses a significant burden on their lifestyle expectations. The details of underlying interests and strategies to address these interests are presented in the *Community Trails Mediation Guide* prepared as part of the EDR/PAR intervention. (See Table Two-A, Positions of Locals who Opposed Access, and Table Two-B, Concerns of Locals who Opposed Access, in the *Community Trail Mediation Guide*, Volume Two). The *Guide* is found in the thesis appendix. For the full set of recorded comments in opposition to prerogatives for local trail access, see Appendix Two-B, Gold Hill Trail Access Perspectives.

Closing a segment of trail can have the effect of altering local patterns of landscape access and community interaction. Locals in Gold Hill have expressed their appreciation for the passive tranquility of traversing the landscape on a local trail. Please refer to Appendix Two-B, Gold Hill Trail Access Perspectives for comments by locals in support of access. The local trail experience appears to offer an archetypal or ancient experience integrated in a modern lifestyle. The use of a local access trail creates a unique interlude in time and space. This interlude offers familiarity and comfort in a routine, habitual custom of use. For those who often travel the same route, a disruption of trail use appears to interrupt the way in which individuals connect with themselves, others and the landscape.

A closure appears to have residual effects on psychological and sociological processes. Some locals also felt that the fabric of their social life was under threat, in that this particular "outsider" threatened their sense of safety in the landscape. Social distancing had been compounded because the new property owner did not live in the community, although he plans to. Some residents wanted to ensure his integration into the community prior to any further damaging effects.

A trail closure can negatively impact quality of life and the amenity value of the landscape. This may also impact residential property values in an area. In conducting the research for this case study, it has also been found that individuals have left other areas of Boulder County in which trails were closed to locals and moved on to less developed areas of Montana and Idaho. A trail closure may also impede ecosystem stewardship of a landscape by a local community by preventing connecting experiences with the local habitat.

The American West certainly has been the scene of dispute over natural-resource use since Spanish gold seekers appeared on the horizon, if not before. Tensions over resource use are tied to cultural identity. The trail dispute in Gold Hill is aggravated by a regional cultural clash. Tension exists between those who identify with the ethos of the old mineral, ranching West and the New West's non-resource-dependent, environmentally-sensitive, outdoor recreation lifestyle. The New West reflects the lifestyle values of immigrants from other parts of the United States and abroad whose livelihood is seldom dependent on mineral extraction, ranching or forestry. In the multi-cultural, post-modern world of the American West, making sense of these differences deeply affects individual choice and personal economic survival. The perceived best use of natural resources varies greatly between the two paradigms. This variation often aggravates if not leads to conflict.

The North Trail dispute is in part caused by urban recreational demand for wilderness along the Front Range. It is also caused by a sense of those that are local and those that are "outsiders." Urban eco-tourists have begun in the last fifteen years to recreate in the forests around Gold Hill. Urban eco-tourists recreate without necessarily developing attachment to place. In Gold Hill, urban eco-tourists are very often strangers, "outsiders," unfamiliar, anonymous people that whiz past the local landowner without even the chance pause for a greeting. It is observed that urban eco-tourists recreate without understanding the local sense of prerogative, landscape ownership or stewardship incentives. In this light, the urban eco-tourist is "New West" with a twist of anonymity.

PRINCIPLES OF THE EDR/PAR INTERVENTION

Environmental Dispute Resolution

Environmental dispute resolution (EDR) initiatives resolve disputes over the management of natural resources and these initiatives are being adopted in growing numbers (Coughlin et al, 1999). Community-based initiatives bring people together to collaborate and resolve natural-resource dilemmas like grazing practice reform, watershed management and forest management planning.

Conflict over resource use is certainly not new. The growth of these initiatives over the past two decades stems from three origins: demonstrated effectiveness, government agency support, and need. EDR allows resolution of thorny and complex social and ecological issues outside of a slow, expensive judicial process that is prone to appeal. Judicial processes are the backbone of conservation in the United States, but they do not always offer outcomes that meet the best and most stable interests of all the parties. Environmental dispute resolution processes can. Environmental dispute-resolution processes are “able to satisfy creatively the basic concerns of participants and, as a result, are preferred to the uncertainties and delay of more traditional administrative and judicial processes” (Crowfoot and Wondolleck, 1990).

