

THESIS

RELATIVE DEPRIVATION, AND PROCEDURAL AND DISTRIBUTIVE JUSTICE
IN NATIONAL ENVIRONMENTAL POLICY ACT SCOPING DOCUMENTS

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ABSTRACT

RELATIVE DEPRIVATION, AND PROCEDURAL AND DISTRIBUTIVE JUSTICE IN NATIONAL ENVIRONMENTAL POLICY ACT SCOPING DOCUMENTS

The U.S. Forest Service often deals with very contentious resource management issues. This contention is wrought by the nature and diversity of people using National Forest system lands. The process for making decisions on the management of these issues is called the National Environmental Policy Act (NEPA). This act describes how decisions will be made and how the public will be involved with these decisions based on the comparison of environmental impacts to alternatives usually developed by Forest Service resource managers before the public input process. The first step in NEPA is called scoping. In many cases this scoping is accomplished by sending a letter out to interested parties, called a scoping letter which describes the proposed action. This study examined NEPA-required scoping using a letter. Participants' attitudes toward the Forest Service and their feelings of justice were measured in reaction to information provided in a scoping letter. Participants were assigned to read one of three scoping letters.

One letter provided a proposed action that decreased recreational shooting opportunities by eliminating shooting over a large area of National Forest System lands.

The second scoping letter provided a proposed action that increased recreational shooting activities by opening up large areas of National Forest System land to shooting activities. The third scoping letter did not mention any proposed action.

This letter described the processes that would be used to decide what the problem was regarding shooting and another process that would be used to decide on solutions to the problem. Participants who received the scoping letter that only provided processes had a more positive attitude toward the Forest Service than participants who received a scoping letter with a proposed action. Participants who received a letter with a proposed action that was not in their favor did not have a significantly more negative attitude toward the Forest Service than those who received a decision that was in their favor. In terms of justice, participants with a negative attitude toward the Forest Service who received a scoping letter with a process did not have significantly different feelings of justice than those who received either letter with a proposed action. Finally, no matter what participant's attitude toward the Forest Service, there was no significant difference in their feelings of justice.

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TABLE OF CONTENTS

Introduction.....	1
Recreational Shooting on Forest Service Land, a Case of Polarization	6
Literature Review.....	11
Relative Deprivation	11
Decision-Making.....	21
Procedural Justice	22
Distributive Justice.....	41
Hypotheses.....	56
Methods.....	60
Participants.....	60
Stimuli.....	61
Questionnaire	62
Variables	62
Participants' gender, age, and education Level	62
Attitudes toward the Forest Service.....	63
Predisposition toward shooting.....	63
Feelings about justice in the decision making process	64
Assumptions about relative deprivation, gun ownership and target shooting activity	64
Pretest.....	65
Procedure	65
Scale Construction	67
Attitudes Toward the Forest Service.....	67
Feelings of Justice.....	68
Ease of Reading Scoping Document.....	68
Results.....	70
Participants.....	70
Demographic Characteristics of Participants.....	71
Hypothesis Testing.....	72
Discussion.....	75
Study Limitations.....	80
Conclusion	86

Introduction

United States Forest Service (Forest Service) land management creates a challenging public relations task. Unlike many other public relations efforts, the Forest Service land manager does not have the luxury of working with one audience at a time nor does he or she have the benefit of offering a single or limited selection of products. Forest Service lands are managed to provide a variety of products, such as lumber and minerals; recreation opportunities, such as rock climbing; and service opportunities, such as river access for a white water rafting company. Whenever the Forest Service begins the process of making a decision that affects one of these products, opportunities, or services, people affected by the decision may become polarized. Sometimes the polarity is among groups, such as environmental groups versus industry; sometimes it is among individuals.

National Forest Service system lands are simply considered the property of everyone in the country. Therefore, people feel they are entitled to whatever opportunity or resource is available from these lands. An individual may demand that off-highway vehicle use be provided close to where he or she lives even if the area is in a critical watershed where vehicle use may be destructive. But, another individual may protest the use of the area for off-highway vehicles because it is an important watershed on which the entire community relies. The Forest Service land manager is left to make the off-highway vehicle use decision and must pay equal attention to both interests. Sometimes,

depending on the social situation and politics involved, the case may be decided in favor of the individual who wants off-highway access over the individual who wants to preserve the watershed for the community. Thus the decision affects the land manager's ability to provide for the greater good.

Söderholm (2002) said "individuals have two different preference orderings. Private preferences reflect only their own well-being as consumers of private goods, while public preferences reflect moral values about what persons, as citizens, believe is right and just for society as a whole" (p. 489). Thus, if the Forest Service is forced to make a political decision in favor of the use of off-highway vehicles and ignore the watershed, the decision does not meet the intent of public land management, especially for the Forest Service. The agency is charged with making collaborative, public preference decisions and where there is conflict should make decisions that are philosophically based on Gifford Pinchot's credo (1905) : "...where conflicting interests must be reconciled, the question will always be decided from the standpoint of the greatest good of the greatest number in the long run" (Pinchot, 1905, pg. 11).

In discussing the distinctive nature of regulatory agencies, Sparrow (2000) identifies some important features that distinguish regulatory agencies from the rest of the government emphasizing, "the core of their mission involves the imposition of duties" (p. 2). Therefore regulatory agencies, like the Forest Service, deliver on obligations like the protection of resources, rather than providing services. For example, with a recreational opportunity like guided kayaking, Forest Service permitting focuses on the protection of a watershed health or wildlife habitat, as provided by law, rather than making the kayaking experience more challenging by providing gates or working with water

providers to increase flows. In a modernized near-quote of Pinchot, Sparrow (2000) states, “The underlying nature of the regulatory business requires that individual or private satisfaction be weighed against, and often sacrificed to, broader public purposes” (p.3). So, when decisions are made that emphasize politics and personal or public preferences, “...regulators are scrutinized more for their uses or abuses of power than for their stewardship of public resources” (Sparrow 2000, p. 2).

As regulators and stewards of public land, the managers of the Arapaho and Roosevelt National Forests and Pawnee National Grassland (ARP) are watched closely and are often accused of abusing their power when they make land management decisions that favor the environment over the development or use of natural resources and vice versa, despite their philosophical intent to manage for the greatest good, for the greatest numbers. This is particularly true in communities that are located within National Forest system lands throughout the Front Range of Colorado. The greater good often collides with the local need to make money off of public lands, maintain community stability or provide a community-specific recreation area. For example, within the town of Nederland there is a parcel of Forest Service land. Because the land is surrounded by private land it is impossible for the agency to manage, because it is small (less than 30 acres), and the only way to access the land is through private land. When the Forest Service tried to get rid of this parcel of land through a sale or an exchange, the community protested and eventually halted the effort because the land serves as open space. It is of great advantage to community members because they got the land for free and they are not responsible for its management. Also, people outside of the community receive little benefit from this 30-acre parcel because of its small size and its limited

access. Therefore, because of the politics, despite the Forest Service mission, this situation does not serve the greater good.

When the Forest Service makes land management decisions, it must do so in accordance with the National Environmental Policy Act (NEPA). The requirements for implementing NEPA are described in Forest Service Handbook 1909.15 – Environmental Policy and Procedures Handbook (FSH 1909-15, 2004). Through a series of prescribed steps, an “environmental analysis assesses the nature and importance of the physical, biological, social, and economic effects of a proposed action and its reasonable alternatives. ...Environmental analysis, as the term is interpreted by the Forest Service, includes scoping as well as subsequent analysis of the proposed action” (p. 5).

This study focuses on the action of scoping, which, in the Forest Service, is always the first step in an environmental analysis. Scoping is “an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action” (Code of Federal Regulations, 40, part 790 to end, revised as of July 1, 1999). In the Forest Service, scoping is an integral part of environmental analysis. Scoping is used to refine the proposed action, determine the responsible official and lead and cooperating agencies, identify preliminary issues, and identify interested and affected persons” (FSH 1909 – 15, p. 7). The results of scoping, especially public reaction to the proposed action, are used to decide on the amount and method of public participation. A public meeting is the most common Forest Service method of public participation. However, if there is not much interest in the proposed action, the line officer, for example the District Ranger, may choose to make phone calls, meet with a select group of people, or he or she may not feel that public participation is

necessary. In any case the final decision, no matter what public input is provided, is left to the responsible Forest Service line officer.

According to FSH 1909-15, “The most important element of the scoping process is to correctly identify and describe the proposed action. Elements of the proposed action include the nature, characteristics, and scope of the proposed action, the purpose and need for the proposed action, and the decision to be made” (p. 8). In many cases, because of the way a proposed action is written, interested publics may perceive the decision has already been made. For example, this statement is used as an example of a well stated proposed action by the Shipley Group (2002). “The Department of Energy proposes to upgrade in fiscal year 1994 its security at the Atlas facility by adding a 30-foot guard tower at the eastern entrance and replacing the outdated electronic sensor system currently installed in the perimeter fence” (p. 32). To some people, the wording of the proposed action could make it seem as though a decision has already been made. This decisional perception may cause publics to believe they were never involved with the decision-making process. Further, since they perceive a decision has been made, interested publics can agree or disagree with the decision.

There is no specific description of scoping in FSH 1909-15 just some general direction : “Except where required by statute or regulations, the responsible official may adjust or combine the various steps of the [scoping] process outlined in this chapter to aid in the understanding of the proposed action and identified issues” (p. 7). Many times, to save time and money, the Forest Services’ first step in the scoping process is to send out a *scoping letter*. The letter normally addresses all of the elements required for scoping, including the proposed action. The proposed action is the action the agency thinks is

needed to address what in NEPA is called the “purpose and need” (The Shipley Group, 2002, p. 31). Simply stated the purpose and need are usually the suggested solution to a problem. In conjunction with the nature, characteristics, and scope of the problem as suggested in FSH 1909 – 15, the proposed action is the who, what, where and sometimes when description of the solution. According to the Shipley Group (2002) even though the proposed action may not be what the decision maker chooses to do at the conclusion of the NEPA process, it is, “usually, what the agency (or decision maker) is thinking about doing when the NEPA analysis begins” (p. 44).

This study focused on the scoping letter in the NEPA process and what I believe to be the non-participatory and pre-decisional element of this letter: the proposed action. I believe the proposed action provided before any decision making process is initiated polarizes the interested publics. In particular, this study examined how people’s perception of the Forest Service’s proposed action concerning recreational shooting affected their attitudes toward the Forest Service and their feelings of justice. The study was guided by three theoretical ideas: relative deprivation, distributive justice and procedural justice.

Recreational Shooting on Forest Service Land, a Case of Polarization

One of the most contentious Forest Service issues on the Front Range of Colorado is recreational shooting. Since the establishment of National Forests, target shooting or “plinking” has been a legitimate use on Forest Service land. Shooting is allowed on any Forest Service land as long as it takes place in accordance with the Code of Federal Regulations, which states, “that discharging a firearm or any other implement capable of

taking human life, causing injury or damaging property is prohibited” (36 CFR Ch 11, 07, p. 320). Shooters must be at least 150 yards away from campgrounds, houses, trailheads or any area already being used by other people. If followed, these regulations are supposed to give shooters a safety margin and prevent conflicts. Shooters are also prohibited from damaging property, including trees, telephone poles and signs. Any violations will result in a fine, a court appearance or both.

In addition to this regulation, Forest Service etiquette policy says you must shoot in an area with a safe background. Scout the area for other people or animals that may be in your shooting range. Select a safe backstop free from rocks or objects that could cause a bullet to deflect. Recognize that it is the shooter's responsibility to know where their bullet impacts and not expose others to danger. Shoot targets that do not destroy or damage trees or wildlife. Bring your own target, shoot against a bale of straw or earthen bank, do not shoot at trees or place targets on trees. Shooting animals without a hunting license is illegal. Use targets that are easy on the land. Do not use glass containers as targets. Pack out what you bring into the forest, including spent shells and remnants from sport clays (www.fs.usda.gov/arp).

The number of places to shoot along the Front Range is decreasing. Counties and communities throughout the Front Range have closed shooting ranges and in most cases have made it illegal to shoot on lands they own. Therefore, in many cases, the only remaining areas to shoot are located on the National Forest. The ARP is an administrative unit that covers 1.6 million acres on the Front Range. Over 735,000 persons live on private lands within the National Forest, the result of homesteads, mining claims or land exchanges. In addition there are over 30,000 homes located on private land within the

forests and grassland boundaries (Front Range Fuels Treatment Partnership Strategy, 2003). Also, the ARP, with approximately 6 million visitors per year, is the second most visited forest in the United States (National Visitor Use Monitoring report, 2003). The intermix of public and private land and the tremendous amount of recreational use create a prime setting for confrontation on almost any issue that has polarized publics. Such is the case with recreational shooting.

The best example of this confrontation can be seen at the Boulder Ranger District of the ARP. The District is a mix of county, private and National Forest system lands. In Boulder County, the commissioners, supported by the communities within the county, have made it illegal to shoot almost everywhere in the county. On the other hand, very strong advocates of shooting live in the county, including the creator of a national, web-based shooting video program and blog, and the publisher of *Soldier of Fortune* magazine. Also, in the recent past, the *Second Amendment Foundation*, a national organization dedicated to preserving the right to bear arms, seems to have a very strong connection to Boulder; for example, many of the articles published in 2007 in its official publication, *Gun Week*, report on Boulder-specific recreational shooting issues.

Once the county started closing areas to shooting, the only opportunity remaining to “plink,” or recreational shoot, was on National Forest system land. Shooters from Denver, Boulder, Longmont as well as other Front Range communities now use this Forest Service land for shooting. Over time several small areas have become popular for shooting. While most of the shooters are very responsible, some are not and they often use refrigerators, computer monitors, propane tanks, and fruits and vegetables for targets. After they are done shooting they leave their targets, casings and shells. This use can

cause a buildup of toxic trash and litter, and the concentrated use may create unsafe conditions as more and more shooters use the area at the same time.

The Boulder Ranger District has one of the most diverse National Forest System lands ownership patterns in the United States. That is, a parcel of privately owned land is adjacent to a parcel of National Forest system lands, which may be adjacent to lands owned by Boulder County. Therefore, shooting on National Forest System lands may occur next to parcels of private and county land where shooting is not allowed, and in the case of private land, often abhorred. Thus, in communities like Nederland and Jamestown, recreational shooting often occurs near homes and communities. People living in these areas complain about the noise from the shooting, especially in areas where the use is concentrated. They also say they often fear for their safety and tell stories about bullet holes in the sides of their houses and bullets whizzing over their heads.

To address this situation, the District promised to make a decision designating where shooting should occur in 2008. When news of this impending decision reached the shooting advocates, the Forest Supervisor got a call from the Office of the Deputy Undersecretary of Agriculture asking about the situation. A call from the Undersecretary's Office is an extraordinary event. The undersecretary had been notified directly by one of the shooting advocates and told that the District was going to prohibit shooting on the entire District. Even though this district-wide prohibition was never intended, local Forest Service decision makers were advised by the Undersecretary's Office and the Forest Service Chief's Office that the total prohibition of shooting on National Forest System Lands should not occur. In addition, they were told to keep the

Chief's Office continually informed about their efforts. It is in this context that the District continues to try to make a decision about recreational shooting.

Literature Review

Relative Deprivation

During World War II, the U.S. Army's newly created Research Branch, Information and Education Division, undertook one of the largest social science research projects in history. Titled, *Studies In Social Psychology In World War II*, this four-volume report included, *The American Soldier: Adjustment During Army Life*, *The American Soldier: Combat and Its Aftermath*, *Experiments on Mass Communication*, and *Measurement and Prediction*.

The observations in Volume I, *The American Soldier: Adjustment During Army Life*, forms part of the foundation of this study. While examining how personal adjustment to army life varied based on a soldier's background characteristics, Stouffer, Suchman, DeVinney, Star and Williams (1949) introduced a concept they called, *relative deprivation*. They provided this concept to explain variations in attitude toward induction among new recruits related to education, age and marital status. In need of finding a way to use the information provided by the disparate collections of data in the chapters of this volume, Stouffer et al. said, "The idea [of the concept] is simple, almost obvious, but its utility comes in reconciling data..."(p.125). After reviewing and reconciling the data, the authors believed the data described a separate feeling, which they came to call deprivation. This deprivation was related to, and included well-known sociological

concepts such as social frame of reference, patterns of expectations, and definitions of the situation. Further, the deprivation was related or relative to the situation the soldiers perceived they were in compared to others that might not be in the same situation. Thus, the concept was more accurately described as *relative deprivation*.

Although becoming a soldier meant real deprivation such as pain, suffering and loss to many men, Stouffer et al. (1949) distinguished relative deprivation by suggesting; "... the felt deprivation was greater for some than for others, depending on their standards for comparison" (p.125). It is this standard of comparison that forms the unique foundation of this kind of deprivation. For example, in the case of marital status, even before there was loss or pain and suffering, a married drafted person would feel deprived in comparison to an unmarried drafted person, especially if they were the same age. Even more deprivation could be felt if this married drafted man compared himself to another married man of the same age, who was not drafted. Stouffer et al. (1949) said, "comparing himself with his unmarried associates in the Army, he could feel that induction demanded greater sacrifice from him than from them; and comparing himself with his married civilian friends he could feel that he had been called on for sacrifices which they were escaping altogether. "Hence the married man, on the average, was more likely than others to come into the Army with reluctance and, possibly, a sense of injustice" (Stouffer et al., 1949, p. 125).