The Alternative Dispute Resolution Act of 1998 (H.R. 3528) and Vice-President Al Gore’s National Performance Review strengthened existing government agency and institutional support for EDR. This support has blossomed into the Environmental Conflict Resolution Institute, the Department of the Interior’s Office of Collaboration and Dispute Resolution, the Environmental Protection Agency’s Conflict Prevention and Resolution Center, among others. Each has fostered innovation in the workings of government and a broader acceptance of mediation as an approach to public planning processes that contain dispute-like tensions and for encouraging inter-individual dispute resolution which is part and parcel of the work of public planning as well. EDR, mutual understanding, and non-violent action are models of behavior that have received official recognition and these models as they are lived every day are changing the way people work together to solve problems at all levels of government and community interaction.

The principles used to guide the EDR for this case include “fairness, accountability, and legitimacy, [representation] inclusiveness, [transparency] openness “(Innes, 2004). See Table 17 and Table 18 in Chapter Four for a thematic and condensed literature review of the different ways in which researchers and activists have evaluated and understood EDR processes (Gardner & Lewis, 1996; Innes, 1999; Kaner, 1996; McCloskey, 1996; Moore, 1996; Susskind and Cruikshank, 1987; Morissey, 2000; and Wondolleck and Yaffee. 2000).

In public forums, stakeholder groups often represent a consistent set of interests. It is a difficult task to lump people together into a group as if their attributes or opinions may not also fit in another. Still, stakeholder groups as they appear on the political horizon do not generally overlap in their membership. In addition, these stakeholder groups no matter how homogenous in appearance are not monolithic in their behaviors or opinions within their own interest group. Such diversity can add another layer of complexity to an EDR process. For the purposes of simplicity and general understanding of the main interests of those who are involved in the contest over natural resource use, the primary stakeholder groups in EDR processes are listed below:

- Environmental non-governmental organizations may represent future generations, other species, indigenous knowledge, and people of color. Some of the larger of these stakeholder groups may be very well funded and extremely competent professionals with a great deal of expertise. Others may have heartfelt convictions, a great deal of emotion and difficulty in expressing their capacity to see beyond to the other side of a conflict. These latter individuals are usually volunteers and are the lifeblood of most environmental groups. They don’t back down until the greater good as they see it, has been met. Since these groups present more than one type of interest, one type of people, and the silent voice of nature and future generations, these stakeholder groups shoulder a great deal of responsibility, and special attention

needs to be given to the range and authenticity of interests they represent in an EDR process.

- Industrial associations, private companies and chambers of commerce can represent a range of profit-seeking and shareholder interests (as represented by CFOs and CEOs) from private property rights to prerogatives for residential, commercial and recreational development or rights to oil, coal, and timber exploitation. The main driver for these interests, the stakeholder, is fairly diluted in its representation. Again special care needs to be given to hear stakeholder interests that sometimes go beyond the bottom line and seek to include social and environmental externalities in the production function. Some economic interests are supported by government subsidies and judicial preference. Often media control by broader profit-seeking interests can confound issues such as equating job creation or economic growth with quality of life. These groups are generally very well funded with little expertise in either socio-cultural or ecological matters.
- Local, state and federal government have legitimate authority to tax and administer policy to protect public goods such as clean air and water. This group is generally well-educated, but oftentimes too budget- and time-constrained to administer their professional, full-time responsibilities as they would like for the greater public good. These individuals are relatively well and consistently paid compared to tradesman, environmental advocates, lumber harvesters and other self-employed workers that may be involved in an EDR process.
- Local residents represent cultural and lifestyle interests, recreational preferences and personal security preferences. This group of stakeholders is generally very committed, often very articulate, but short on time and money as they have lives to lead, long work days, long commutes and often other personal and volunteer responsibilities
- Recreational users offer the greatest opportunity for common ground among these interests as people who recreate in natural settings come from each of these groups. In an EDR process, caution must however be exercised when the underlying interests of these recreational stakeholder groups are diluted by their funding sources. These groups are often funded through membership dollars or in some cases, through support by manufacturers of the products with which these individuals like to recreate.