Merton and Kitt (1950), in an essay about the relationship between reference group theory and relative deprivation described in *The American Soldier*, thought the concept of relative deprivation took a major place in interpreting the large amounts of data from Research Branch studies during World War II. But, despite their praise of the

theory of relative deprivation, Merton and Kitt (1950) said, “it nowhere finds formal definition in the pages of these volumes” (p. 43). In their essay, Merton and Kitt also do not provide a definition of relative deprivation calling their study of deprivation a, “provisional after-the-fact interpretation of the concept” (p. 46). Despite the lack of a definition, of particular importance to this study of the NEPA scoping letter, proposed action and polarization is Merton and Kitts’ identification of a membership group or in-group and a non-membership or out-group in sustained social relations. Although they describe these groups more in the context of reference group theory they suggest a connection to relative deprivation. They define the in-group as friends and associates and the out-group as those with who the individual is not in sustained social relations. This is the first mention of in-groups and out-groups but it addresses how individuals relate themselves to groups to which they are not members. In the case of recreational shooting, this group membership frame of reference becomes important because any action that affects shooting activity will lead to in and out-group comparisons between shooters and non-shooters. The result is, no matter what the action, some people will feel they are a part of the out-group.

While working for the National Opinion Research Center studying the factors affecting the career decisions of graduate students in the traditional arts and sciences, James Davis (1959) first proposed relative deprivation as a theory.

“In casting about for theoretical tools, it occurred to us that the lot of the American graduate student might be characterized not as actual economic destitution but as one of relative deprivation of the famous sort experienced by American soldiers in World War II,” (Davis, 1959, p. 280). Davis hoped that if this were the case the *theory of*

relative deprivation might explain much of his data. After examining two major writings on the theory of relative deprivation, *The American Soldier* and the critique provided by Merton and Kitt, Davis still felt like he and his associates were short of their goal of explaining their data. He said, “*The American Soldier* text was highly informal and the theory was uncodified” (p.280). He also felt Merton and Kitts’ work was devoid of substantive propositions. In an effort to address his perceived shortcomings of *The American Soldier* and Merton and Kitts’ propositions about relative deprivation, Davis (1959) provides a theoretical system focused mostly on the Research Branch authors’ interpretations of relative deprivation. Davis does not claim his is the theory the Research Branch authors actually used, but he and the others involved with his study believe that their theory goes a long way in explaining the arguments about the concept of relative deprivation appearing in the *American Soldier*.

In considering populations and deprivation, Davis (1959) analyzed the population based on six assumptions. The first assumption is, “at least one of these partitionings is considered throughout the population to reflect differences in desirability. Such a partition divides the population into two classes, the deprived and the non-deprived,” (Davis, 1959, p. 281). This might be considered the foundational assumption about relative deprivation because the other five assumptions, and many of the other studies examined are based on this dichotomy. In this case, non-deprived is the preferred state and the classes, deprived and non-deprived, are based on the relative value of what the classes are deprived of. For example, season ticket owners of an event would be the preferred state for people who enjoy the event. Unlike states of deprivation like poverty, the deprived need not feel pain. It is only necessary that, “deprivation be acknowledged

as less desirable than non-deprivation” (Davis, 1959, p. 281). Finally, Davis acknowledges that not every situation will have consensus in values. “Rather, the theory [in Davis’ terms] considers some of the consequences of situations where there is consensus” (Davis, 1959, p. 281).

Davis sets forth five other assumptions to complete his theory of relative deprivation:

“Within the population, comparisons are random;

If a person (ego) compares himself with a person (alter) when ego and alter differ in their deprivation, ego experiences a subjective feeling opposite in direction to the evaluation of alters’ condition;

A person experiencing *either* relative gratification or relative deprivation will also experience a feeling that his deprivation status is different from that of his peers. We call this fairness in the sense that it indicates a belief that there is differential treatment in the in-group;

If a person (ego) compares himself with a person (alter) in an out-group when ego and alter differ in their deprivation, ego will experience a feeling toward alter’s group opposite in direction to the evaluation of alter’s condition;

A person experiencing either relative subordination or relative superiority will also experience a feeling that his deprivation status is different from that of the out-group we call this social distance,” (pp. 283, 284).

The last three assumptions of the five assumptions of Davis (1959) are significant in this study of NEPA’s scoping letter and proposed action because they address the “psychological consequences of various types of comparisons” (p. 282). Also, as suggested by Merton and Kitt (1950), Davis divides the last four of the five assumptions into two categories: “(a) in-group comparisons or comparisons between people in the same sub-categories and (b) out-group comparisons or comparisons between people in different categories” (p. 283).

In his study of relative deprivation and social justice with the working class in Great Britain, Runcimen (1966) is the first to introduce the notion of separate types of deprivation, egoist and collective relative deprivation. Egoist relative deprivation is a situation where a person is dissatisfied with his present situation but not in a way that gives him common cause with others like him. Collective relative deprivation is strong lateral solidarity, the type of deprivation, which he suggests, may generally describe the working class. Runcimen also makes the first reference to social actions related to deprived groups saying that collective relative deprivation plays, “the largest part in the transformation of an existing structure of social inequalities” (p. 34).

In their overview and conceptual critique of relative deprivation theory, Walker and Pettigrew (1984) are critical of relative deprivation theory research because of a focus on the egoistic variants of relative deprivation. Walker and Pettigrew believe the weakness of this focus is the attempt to explain social phenomenon through the study of

an individual, egoistic relative deprivation, when the study of fraternal relative deprivation or collective relative deprivation, as Runcimen (1966) titles it, would provide a more accurate picture of the phenomenon. Despite what Walker and Pettigrew believed, in this study the most fruitful studies of relative deprivation seem to be those that examine both egoistic and collective relative deprivation and how they relate and affect each other.

Beaton and Tougas (1997) said, “Relative deprivation has often been associated with the promotion of one’s personal and group situation” (p. 774). In their study of the representation of women in management, Beaton and Tougas found that relative deprivation could be used to account for feelings and action related to women’s individual and group situations. Using female recruits from a Canadian federal agency that was contemplating changes to an affirmative action program, they distributed a questionnaire that measured personal and collective relative deprivation. Beaton and Tougas found a progressive relationship in the types of deprivation stating, “that the sense of personal relative deprivation will give way to a sense of deprivation on behalf of the in-group” (p. 780). In their study this progression provided strength because the evolution from personal relative deprivation to identifying with group relative deprivation created female managers who were agents of change seeking to promote a change to not only their situation, but the group’s situation as well. Thus, as suggested by Runcimen (1966), an evolution to collective action led to the transformation of the existing social equalities in the Canadian agency.

The power of the evolution from personal relative deprivation to collective relative deprivation has affected shooters in Boulder. That is, the shooting advocate has a

very popular blog and also a video show for outdoor cable channels. When the Boulder District closed one of his favorite places to target shoot, the blogger may have experienced personal relative deprivation. As he dialoged with other shooting advocates on the blog each of them responded because they may have felt personal relative deprivation. Soon the bloggers became a deprived collection of shooting advocates experiencing collective relative deprivation. As a group they moved to address what they thought was a social inequity; the loss of the target shooting area. Eventually, because of research done by the group, the group's political influence and the group membership consisting of lawyers, the shooting area was reopened. Thus, collective action was the catalyst for addressing their social inequality.

C. Kelly and J. Kelly (1994) also break relative deprivation into two types. The first type is *egoistic relative deprivation* (ERD), "where the individual feels personally deprived compared to other individuals" (p. 66). The second type, is *collective relative deprivation* (CRD), "where the individual feels that his or her group is deprived relative to other groups" (p. 66). In their London study of participation in a white-collar union, they sampled 190 females and 140 males in a wide range of jobs from the lowest clerical grade to the highest rank of principal officer. Using a Likert-scale questionnaire, they asked participants questions related to prospective participation in groups, personal attitudes covering a range of industrial relations issues and questions related to possible social psychological determinants of participation. The results revealed three variables important for increased group participation: group identification, out-group stereotyping and the endorsement of a general collectivist orientation. "The combination of these three variables suggests a picture of the potential group activist as a person who is firmly

committed to a ‘them and us’ representation of intergroup relations, having a strong sense of identification with the ingroup and a clear perception of difference between ingroup and outgroup members, grounded in general collectivist orientation” (Kelly and Kelly, 1994, p. 78). Participation was not associated with their remaining variables of egoistic relative deprivation, political efficacy and perceived intergroup conflict.