EDR is an intervention in which stakeholders willingly choose to participate in a process of dispute resolution because it will best serve their goals. In a sociological sense, the components of tension in society come together to meet each other in an alternative setting, rather than the legislative or judicial arena. The level of trust that is generated in a facilitated environmental mediation gathering depends on the level of decision-making authority that each representative or individual carries with them when they walk in. Real people meet each other and reveal or do not reveal themselves as individuals. Regardless, there are different types of EDR intervention moments of engagement. In a community-based initiative like the one in this case, everyone is already familiar with each other despite their alignments with varying stakeholder groups as described above. Still, trust may be a difficult thing to come by.

The early promoters of mediation practice have something to offer in understanding the underlying composure and psychological stance that is brought to bear in an EDR gathering.

“Mediation is a voluntary process in which those involved in a dispute jointly explore and reconcile their differences. The mediator has no authority to impose a settlement. His or her strength lies in the ability to assist the parties in resolving their own differences.” (Cormick, 1980, 27)

Mediation theory states that when people move beyond positions to needs, the opportunity exists to reach outcomes that work for all parties.

“Being soft on the people and hard on the problem” allows you to deal directly and empathetically with the other negotiator as a human being, thus making it possible to reach an amicable agreement.” (Fisher and Ury, 1981, 14)

The EDR process depends on the ability of the parties to engage in interpersonal dialogue. By becoming involved in a collaborative forum for dialogue and mediation, stakeholder representatives can hope to understand differing economic, social and ecological perspectives on the use of common resources. Consensus means that everyone "can live with" the proposed settlement, not necessarily that all agree with it or are supportive of it. Consensus means simply that no one will oppose the agreement. A formal agreement between diverse stakeholders to share a trail segment entails that everyone abides by the behavioral guidelines that have been set out. If not, the landowner may choose to close the segment.

If consensus is reached in early stages of the process, a shared vision of the whole set of conditions can construct common ground for mutually acceptable natural-resource management plans. The process can also generate trust between group members that endures beyond the initial context of discussions and into the implementation of a particular action path. With trust comes an appreciation that setbacks may be attributable to the complexity of ecological and social setting. Trust supports perseverance and the long-term adaptability and stability of an agreement.

In negotiating or supporting negotiation in an EDR process, the following negotiation principles have been effective:

- Separate the people from the problem;
- Focus on interests, not positions;
- Invent options for mutual gain;
- Insist on using objective criteria; and
- Know your BATNAs, your best alternative to a negotiated agreement.

(Fisher and Ury, 1981)

Fisher and Ury (1981) set the stage for understanding mediation processes, as well as Moore (1996), and have provided a strong foundation for guiding EDR facilitators in supporting participants. In order to increase the acceptance and use of mediation for public and private disputes, the notion of efficiency has been heavily relied upon. Efficiency is “avoiding transactional costs of digging into positions” (Fisher and Ury, 1981:14).

Efficiency is not the essence of mediation or of EDR. The concept is important, but not necessary or sufficient. In the context of a complex environmental dispute, it may not necessarily be efficient to get involved with a dispute resolution process. Due to their pre-existing and specialized knowledge; county, state and national advocacy groups have the resources to prevent and resolve disputes through lawmaking that may be much more efficient. Efficiency, just like economies of scale, are social constructs of reality that do not in fact always serve to meet the ideal of a wise and stable social and ecological outcome.

Under the sole condition of efficiency, this process should not be replicated. The opportunity costs to the practitioner/researcher were too great. The costs of an EDR/PAR process are simply the ones associated with unearthing the details of socially and ecologically complex phenomena. Without funding, such an effort is likely to be too costly for any one individual to perform. Replicating this EDR/PAR intervention would require attention to the availability and conditions of receiving financial resources.

Efficiency as a construct for usefulness has been used to validate the approach in westernized, business-oriented settings, but I hope that you will agree as you read this thesis, that efficiency is not

the sole basis for evaluating an intervention. Rather, I would have you consider whether the process itself was “fair, credible, legitimate and wise” (Susskind and Cruikshank, 1987). These are the essential and necessary factors that distinguish EDR from other public interventions to resolve dispute.

Participatory Action Research

PAR in Practice

PAR differs from other research approaches in defining problems, gathering information and using results. Scholars and members of a community collaborate to conduct PAR. Resulting from the intermingling of purposes and understandings, issues can arise from this type of work that affect the research. PAR is an atypical, unconventional form of academic social research that is growing in acceptance. Several different approaches to PAR have developed over time, and affect the form and content of knowledge creation in its basic and applied sense.