In the case of Boulder, using the variables for group participation described by Kelly and Kelly (1994), there is tremendous potential for collective action on both sides of the shooting issue. Within both groups there is some egoistic relative deprivation; for example, bicyclists and homeowners may individually feel deprived. But, collective action would result from bicyclists and homeowners coming together to oppose shooting.

Shooters in particular demonstrate collective relative deprivation per Kelly and Kelly (1994). As a group they have sent letters to Congressional representatives and local elected officials, and they attend public meetings in groups to voice a collective opinion. This collectivism is especially evident with the intervention of national groups like the National Rifle Association (NRA) and the Second Amendment Foundation (SAF). In support of this experience, Kelly and Kelly (1994) say, “evidence suggests that it is the perception of collective relative deprivation which has the most impact on participation in collective action” (p. 66).

Perhaps an even more accurate description of the type of relative deprivation taking place on the Boulder Ranger District comes from what Foster and Matheson (1995) term “double relative deprivation (DRD)” which is the combination of ERD and CRD (p. 1167). In their study of discrimination toward women and the availability of resources to deal with this discrimination, Foster and Matheson explored whether

collective action was more associated with this combination of ERD and CRD. They hypothesized that despite the fact that research has not shown ERD to contribute additively to collective action, "... DRD, represented by the multiplicative combination of ERD and CRD, would be associated with taking collective action above and beyond the experience of ERD or CRD alone" (p. 1169). Female students from an introductory psychology class were given a questionnaire that assessed their perceptions of egoistic and collective deprivation, the resources available for women to deal with discrimination, and their participation in collective action. Their results showed, "women who perceived a high degree of both ERD and CRD participated in the greatest number of collective actions" (p. 1173). In the present study, in Boulder, no matter what side of the shooting issue a person may be on, it is the combination of ERD and CRD that could lead to a greater chance of collective action.

It could be argued that all of the types of relative deprivation exist in the groups, shooters and non-shooters, on the Boulder Ranger District. Further, it is not only the existence of these different types of deprivation that may polarize groups, but it may also be the combination of deprivations that eventually generates and supports collective action. In searching for a solution, consideration must be given to NEPA's polarizing effects. Given what is known about relative deprivation, this polarization may be leaving people involved with the shooting issue feeling deprived and affecting the resolution of the problem.

Decision-Making

As mentioned previously I believe the proposed action stated in a scoping document is perceived as a decision. This decision occurs before there is any inclusive decision-making process. In most cases the proposed action is decided upon by a group of Forest Service natural resources professionals. Based on their identification of the problem and their expertise, an interdisciplinary team provides an action it believes best addresses the problem. For example, in the case of recreational shooting, an interdisciplinary team may decide the problem is public safety (people getting killed or injured by stray bullets) and environmental degradation (bullets and trash left over after shooting). To respond to this problem, without public input, the team may propose closing areas to recreational shooting. However, what if a person or group has created a trail without Forest Service approval and the use of this illegal trail brings people within 150 yards of where people have been shooting? Not only is the proposed action addressing the wrong problem, shooters have been denied the opportunity to help identify and solve the problem. I believe the public denial of participation in the decision-making process may create feelings of relative deprivation and encourage collective action in opposition to the proposed action.

This denial of the decision-making opportunity will be looked at from two theoretical bases, procedural justice and distributive justice. These decision-making theories either focus on the attributes of the processes, procedural justice, or the attributes

of the decision maker and the distribution of resources, distributive justice. As they relate to NEPA and Forest Service decision making, procedural justice may be considered to provide the ideal model—inclusive and based on processes that can provide opportunities for all to be heard and to speak to the problem. This is described by Tyler (1989) as *process control* which refers to, “participants control over the presentation of evidence” (p. 830).

The other type of justice, distributive justice, might be considered the more practical model by the Forest Service line officer making the decision because it affects the distribution of resources, described by Tyler as, “participants control over the actual decision made” (p. 830).

Procedural Justice

In their book about methods and procedures to resolve conflicts that may arise between individuals and groups, Thibaut and Walker (1975) predicted, “...human life on this planet faces a steady increase in the potential for interpersonal and intergroup conflict” (p. 1). They further implied that the quality of human life would depend on how well we resolve this conflict whether we manage it, moderate it, or are able to resolve it. They did not focus on violent methods of conflict resolution like revolution, but proposed the study of peaceful methods, “at least in their most characteristic forms” (p. 1). Their foundational exploration dealt with the justice system and focused on who controlled the procedures, a third-party decision maker or the disputants.

Thibaut and Walker (1975) suggested the most just procedure for resolving conflict that results in litigation is the type that places the majority of the control over the

process in the hands of the disputants, with limited control in the hands of the decision maker. This is in contradiction to the current Forest Service NEPA-oriented process, with Forest Service personnel providing the proposed action and Forest Service line officers deciding on the decision-making procedures. The disputants, in this case interested parties, are never involved in decision making until after they are provided a proposed action. And even after public involvement, the line officer decides on whether there is a need for a decision-making process. If he or she believes there has been adequate public involvement he or she may make a decision with no public process, that is, no distribution of control. In contrast Thibaut and Walker suggest, “the key requirement for procedural justice is this optimal distribution of control” (p. 2).

In defining procedural justice Thibaut and Walker (1975) provide distinctions between procedural and distributive justice. Based on analysis going back to Aristotle, the differences between the two forms of justice are as follows:

“1. Although procedural justice may often lead to and produce distributive justice, it is possible for distributive justice to be achieved without the application of any special procedure, as when all parties spontaneously agree about a fair allocation.

2. It is only when allocation is in dispute that procedures are necessary and only then, therefore, does the question of procedural justice arise.

3. Procedures—whether just or not—may be applied to disputes having nothing to do with problems of allocation, as in criminal suits in which the decision entails no allocations (unless that term is broadened to include ‘retributive’ allocations)” (Thibaut and Walker, 1975, p. 3).

Another significant foundational contribution of Thibaut and Walker (1975) is the identification of five models of procedural choice and their relationship to two general types of conflict resolution: adversarial and inquisitorial. Their models are: (A) autocratic, (B) arbitration, (C) moot, (D) mediation, and (E) bargaining. The relationship between adversarial and inquisitorial resolution types is based on the control relationship existing between the disputants and the third party. In the case of the Forest Service, disputants would be those members of the public interested in the decision and the third party would be the Forest Service line officer. The current Forest Service decision structure is most related to an inquisitorial type with the third party having the most control over the decision-making process. On the contrary, if the disputants had the most control over the decision, it would be considered an example of an adversarial resolution type.

Thibaut and Walker's (1975) description of the different procedural models appears in Table 1. In their experiment to distinguish the different models, 134 male undergraduate students were randomly divided into two large groups and then divided into groups of three and seated at individual tables. One person in each of the groups of three was designated the Planning Director and the remaining people at the table were designated Creative Directors. The planning director would be equivalent to the Forest Service line officer or third party, and the creative directors would be the interested publics or disputants. The goal at each table was to rank a group of car advertisements from best to worst.

Table 1 – Descriptions of the five procedures for conflict resolution

Autocratic, Model A

1. The two Creative Directors will give their orderings to the Planning Director.
2. The Planning Director will select the ordering that goes forward to the second round of competition.

Arbitration, Model B

1. The two Creative Directors will give their orderings to the Planning Director.
2. The two Creative Directors will explain and support their choices to the Planning Director.
3. The Planning Director will select the ordering that goes forward to the second round of competition.

Moot, Model C

1. The two Creative Directors will give their orderings to one another and the Planning Director.
2. The two Creative Directors will explain and support their orderings to the Planning Director.
3. All three of them will discuss the orderings of the two Creative Directors.
4. All three of them will have to agree on the ordering that goes forward to the second round of competition.

Mediation, Model D

1. The two Creative Directors will give their orderings to the Planning Director.
2. The Two Creative Directors will explain and support their choices to the Planning Director.
3. The Planning Director will suggest a selection to go forward to the second round of competition.
4. The two Creative Directors will have to decide which ordering should go forward to the second round of competition.

Bargaining, Model E

1. The two Creative Directors will give their orderings to each other.
2. The two Creative Directors will explain and support their choices to each other.
3. The two Creative Directors will have to decide which ordering should go forward to the second round of competition.

(Thibaut and Walker, 1975, p. 12)

Thiebaut and Walker (1975) suggest Model A (autocratic) is most similar to a pure inquisitor style, and Models B and C (arbitration, moot) are similar to the adversarial style. If we compare Theibaut and Walker's models to NEPA, and in this case assume that Creative Directors are interested publics who have taken the proposed action and provided comment, then Model A is most similar to making decisions through NEPA processes. Thiebaut and Walker's work begins to provide structure to procedural justice

but it was focused on who controlled the decision making and dealt with litigated situations alone.

In his essay addressing fairness in social relationships Levanthal (1980) said, “All groups, organizations, and societies deal with the question of allocating rewards, punishments, and resources. The manner in which a social system deals with these issues has great impact on its effectiveness and the satisfaction of its members” (p. 27). In his discussion of procedural fairness he suggested that concepts not associated with procedural fairness and the distribution of resources restrict the analysis of perceived justice to this last step in the allocation processes, that is, the distribution of the resource. Considering both procedural fairness and the fairness of the distribution of the resource allows the inclusion of the existing social system which takes the focus away from the decision maker, in this case the Forest Service, and puts the focus on due process and fair distribution.

Levanthal (1980) discussed a concept of procedural fairness that focuses on an individual’s perceptions, what he calls the *cognitive map* of the events that precede the distribution of resources and how those involved with the procedure evaluate those events. Leventhal provided two steps for analyzing the perception of procedural fairness. “First, the major procedural components in an individual’s cognitive map of the allocative process are identified. Then the justice rules used to evaluate procedural fairness are applied to those components” (p. 37).

Leventhal (1980) believed an individual develops a cognitive map of the settings in which he or she interacts and the social system in which he or she functions and that, “These internal representations of the social environment contain structural elements that

correspond to important features of the allocative process” (p. 37). A person may evaluate the fairness of any of these structural elements, an evaluation based on what Leventhal calls, “rules of fair procedure” (p. 37).

Leventhal (1980) identifies seven categories of structural elements.

1. Selection of agents is the process of choosing the persons or agents who serve as decision makers or information collectors.
2. Setting ground rules is procedures for informing potential receivers about the nature of available rewards and how to get them.
3. Gathering information is obtaining information that will be used to evaluate prospective receivers.
4. Decision structure is the structure of the final decision process.
5. Appeals are grievance or appeal procedures and can be formal or informal.
6. Safeguards are procedures that ensure agents who administer the allocative process are acting with honesty and integrity.
7. Change mechanisms are methods for changing procedures used to regulate the allocative process. (p. 38)

Leventhal (1980) suggests these seven structural components may be present in courtrooms, in classrooms, or in work situations, among others. And they are part of, “an individual’s cognitive map of any interaction setting or social system in which rewards, punishments, or resources are distributed” (p. 38). It is Leventhal’s opinion that each of these procedural components may become the focus of a judgment process evaluating the fairness of a procedure, and he postulates the following procedural justice rules used to define criteria, “which allocative procedures must often satisfy to be perceived as

fair”(p. 39). It is the pairing of the structural components and the procedural justice rules that govern the evaluation of procedural justice.

The six procedural justice rules are:

1. *The Consistency Rule*. Allocative procedures should be consistent over time and across persons.
2. *The Bias-Suppression Rule*. Personal self-interest and allegiance to narrow preconceptions should be avoided.
3. *The Accuracy Rule*. Allocative processes are based on as much good information and informed opinion as possible.
4. *The Correctability Rule*. Opportunities must exist to modify and reverse decisions made at different points in the allocative process.
5. *The Representativeness Rule*. All phases of the allocative process must reflect the basic concerns, values, and outlook of important subgroups of individuals affected by the allocative process.
6. *The Ethicality Rule*. Procedures for allocation must be compatible with the fundamental moral and ethical values of individuals involved.

The following is an example of how to pair Leventhal’s (1980) procedural components with procedural rules. If the Forest Service decides to *gather information*, a procedural component, the procedural *consistency rule* would demand that the District Ranger gathers information from shooters and non-shooters in the same way. That is, if he or she meets in person with the non-shooting group, then he or she must also meet in person with shooters. When you combine all of the combinations of components and procedural rules, there are 42 combinations of procedural components and rules.

Similar to Thiebaut and Walker (1975), Leventhal (1980) provides structure that can be compared to NEPA. For example, in the previous situation a group of Forest Service resource specialists had provided a proposed action to address safety concerns in a shooting area; close the area to shooting. The real problem in this situation was the location of an illegal trail and people using this illegal trail got within 150 yards of the shooting area, putting them at risk from shooters. The application and combination of the *gathering information component* with the procedural justice *accuracy rule* suggests that NEPA, by way of information provided only by Forest Service professionals, does not contain even these early tenets of fair procedure.

In the past, on the Boulder Ranger District as problems with recreational shooting began to emerge, the District Ranger tried to exclude shooting in small areas where people's shooting caused problems to nearby communities. One small closure near the town of Nederland was opposed by a local resident who was not only personally opposed to the closure, but since he maintained a web site that promoted shooting, through his blog, he also stimulated involvement and opposition from people who were fans of his site.

By ignoring procedural structural elements and procedural justice rules in closing this site, the District Ranger initiated negative reactions with the distribution of the shooting site resource and lack of endorsement of the decision. Cohen (1985) said, "Reactions to resource distribution are significantly affected by the procedures that lead to them" (p. 643). Suggesting that procedural justice is necessary, Cohen describes the lack of endorsement of the decision and its encompassing structure and says people affected by the lack of procedural justice react with, "active withdrawal, apathy, or

attempts to change the decision or the institutional structure” (p. 645). At the conclusion of many NEPA decisions those dissatisfied with the decision often appeal to higher authorities, for example a congressional representative or senator. On occasion there are citizen responses bordering on civil disobedience and in some cases there are appeals for the dismissal of the Forest Service person responsible for the decision.

Cohen (1985) coins the term pseudoparticipation, and describes it as those who have already made a decision or are about to make a decision working more to persuade people affected by the decision rather than working toward participation. Since, in most cases, the proposed action is created before there is public participation, the rest of the NEPA process, and especially the public participation becomes more an exercise of pseudoparticipation.

In addressing organizational participation, Cohen (1985) describes participatory effects that are applicable to circumstances and effects in scoping. For example, in fair process effects, when employees believe the decision-making process is just, they are not likely to want to change them, and in frustration effects, when employees question the justness of decisions and the decision-making process, they might press for change (Cohen, 1985, p. 654).

If there is no apparent participatory decision-making process, as in scoping, unjustness may become apparent to those interested in the issue. Therefore, it is likely that some frustration effect is taking place and change will be demanded. Again in many NEPA projects, change is demanded not only by the opposition, but also by proponents. For example, in settling water storage disputes, some people advocate for the storage of water with dams while other people oppose water storage and dams. The proposed action

may be for storage, but the amount of water proposed to be stored, or the location of the dam, might not be agreeable to the dam proponents. If they had been allowed to be a part of the decision-making process, their thoughts on both the amount of water stored and the location of the dam may have been incorporated into the action and they would feel they were heard.

Of particular interest is Cohen's (1985) discussion of the fundamental differences in the contexts in which individuals or groups with conflicting interests struggle over scarce resources. He concludes, "That struggle, and the procedures that develop to govern them, cannot be isolated from the political and economic contexts in which they occur" (p. 661). Just as Cohen suggests that forms of participation most beneficial to employees may be detrimental to employers and vice versa, decisions that are beneficial to the Forest Service may be detrimental to some affected by the decision. For example, many shooters in Denver use the area near Nederland to shoot and these shooters outnumber the town residents. Consequently, to provide for the greatest good, the Forest Service decision would maintain shooting near Nederland. But, the decision ignores local politics and the people in Nederland would be dissatisfied with the decision. Therefore, the political context, per Cohen, of the decision becomes extremely important and it has been ignored by the proposed action of the Forest Service. Community participation prior to the development of a proposed action would help the Forest Service answer the "who benefits" question in a more socially responsible manner.

Lind and Tyler (1988) provided two models of procedural justice, the self-interest model and the group value model. Both models are based on control. On the one hand, people seek personal control over decisions because they are concerned with their own

outcomes. However, they shift to process control or the group value model, when the conflict is so complex that they must rely on a third-party decision maker for the outcome. In Boulder County shooting is a very complex issue. The District Ranger had closed the Nederland shooting area based on her interpretation that a road nearby, within 150 yards, was an occupied site. The web site manager called some contacts in the National Rifle Association and The Second Amendment Foundation who had contacts in the Forest Service Washington Office. Within weeks, a letter arrived from a Forest Service Director. The letter specifically addressed roads and stated very clearly that a road could not be considered an occupied site. Therefore, through the use of the group value model the web site manager got a third-party decision maker involved and managed to get the decision changed. This shift from a self-interest model to a group value model is explained by Lind and Tyler (1988) as the recognition by individuals "...that they must curb their egoistic preferences in order to obtain outcomes that are available only through cooperation" (p. 223). A social compromise of curbing this egoistic preference is, "the acceptance of outcomes and procedures on the basis of their fairness, rather than their favorability to one's own interests" (p. 223). Now in order to close the area the Ranger must go through the NEPA process, which may threaten the fairness required by way of Lind and Tyler.