“Participatory action research is research carried out by a group of people on their own condition. It is marked by guidance (wonderful Indonesian word) by a professional researcher (originally - in the 60s - often an anthropologist). The researcher posed the questions - facilitated the inquiry - and the community did the spadework and worked out the answers. Their research was assumed to lead to action (hence ‘action’ research) to modify their condition - to change it for the better.”
(Brown, 2003)

In this case, PAR brought to light the experience of locals on local public and private trail segments. The PAR broadly revealed the role of trails in community life and their ensuing link to ecosystem stewardship. In conducting the preliminary research in support of the PAR in this case, it was discovered that research on trails and outdoor recreation has not previously been pursued. Further research may be interesting for both basic and applied knowledge creation within a range of academic disciplines including human ecology, eco-anthropology, political ecology, social anthropology, human geography, environmental history, landscape architecture, phenomenology, conservation biology, and environmental sociology.

PAR has differing labels in the literature. Recently academics refer to participatory action research, PAR (Chataway, 1997; Ansley and Gaventa, 1997) and others before referred to participatory research, PR (Brown and Tandon, 1983; Hall, 1992; Gaventa, 1991). Still others refer to Community-Based Participatory Action Research, CBPAR (Chesler and Israel, 2002; Sclove, R. et al. 1998). I chose to avoid the longer title because in the context of a resident community-based research project and a process like EDR, CBPAR is an unnecessary distinction for the purposes of this thesis. CBPAR, PR and PAR as applied in this case are one in the same. (See also Chapter 3, “Principles and Practice in the Gold Hill Case”.)

My Interest in PAR

Participatory action research has been useful in improving social and environmental conditions in community settings in the developing world. I have been interested in PAR since 1997 when I read about Participatory Learning and Action in a newsletter published by the International Association for Public Participation (Sweetser, 1997). Participatory Learning and Action (PLA) is a form of PAR.

Since 1993, I had been looking for a bridge away from the use of the specialized economic lens to a lens that might more broadly encompass perspectives that could resolve environmental problems. I thought that PLA looked like a fun and very effective way to solve social and

environmental problems. PLA certainly appeared to be an effective way to engage community-wide co-learning to discover a common vision for the future.

The PLA article was written by a social anthropologist with whom I later spoke and who tied me into a research opportunity with United States Agency for International Development (USAID). Through that contact and my interest in group process and team development, I worked with the Senior Advisor for Participatory Development (PD) at USAID under the Clinton Administration.

These experiences led to my first two thesis research topics which I was not able to complete for a range of personal and research reasons. Before either of these research projects, in the summer of 1999, I trained in PLA principles, tools and techniques in Ottawa, a city that serves as a bilingual international hub of participatory development practitioners. I traveled to a South American capital to observe team work at a USAID mission targeting those most in need. According to the PD Senior Advisor, this mission most reflected participatory development practice and organizational change resulting from alignment with Vice President Al Gore's efforts to reinvent government. While there I also visited, conservation areas where eco-tourism was being evaluated as a tool for preservation.

I have also participated in research overseas under the auspices of United Nations Environment Program in which team members were familiar and had used previously *Methodes d'Action et de Recherche Participative (MARP)*, the francophone equivalent for PLA. In this research experience, I evaluated the use of PAR to support environmental amelioration along the shores of a small coastal city. The city had been selected as one of six pilot sites for testing Agenda 21 of the Rio Convention on Biological Diversity of 1992. PAR was articulated by the regional environmental non-governmental organization (NGO) as the foundation of their effort to support Agenda 21.

Origins of PAR

Participatory development practice emerged to respond to the post-colonial legacy. Previously, anthropology served a ruling elite or nation in their effort to better collaborate with and manage a people under conquest. Examples of this are rife in the anthropological literature that served colonial French rule over the Berbers of North Africa. Anthropology served to describe peoples that were often perceived as lesser than and from the colonial perspective, in need of colonial intervention. Anthropology also served to identify those indigenous groups that might be more easily integrated. This worldview was fed by the relative differences of non-western peoples and an imperative for dominion over natural resources including labor (Gardner and Lewis, 1996).

Later, as anthropological researchers began to appreciate and develop close relationships with the peoples under study, they also began to identify with them on several planes including psychologically and sociologically. As a result of the anthropological practice of *participant observation*, a transformation of the relationship between nonwestern peoples and western peoples emerged. French trappers in Colorado were early examples of this capacity to reside within differing cultural contexts. This capacity to live differently was the precursor to post-modern theory and re-conceptualizing the social construction of reality. This thesis relies on deconstructing social constructs through appreciative inquiry and the term social construction is used frequently. See also Table 19. "Lexicon for the PAR/EDR Intervention."

A recent stream of research in the development field was Rapid Rural Appraisal. Rapid Rural Appraisal (RRA) quickly determined needs from a western perspective, but as a result created demonstrable flaws in eventual project design, buy-in and sustainability. Usually these processes are administered by well-intentioned outsiders who come to help those that they perceive as uneducated and in need. This type of thinking is a remnant of colonial and missionary paradigms for intervening and also results from the simple human desire to help others. In any event, RRA parallels conventional survey instruments that often lack the longitudinal depth or layered complexities of a social setting to effectively guide community-based decision-making for sustainable results.

A recent evolution in the community-needs assessment field is Participatory Rural Appraisal (PRA). PRA has the potential to deeply draw a community into effectively designing their own

future. I chose the nomenclature of PAR over PRA because I chose to highlight an approach that can also be applied in an urban setting. I also chose PAR so as to more broadly encompass the range of approaches that actively seek to engage communities in determining their own destiny.

Action Research to Support the PAR Process

In this case, as the process played out, a cyclical oscillation between action research and participatory action research occurred in ensuring community-wide empowerment. So in this case, the use of the term PAR refers to a cycle of PAR/AR/PAR and so on. PAR is conventionally employed in short-term interventions in which the inquiry lasts perhaps one day to two weeks. An action is taken and evaluated at a later date using PAR in order to adjust the course of action if necessary. In this case, the inquiry lasted three years and was conducted without funding. As a result action research interludes were required due to the difficulty of engaging locals in the depth of sustained and detailed research required to understand local trail issues.

In this case, the PAR/AR/PAR cycle paralleled recommendations for innovation put forth in the Consensus Building Handbook such as “create practices and institutions that [are] both flexible and networked which permit[s] a community to respond more creatively to change and conflict (Innes, 1999:634). PAR may have a residual effect on an EDR process. The results of the PAR effort may still serve to engage the New Landowner even now, more than three years after the research was initiated. In the simplest terms, the community has done its homework and locals are for the most part prepared to be good neighbors for the New Landowner as he makes his home in the area.

THE CAUSAL NETWORK OF THE INTERVENTION

The Causal Network serves to systematize an understanding of the process variables involved in resolving a dispute such as the one presented in this case. In this case, the causal network (a priori) both organized the design of the intervention and served as a foundation for the evaluation of the process (a posteriori). The causal network is case specific. Refer to Diagram 1. “Causal Network of the Intervention” and the evaluation in Chapter Four.

The Causal Network presents a hypothetical series of social stepping stones that must be met in order to reach resolution of the Gold Hill trail dispute. Each of these steps is expected to have independently derived value for the community and a broader audience. An underlying principle of the Causal Network is a focus on the integrative potential of common interests in the dispute. Mutual interests are hypothesized to exist for a stable community life and for conservation of the relatively pristine forested landscape and the two adjoining watersheds.

The Causal Network shows feedback loops to represent the theory that an iterative component exists in building relationships that cycles back and forth, to and from “learning and shared knowledge” (Innes, 1999:647-654). In the most linear fashion, the hypothesis is that building relationships leads to co-creating a shared understanding of the local trail system and eventually to the resolution of disputes on any segment of the system.

Although the variable of capacity-building and community integrity are shown as causal factors leading to dispute resolution, they are also outcomes of an EDR/PAR process. Again this reflects the iterative nature of many social processes. The premise for speculating that relationships would lead to foundations of trust that could support the resolution of the trail dispute was a useful one for organizing the initiative. In coordinating the mediation process, I aimed for an ideal outcome of mutual understanding and community building. An EDR process can independently offer this potential, but it is also likely that a concerted and sustained PAR/AR/PAR cycle can complement EDR processes significantly.