Tyler (1989) explored the group value model in more detail. Tyler explored people's concerns about their long-term social relationships with authorities and institutions, like the Forest Service, acting as third parties. Tyler said, "This leads them to be concerned with three noncontrol issues: the neutrality of the decision-making procedure, trust in the third party, and evidence about social standing" (p. 831). Tyler

believed these three issues were more important to people than whether they received a favorable outcome or were in control of the decision leading to the distribution of the resources.

Neutrality is the focus of people on whether the authorities and institutions, acting as third parties, create a neutral arena for resolving the problem or conflict instead of focusing on a favorable outcome from the decision. Tyler (1989) believed, “people will be concerned with having an unbiased decision maker who is honest and who uses appropriate factual information to make decisions” (p. 831).

Trust has to do with the intentions of the authority or institution acting as a third party. Trust is the belief that this third party has benevolent intentions and a desire to treat people fairly and reasonably. If people feel they are being treated with trust by third parties, they will develop a long-term commitment to the group.

Tyler (1989) believed people care about their *standing* in a group and that interpersonal interaction in social settings affects how they will feel about their status in a group. If third parties treat them badly, they will believe they have low status in the group; on the other hand polite treatment demonstrates they have high status.

Further supporting his group-value model, Tyler (1989) also assumes that group membership is psychologically rewarding, “People want to belong to social groups and to establish and maintain the social bonds that exist within groups” (Tyler 1989, p. 831). Their reasons for wanting to belong to groups are self-validation in regard to attitudes and values, emotional support and a sense of belonging, and the fact that groups are important sources of material resources.

To test his assumptions about non-control issues Tyler (1989) conducted telephone surveys with a random sample of people in Chicago who had recently been involved with legal procedures in court or with the police department. He measured and compared their focus on outcome favorability and process control versus the non-control elements of neutrality, trust, and standing.

Outcome favorability was measured absolutely and in relative terms. Favorability measures were attributed to interactions with police and with the courts. Respondents were asked how the police treated them, and if the police had solved their problem. In the court cases the respondents were asked if the outcome of their case was positive or negative.

Process control was measured by how much opportunity respondents had to present their problem or their side of the case, before decisions were made.

Asking respondents if their outcomes were influenced by race, sex, age, nationality, or some other personal characteristic measured neutrality. Trust was measured by respondents' perceptions of how much effort third parties had made to be fair to them. Standing was measured by asking respondents if authorities had been polite to them and had respected their rights.

Based on study results, Tyler (1989) concluded, "that neutrality, trust, and standing are a key input into people's reactions to their experiences with third parties" (p. 833). People care more about them than the issue or problem that initially brings them to a third party; they care about their relationship to third parties in terms of neutrality, trust, and standing. These elements explain more about people's reactions to their experiences with third parties than do variations in control or outcome favorability.

In discussing the recognition of people's connection to authorities, Tyler (1989) concluded that groups with problems value the opportunity to present their problems to authorities, and people in organizations focus on their long-term association with the group and with its authorities and institutions. "People expect an organization to use neutral decision-making procedures enacted by trustworthy authorities so that, over time, all group members will benefit fairly from being members of the group" (Tyler 1989, p. 837). They also believe that, as members of a group, they deserve to be treated with respect, dignity, and politeness. Therefore, the question in Boulder County becomes, Can an authority that comes to a group of shooters with a NEPA-generated *proposed action* that is not in the shooter's favor be considered neutral, trustworthy, and provide standing? Some factors make it hard to answer this question in the positive. For example, was the action unilaterally generated? Did the generation of the action ignore procedural justice elements? How would this affect neutrality, trust and standing? And, did the blogger bring in a third party because he does not believe the District Ranger demonstrates neutrality, is trustworthy, or provides standing for group membership? Perhaps, if the District Ranger provided a different decision-making process with more focus on tenets like neutrality, trust and standing, the blogger might not have been moved to act.

In 2003, Blader and Tyler in *Human Resource Management Review* offered a four-component conceptual framework of the components of procedural justice. Focusing on tools for actual human resource and management practices in work organizations, their discussion incorporates the, "consideration of both type of justice (justice of decision-making processes and justice of treatment) and source of justice (organizational rules, specific organizational authorities)" (Blader and Tyler, 2003, p. 109).

Justice of decision-making processes is associated with concerns like neutrality, whether the decisions are made carefully, and whether decisions are consistent. Justice of treatment is more the quality of treatment; are employees treated with dignity and with concerns for their rights. Blader and Tyler (2003) emphasize that both of these justice concerns emphasize relational and not material reasoning.

Source of justice has to do with the source of the procedural experience and it, “reflects the origins of the experiences that shape employees’ procedural evaluations” (Blader and Tyler, 2003, p. 114). There are two sources associated with justice, *formal* rules and procedures of the organization and *informal* groups of authorities for example bosses and heads of departments. Rules and procedures tend to stay constant across time situations and people, but authorities are dynamic and unique.

The interaction of the types and sources of justice form the foundations of whether they are formal or informal interactions. For example, the Forest Service has a *flexible* work schedule. The rules for that schedule give a range of hours that the employee may use to make up their eight-hour workday and what days the flexible schedule is available. However, the use of the flexible schedule is contingent on approval by your supervisor. Therefore, how just the application of the schedule might be is associated with the formal, rules for the flexible schedule, and informal, how the supervisor applies the rules, processes involved.

Blader and Tyler (2003) described this interaction this way, “There are two central sources from which overall procedural fairness evaluations are drawn;” formal sources, official rules and procedures of organizations, and informal sources, the experiences people have with their supervisors or heads of departments” (p. 114). It is the joint

influence of the formal and informal sources that affect perception of procedural justice.

Table 2 displays the components of Blader and Tyler’s (2003) model.

Table 2. Four-component model for procedural justice per

	Procedural element	Procedural source
	Rules of the group (formal)	Actions of the supervisor (informal)
Quality of decision making process	Formal quality of decision making	Informal quality of decision making
Quality of treatment	Formal quality of treatment	Informal quality of treatment

(Blader and Tyler, 2003, p. 115)

So the four-component model becomes, (1) formal quality of decision making, (2) informal quality of decision making, (3) formal quality of treatment and, (4) informal quality of treatment. Through their description and examination of the four-component model, Blader and Tyler (2003) concluded that with the four-component model “a more inclusive understanding of procedures can comprise all processes and interactions that occur in the context of organizational life” (p. 121).

To test their four-component model, Blader and Tyler (2003) as described in *Personality and Social Psychology Bulletin*, set up two studies to examine “(a) whether the model describes the way in which people actually group their procedural concerns and , (b)whether each of the components is significantly related to overall evaluations of

procedural fairness” (p. 750). The first study sampled employees at a financial institution. The second study was a laboratory study where the four components were manipulated.

In the first study a questionnaire was distributed with scales assessing independent variables that included the four components as well as measures of outcome fairness and outcome favorability. The dependent variable was overall evaluation of procedural fairness. The results indicated a significant association with overall procedural justice evaluations for all of the components, and, together the components provided a good prediction of overall procedural justice assessments. From this study Blader and Tyler (2003) concluded, “the four-component model was a valid description of how people define procedural justice” (p. 752).

The goal of the second study was to demonstrate a causal relationship between each of the hypothesized four components and overall procedural justice evaluations. Participants in this laboratory study evaluated scenarios that contained information regarding each of the four components. Each participant received a packet containing three different scenarios and each scenario depicted a different procedure in the context of a situation relevant to college life; trouble with a roommate and the request for a room change, a dispute over a course grade and a group application for an event grant.

The results of study 2 were similar to Study 1. However, rather than just validating the four component model in terms of people’s definition of procedural justice, this study showed shifts in overall perceptions of procedural justice. It also demonstrated the independent effects of each of the components.

Blader and Tyler (2003) suggest that the results of their study support the argument that the four-component model describes how people may evaluate the fairness of procedural justice actions. In the case of the three groups in this study shooters, non-shooters, and Forest Service decision makers and resource specialists, the four-component model provides a way to describe how the groups might assess and characterize fairness or ultimately believe that fairness is being promoted by following NEPA processes.