In Chapter Four, the EDR/PAR intervention is evaluated through the use of the Causal Network. In particular, the moderating effect of PAR in EDR is analyzed. The analysis centers on the extent to which PAR served as a moderating influence to support stable outcomes of the EDR process.

CASE STUDY APPROACH

Benefits of Case Study Research

A case study design was employed because such a design makes room for meaningful learning opportunities well-suited to both the needs of the participants and the objectives of the researcher. On the other hand, the principal drawback to case study research is that it does not necessarily lead to definitive conclusions. Case study research has been defined in the following way:

A case study is a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence (Robson, 1993:52).

A case study approach was chosen for several reasons. First, a case study allows for highly descriptive examination of the processes and outcomes of actual, not hypothetical, interventions. A case study can describe the links between an array of events, participants and the context of their choice-making. The highly descriptive quality of a case study derives from the gathering of qualitative data. Such data when properly harnessed systematizes an understanding of social processes in order to draw out insights.

Second Tier Discoveries

The research design for this case study makes room for the interpretation of the social behaviors and attributions that emerged in the dispute resolution process. “With qualitative data one can preserve chronological flow, see precisely which events led to which consequences, and derive fruitful explanations...”(Miles and Huberman, 1994:1).

A case study permits the exploration of complex social interactions originating from either the original premise for study or from emergent and tangential patterns of social phenomena. These second tier results can greatly expand understanding of the context for dispute in this case. Case studies rely on “multiple sources of evidence” (Yin, 1989:23). In this case, these multiple sources wove rich understanding of not only the dispute resolution intervention, but also the broader social context that underlies the dispute.

Yin writes that a case study is a particularly useful research strategy when “the boundaries between phenomenon and context are not clearly evident” (1989:23). This case study offered the opportunity to describe the phenomenon of community trail systems and theorize ways in which they serve local communities and the management of a forest ecosystem.

An analysis of the phenomenon of community trail systems emerges from the particulars of a specific historical, social and ecological context along the Colorado Front Range. A combination of sociologic and psychological factors alters the status quo on local customs of trail use. The sociological factors contributing to this change include urban exodus, the political ecology of the state of Colorado and heightened demand for outdoor recreation. The role of trails systems in maintaining local knowledge of a regional ecosystem and in providing opportunities for community viability is explored. An analysis of social impacts of trail loss is provided in the *Community Trails Mediation Guide*. See in particular Appendix One-B: “Functions of Trail Customs.” The *Mediation Guide* was designed to support iterative participatory research and to serve as a repository for gathering ongoing local insight. *The Community Trails Mediation Guide* covers the particulars of adaptation to exogenous events is expected to open further discussion on participatory options for dispute resolution and clarify the role of trails in stewardship of a vast contiguous montane forest ecosystem.

Justification for Case Selection

The Site

Selecting the Gold Hill case was driven by familiarity with the research site and the resulting ease of implementation of the intervention. The Gold Hill case was an opportunity to actually implement a strategy that I hope will have deeply-rooted and long-lived benefits. The choice of this Gold Hill case also allowed me to be constantly immersed in the project at little additional cost. However, despite my initial cost appraisal, the opportunity costs of this project remained substantial.

Another reason I chose Gold Hill is that I am a local resident. Being a “local” permitted instant rapport and familiarity with most members of the community and the setting. As Robson puts it, I had an “insider opportunity” and “a pre-existing knowledge and experience base about the situation and the people involved” (Robson, 1993:447). Gold Hill has been my primary residence since 1990. I have been involved in the elementary school as a parent. In 1993 and 1994, I was on the board of the Gold Hill Town Meeting, Inc. (GHTM), a 501-C3 that addresses community matters from forest management to road maintenance. My house is in the historic town site on the main street; from this location, it was easy to keep a sense of the pulse of the community.

Of basic research interest, the case reveals a particular set of phenomena that has received little or no academic or policy-making attention: local or community trail systems. After a short time of initial involvement, I realized that the case was “revelatory” (Yin, 1989:48); the case could elucidate a little-known social and ecological phenomena: local trail systems. I found no reference to the role of trails in human communities in numerous literature searches. Dr. Atran, a University of Michigan anthropology professor did provide a trails-related citation entitled *A Phenomenology of Landscape*. As a consequence, the impact of gradually losing these trail systems has also not been studied. Research on trails from this participant-observer perspective, tied to a literature on anthropological understandings of natural and man-made landscape features, is described in the *Community Trails Mediation Guide*.

Exploratory and Action Research Objectives

This case study “arises out of the desire to understand complex social phenomena” (Yin, 1989:14) without a preliminary framework having been documented elsewhere. Exploratory research in the form of a case study permits such an understanding. Exploratory research is meant “to find out what is happening, to seek new insights, to ask questions, to assess phenomena in a new light and usually but not necessarily qualitative (Robson, 1993:42).

This case study explores the outcomes of participatory action research in supporting environmental mediation. The experiences associated with action research build understanding for all involved. In 1970, Rappoport, the author of a well-cited eco-anthropological research (1968), defines action research as “concerned both with action (solving concrete problems in real situations) and research (trying to further the goals of science).” According to his obituary, Rappoport’s primary concern was with a range of ecological and social problems emanating from environmental issues. I clarify this point because Rappoport was the Walgreen Professor for the Study of Human Understanding at the University of Michigan.

Another way of looking at this case study is through the optics of two research methods: “collaborative social research” and “interpretivism” (Robson, 1993:19). Collaborative social research is action research and entails working with a community while keeping an eye on testing an intervention-outcomes hypothesis. See Diagram 1. “The Causal Network of the Intervention.” *Interpretivism* relates to an aspect of action research that naturally generates opinions or theories. In this case, the interpretive approach generated theories about the causes of dispute or about possible paths to resolution. In either view, action research is rooted in solving problems while also increasing lingering understanding.

Participatory action research is a means to ground research in the experiences of local people with benefits of learning shared later with a broader audience than academic research naturally produces. I wanted to give back to my community something of use for the future. As explained

above, I believe that the exploratory research on the role of trails merits further attention and research. Outside the context of my M.S. Thesis, I plan to provide the *Community Trail Mediation Guide* for general public use.

THE GOLD HILL TRAILS EDR/PAR INTERVENTION

The Gold Hill Trails Environmental Dispute Resolution/Participatory Action Research (EDR/PAR) process developed in two phases. Phase One relied on participatory action research to transform a community of protagonists into an operationally neutral mediation team. Phase Two was my attempt to keep the mediation process alive through action research.

When I, the researcher/practitioner, realized factors relating to land tenure and financial inequity might contribute to intractability in resolving the dispute, I reframed the dispute. I chose to pursue a line of inquiry that focused on conservation rather than on “community” a la Wendell Berry, as initially argued by one of the protagonists in opposition to the closure. Mutual interests in conservation appeared on its face to be an important common interest as articulated by the representative of the stakeholder who closed the trail and by the balance of other local stakeholders. To substantiate that level of awareness beyond shallow endorsements of a desire to protect nature that are commonly expressed, took an extra level of research and environmental education. The results of the PAR have not yet taken root in the community, but are expected to.

Phase One lasted approximately five months. My efforts in Phase One included coordinating the Trails Committee, the Mapping Project, and the Trail Mediation Workshop. I also prepared a *Trails Mediation Guide*, a working document to support the Mediation Workshop held on March 15 and 16 of 2003. *The Mediation Guide* was entitled: “Understanding Trail Access by Locals.” The table of contents is presented in the appendix of this thesis.

As noted earlier, the dispute was not resolved at the Mediation Workshop. The stakeholder who purchased and closed a segment of the North Trail chose not to attend. He also did not respond to phone calls. For an overview of specific stakeholders and parties to the North Trail dispute, please refer to Table 20.”Stakeholder and Place Name Codes and Descriptions” in the appendix.

Phase Two was my attempt to keep the mediation process alive through action research. In Phase Two, I deepened my search for incentives to negotiate. I also explored additional options for resolving the North Trail dispute. To inform the Trails Committee and the community at large, I chose to present this research. The first version was almost three hundred pages long. I spent the spring and summer of 2003 researching and writing. The material covered the legalities of trail use in Colorado, the role of trails in ecosystem stewardship and community life, the meaning of community, trail management, trail impacts on ecological resources, the ecological attributes of Gold Hill, and Gold Hill’s trails history and environmental history.