In terms of formal quality of decision making, the rules associated with NEPA are law. Therefore from a regulatory standpoint, as long as the Forest Service follows the law the agency provides a formal quality of decision making and formal quality of treatment. For example, quality of decision making is provided by how the decision is written, what resources are examined and a very distinct set of steps through analysis and finally resolution. From a formal quality of treatment standpoint, there are designated review times and laws about providing information freely and fairly to the public. But the law only provides for one half of the components recommended by Blader and Tyler (2003). There is no legal requirement that accommodates informal qualities of decision making and treatment. For example the law states that the first step is scoping. Today, there are many different channels for providing information to the public, but the law says you must scope and Forest Service decision makers, under time constraints, budget constraints and many other pressures can offer scoping as they see fit possibly leaving publics at a loss for information. The law is specific about comment periods and even specifies a specific medium for informing people about the decision. There are ways to get more time to comment, but once all of the deadlines are expended and no decision has

been accepted the courts take over. The informal quality of treatment can lead to publics interested in the decision feeling mistreated by the inordinate amount of time it may take to resolve a dispute, or they may not have the resources to argue the dispute through to resolution. Compressed time frames and personnel actions like transfers and promotions can make long-term processes confusing and lead to ignorance as players come and go.

Distributive Justice

The essence of distributive justice is the perceived fairness of the allocation of rewards. Walster, Walster, and Berscheid (1973) proposed that people seek maximum reward for themselves at a minimum cost. This seems especially true in the allocation and use of natural resources. For example, although shooters on the Boulder Ranger District demand the freedom to shoot anywhere, in a few cases shooters making these demands refuse to follow the rules and refuse to follow proper shooting etiquette. Further, when there are organized cleanups of shooting areas to remove litter and spent shells, few cleanups are organized by shooters or shooting groups.

In their studies of equity theory, Walster et al. (1973) offered four propositions that provide some insight into how individuals and groups may react to the distribution of rewards. Three of these propositions, I, III and IV, are most relevant to this study.

Proposition I is: "Individuals will try to maximize their outcomes (where outcomes equal rewards minus costs)," (Walster et al., 1973, p. 151). In the case of the Boulder Ranger District, this proposition can be illustrated using the person who is responsible for the blog and the shooters' web site. This person has an area near the town

of Nederland that he has used for target practice for many years. When this area was closed by the Forest Service, he challenged the closure against the will of the people of Nederland: his neighbors. Through his efforts he managed to get the area reopened to shooting; thus, his effort to maximize a positive outcome for himself was worthwhile, even though it resulted in tremendous costs to the people in Nederland; noise, safety issues and the inability to recreate near the shooting area.

Proposition III is: “When individuals find themselves participating in inequitable relationships, they become distressed” (Walster et al., 1973, p. 153). In the case of the reopened shooting area near Nederland, the townspeople were very upset when they found out the shooting area was no longer closed. They appealed to the District Ranger and the County Commissioners to force reconsideration of the closure.

Proposition IV is: “Individuals who discover they are in an inequitable relationship attempt to eliminate their distress by restoring equity” (Walster et al., 1973, p. 54). In the Nederland situation, the shooter who wanted to keep the area open, upon learning of the residents appeal, alarmed people who read his blog by suggesting the closure posed a threat to their second amendment rights and that the Forest Service was going to close all Forest Service lands to shooting. Shooters responded by calling the District Ranger and attending meetings where shooting was being discussed. The shooter also made sure that town residents and the Forest Service knew his significant other was a lawyer. The people of Nederland tried to counteract these efforts by providing testimony from the Town Warden and the Mayor and soliciting support from the Boulder County Commissioners, which the commissioners provided.

Proposition II provided by Walster et al. (1973) addresses distributive justice and its effects on groups and although less relevant to the shooting case than the other

propositions, it is still relevant. It is broken into two subparts, Proposition IIA states:

“Groups can maximize collective reward by evolving accepted systems for ‘equitably’ apportioning rewards and costs among members” (Walster et al., 1973, p. 151).

Proposition IIB states: “Groups will generally reward members who treat others equitably and generally punish (increase the costs for) members who treat others inequitably”

(Walster et al., 1973, p. 151). In Nederland, the shooter and the townspeople are all

members of the community. The townspeople believe the shooter is treating them

inequitably, so they will likely try to punish the shooter by increasing his costs and vice

versa, the shooter has increased the costs of non-shooting members of the community.

Both, shooters and non-shooters will continue to pressure the District Ranger to their

bidding raising costs as well as the stakes and both will spend more to obtain their desired

outcome.

Similar to Walster et al. (1973), Deutsch (1975) stated, “the concept of distributive justice is concerned with the distribution of the conditions and goods which

affect individual well-being” (p.137). This broad view encompassed the psychological,

physiological, economic, and social aspects of the effects. Further, he discussed the

importance of values because they underlie distributive justice and provided what he calls

key values. For example, one of these key values is, “treating people so that all receive

outcomes proportional to their input” (Deutsch, 1975, p.139). Another key value is the

treatment of people as equals. Deutsch also identifies three principles of distributive

justice: equity, equality, and need.

Equity is the principle applied in cooperative relations where economic productivity is the primary goal. In this system the group or person who can produce the highest return for the use of the conditions or goods is assigned the conditions or goods. This is the most common context for distributive justice.

In cooperative relations where fostering or maintaining relationships is the primary goal, the principle of *equality* will apply. Conditions and goods are shared equally to maintain the social good. This principle is more likely to foster enjoyable, personal relations. Further it supports mutual respect and esteem.

In cooperative relations that foster personal development and personal welfare, the principle of *need* will apply. Members of groups may feel a duty to provide for those in need or in jeopardy, albeit only if they can do so with limited risk or loss to themselves. This principle is really emphasized in situations where those in need or at risk are the responsibility of the group.

Although these principles are good general descriptors of distributive justice principles, in reality, such as on the Boulder Ranger District with recreational shooting, the applicable principle is hard to single out, perhaps because multiple principles may be in play. The equity principle might apply if the townspeople successfully argue that Nederland will realize a larger economic benefit if the area in question is posted as a no-shooting area. On the other hand, the equality principle might apply if the District Ranger devises a plan by which both shooters and non-shooters can safely use the area. In this case the Ranger may have to go to extremes to provide for the safety and noise concerns related to shooting, such as building an underground range to limit noise and stray bullets. The principle of need does not apply in the Boulder Ranger District

situation, especially since both groups, shooters and non-shooters, believe they have a need and are in jeopardy of losing their rights.

On the Boulder Ranger District, the shooters and non-shooters are organized and both groups are trying to achieve opposing goals. Tyler (1994), in a reanalysis of his work in 1989, said, "People attempt to maximize personal resource gain by working with others to evolve collective group-enforced rules about fair reward allocation" (p. 851). His work surveying two groups in Chicago is described earlier in this paper. In his 1994 analysis, Tyler also emphasized the role of resources, when resources are the reward in distributive justice situations. In this later analysis he provides for distributive justice in a group context and as a resource-based model of justice stating, "Resource models predict that people's dependence on an organization for resources shapes the role of resource motives in defining distributive justice" (p. 851). That is, people receive satisfaction from the rewards received from an organization such as a membership discount. Also people invest personal resources into groups by developing friendships and investing personal time. And then, a group member will measure distributive justice by comparing personal investment of resources to the rewards (resources) received from membership in the group.

The Forest Service is a resource management agency, managing the distribution and protection of resources and resource-based activities. Many times, because of the safety and noise issues, if recreational shooters have a place they congregate to shoot they take over the resource because it becomes unusable by non-shooters. Tyler's (1994) definition of justice in terms of groups and resources accurately portrays the recreational shooting situation in Boulder.

Though he put some emphasis on describing the resource-based model of distributive justice, Tyler (1994) focuses more on the group element saying, “The most important conclusion of this article is a consistent set of findings about the appropriate psychological model of the justice motive—the relation-dominated model” (p.857). He bases the importance of this relationship approach on his conclusion that there are two distinct psychologies of justice: resource motives, which shape only distributive justice, and relational motives, which shape both distributive and procedural justice. Moreover since relationship motives affect both types of justice he argues procedural justice is the more appropriate model of justice. Data from his review of outcome satisfaction, expectancy, violation judgments, relative outcome judgments, and decision control judgments suggests “that distributive justice judgments do have a basis in resources individuals receive in interactions with others” (p.858). Therefore, in the case of the Boulder Ranger District and the shooting issue, shooters will work together and non-shooters will work together to stop or continue shooting. And it is this interaction with combined motives that best describes distributive justice

In his studies also related to groups and distributive justice, Gitterman (2003) focused on the inter-group distributive justice effects and their relationship to collective action. In his examination of the meaning, scope, and context of social justice in social work with groups, Gitterman (2003) found three factors that must be in place before group members will commit to collective action: 1) members must feel that they can make a difference, 2) members must feel that the group can make a difference and, 3) members must feel that their participation is needed in the collective effort. Gitterman (2003) provides some additional thoughts about group collective action and distributive

justice. He states that people make comparisons in their own social context; therefore shooters and non-shooters will make different comparisons about the effects of providing shooting areas. Furthermore, if people view inequities in terms of collective rather than individual deprivation, they are more likely to respond with collective action. In the case of shooting, collective action should be expected from both groups, non-shooters and shooters, and the District Ranger would do well to consider the effects of this collective action and prepare accordingly.