In the early months of 2004, I presented this second edition of the *Trails Mediation Guide* to a few community members. This text proved too long and technical for any local community member to digest. I was surprised. The reasons for my surprise are presented in Chapter Four, “The Discussion”. The bulk of that edition’s Phase Two research is site-specific and was contained in the “Gold Hill Trails Reference Book” which was not generally distributed.

Previously, in the fall of 2003, I began writing my M.S. thesis. In this case again, I attempted to include the wide-ranging reference material within the thesis. Later as a result of critique, I understood that the reference information confused the central thrust of the M.S. thesis; my thesis simply tests the use of PAR in an EDR case. The actual results of the PAR research are not needed in assessing the value of PAR in EDR. Disentangling the two streams of activity and research has been a significant challenge in this intervention.

Still, the applied value of the PAR in generating local knowledge is relevant to weighing the merits of PAR in an EDR process. For instance, making this information available to a broader public is critical to preventing future disputes around Gold Hill, and may benefit other communities. The *Guide* found in the Thesis Appendix corresponds to the Sixth Edition-Gold Hill Version. The Gold Hill version will be updated and refined one more time before release. The Gold Hill Version

will be provided to locals for the cost of copying. The Sixth Edition is comprised of the following volumes:

Community Trails Mediation Guide, Vol. One:

“Toward a Policy on Local Trails”

Community Trails Mediation Guide, Vol. Two:

“Planning Reference for Preventing and Resolving Disputes”

Community Trails Mediation Guide, Vol. Three:

“Sustain Common Ground”

In April of 2004, I edited the three hundred pages of text into a version with simpler language and less detail. The condensed third edition was entitled: *Wildland Trails and Historic Communities: Informing the Next Steps of the Mediation Process*. Trails Committee members and a few other stakeholders read this third edition. It was not widely distributed.

In May of 2005, I prepared the Fourth edition of my research presentation which included the events following the Mediation Workshop. This updated and more detailed edition of *Wildland Trails* was presented in two parts and also does not contain the detailed Gold Hill reference material. These final volumes are entitled: *Gold Hill Trails Mediation Guide: A Review of Options* and *Trails Mediation Guide Supplement: Landowner Concerns and Incentives*. A Trails Committee member handled the copying and general distribution of this final version. This version can also be found at the local community store in Gold Hill and on Gold Hill’s website.

In 2006, I prepared a more complete and refined edition of the *Trail Mediation Guide*. The Fifth edition was completed, reviewed by a local stakeholder with a long history of experience with local trails on his own land. At his suggestion in March 2006, I reorganized the material one more time to accommodate his sense that the material should be organized as recommendations for a local trail policy in one volume and as a reference book in the second and third volumes. The first two volumes are presented in the Thesis Appendix and are referred to in Chapter Three of the Thesis.

ORGANIZATION OF THESIS

Chapter Two presents the specific issues at play in the North Trail dispute and the community-based origins of the Gold Hill trail mediation process. The chapter describes the dispute and the dispute- resolution process through to the origins of the Gold Hill Trails Committee. My later involvement in the process is presented in Chapter Three. Chapter Two also details the ecological and social landscape of Boulder County, the range of trail disputes that affected Gold Hill, the cast of characters involved with these disputes and the initial steps taken in resolving the North Trail dispute.

Chapter Three covers the approach developed for resolving the North Trail dispute. Phase One and Phase Two of the mediation attempt are described in detail. The remedies to EDR that PAR might provide are presented in the section entitled “Process Goals.” Chapter Three describes the range of PAR techniques used in this EDR case. The chapter also briefly presents complementary forms of action research that supported the Gold Hill Trails Mediation approach. These action research practices include social impact analysis and appreciative inquiry.

Chapter Four systematically discusses what helped the attempt to resolve the North Trail dispute and what could have been done differently. The chapter includes an evaluation of the EDR/PAR approach. Feedback from Phase One of the process is categorized and evaluated using criteria found in the literature on EDR and PAR. Chapter Four also summarizes the lessons learned in mediating this public dispute and offers suggestions and caveats for the future use of PAR in an EDR process.