How open or closed a culture is can lead to effects on perceptions of justice. In their study of culture and its relationship to justice and benefits satisfaction, Arnold and Spell (2006) stated, "...it is important to consider culture's role in determining the importance of procedural and distributive justice" (p. 599). Furthermore, like Deutsche (1975), they suggested that distributive justice can take the form of equity, equality, or need. Arnold and Spell focused on equity discussing the positive and negative inequity perspectives of employee compensation. They also provided a perspective on distributive justice effects in an open versus a closed organizational culture. They described an open culture as one where employees feel welcome and have freedom of thought, and a closed culture as one with a secretive environment with guarded relationships. However they also proposed that measures of a closed versus an open environment are on a continuum.

Their study focused on benefits satisfaction. They gave a questionnaire to 237 employees in two manufacturing organizations. Distributive justice was measured by creating a ratio of the respondent's perceptions of outcomes (benefits) divided by the respondent's perception of his/her own contribution to the firm. Subtracted from this ratio was a ratio created from the same measure, only the employee was asked to provide

his/her perceptions of the benefits and contribution of a typical employee with his/her roles and responsibilities.

Arnold and Spell's (2006) results indicated employee satisfaction with benefits, contextual factors, and especially the organization's culture (open or closed) are significant in shaping relationship with the organization. In the NEPA process, Forest Service professionals define the problem, offer preliminary solutions, like the proposed action, and analyze the effects of the solution on the resource. Finally, after some public input, by way of comments to the NEPA document or generally through public meetings, the Forest Service line officer makes the final decision. Therefore, except for public meetings and some opportunities to comment, the process is closed to the interested publics. It is a closed culture.

The NEPA process does not provide the elements of an open culture. Persons interested in the results of the final decision may easily perceive they have no effect on the decision. The NEPA process, especially the reporting, is complex, which may lead publics to think it is secretive. NEPA's non-participative structure, combined with feelings of secrecy may then stimulate skepticism and distrust causing interested parties to oppose the proposed action. Based on theory, this combination of closed-culture elements in NEPA and the inequitable distribution of reward will escalate the conflict facing the District Ranger.

Although there is opportunity to comment and some opportunities for dialogue, usually through public meetings, a Forest Service line officer can make a decision unilaterally, or may be perceived as making unilateral decisions, especially if the decision does not align with public sentiment. By mandate the Forest Service official will always

favor the conservation of the natural resource, and he or she must make decisions based on a comparison of multiple uses. But the line officer is a disinterested party because his or her livelihood does not necessarily depend on the decision and the line officer may not participate in or benefit from the activity involved. Further, unlike the affected publics, line officers are paid for their participation. Therefore, despite the need for professionalism, the Forest Service official may have no personal or vested interest in the decision. Also, because their decision may be based on elements that are unimportant to the interested parties, the official may be considered a disinterested decision maker by those involved and affected by the decision.

Sondak, Neale, and Pinkley (1999) said “While some resource allocation decisions are made unilaterally by an interested or disinterested individual, many resources are allocated through a negotiated process whereby multiple interested parties determine the division of resources” (p. 489). They suggest that decisions on the distribution of resources in terms of equity, equality, or need are related to the contexts of distributive justice in terms of relationships, contributions, and resource constraints.

In their laboratory study, Sondak et al. (1999) investigated the impact of relationship, perceived contribution, and resource constraints on individuals’ allocation preferences and socially significant relationships’ (college roommates) negotiated allocations. Undergraduate women were recruited in roommate pairs. One half of the subjects were randomly selected to participate in the experiment with their roommate and the other half participated paired with a stranger.

Phase I of the experiment had to do with individual allocation of preference and the norms of distributive justice they implied. Specifically the researchers examined

when individuals preferred distributions that “(a) met their own needs, (b) met the needs of the other party, (c) were equitable in the sense of allocating the majority of the resources to the person who produced the majority of them, (d) were equal” (Sondak et al., 1999, p.497). Subjects (paired strangers and paired roommates) were asked to perform a word-find task. At the end of the task the low contributor to the task was told she produced 30 percent of the correct responses and the high contributor was told she had produced 70 percent of the correct responses. Together the pair was awarded 100 points for its performance and was required to distribute the points between them. To create material value, the participants were told they would receive one ticket to a lottery worth a \$250 cash prize for each point they had at the end of the experiment. In addition if participants had enough points at the end of the experiment they would receive one entry into a lottery for an airline ticket anywhere in the continental United States. This second order good, the airline ticket, manipulated a subject’s need for points and affected how they were inclined to share points. When resource constraints were low, subjects needed just 40 points to be entered into the lottery for the airline ticket. When resource constraints were high, they needed 80 points to be entered into the lottery. Therefore, depending on what resource constraints were applied to the participants, they could either both enter the airline ticket lottery or points would have to be shared for one person to be entered into the airline lottery.

This resource constraint and sharing led to phase II of the experiment. In phase II, subjects were asked to come to agreement on how the points would be distributed between each of them. After agreeing on the distribution, subjects were asked to

complete a questionnaire regarding the allocation of points and satisfaction with the negotiated agreement.

Unlike other experimenters, Sondak et al (1999) observed that their subjects were less self-serving than past research had indicated. They also determined that allocation decisions stem from multiple motives simultaneously and that the “attribution of distributive fairness is a complex process influenced by a constellation of relational, situational, and cognitive factors” (Sondak et al, 1999, p.507). In regard to recreational shooting on the Boulder Ranger District, the question becomes: Can NEPA be used to identify these “complex processes” and help decision makers accommodate these processes to lead to acceptable and reasonable solutions?

In terms of scoping and the associated proposed action, per Sondak et al (1999), neither relationships nor contributions are provided for in NEPA decision-making. Although some relationships may exist between the Forest Service decision-maker and the interested parties before they receive a scoping letter, it is not a relationship that was built to address the current issue. Further, interested parties have had no opportunity to provide a contribution to the proposed action since the scoping letter is usually their introduction to the issue being considered. However, in regard to need, depending on the proposed action, the interested parties may immediately recognize a constrained resource, which could lead to an immediate self-serving reaction.

In his dissertation, *Perceived Fairness In Natural Resource Decision Making: Influences And Consequences*, Smith (2000) suggests U.S history has shown that governments have emphasized either neutrality or accountability in their search for ways to provide the maximum amount of justice. Describing neutrality as focused on giving

citizens unbiased treatment and accountability as an emphasis on respecting citizens' rights, Smith posits that varying degrees of neutrality and accountability have been emphasized in the 20th century. For example, for approximately 60 years in the management of public lands, people trusted Forest Service professionals believing in their neutrality; therefore, public participation was rarely practiced. Citizen dissatisfaction with professionals in the 1960s and 1970s led to an emphasis on accountability and mandates for citizen participation, notably in natural resources. The National Environmental Policy Act of 1970 (NEPA) and the National Forest Management Act of 1976 (NFMA) were part of this movement. These acts mandated a planning process that included standardized methods of public participation.

Hence, in the 1980s resource agencies struggled with citizen participation and in the 1990s they struggled with, "new approaches ... which attempt[ed] to reconcile professionalism and citizen involvement by emphasizing collaboration" (Smith, 2000, p. 18).

Smith (2000) defines distributive justice in terms of decision outcomes; how benefits and costs are distributed among people, suggesting that an equivalent term to distributive justice would be outcome fairness. As other researchers have done, Smith describes distributive justice using the principles of equity, everyone gets rewards in proportion to their efforts; equality, everyone benefits equally regardless of effort; and need, people receive benefits because of deficiencies relative to others. Smith suggests this implication in regard to fairness and the perception of trust, "The first implication is that citizen evaluations of fairness in decision making have substantial impacts on trust in the agency and support for decisions" (Smith, 2000, p. 185).

Part of Smith's research was done on the Huron-Manistee National Forest and addressed the same process, NEPA, examined in this study. Smith says "Decision makers would be wise to focus on fairness principles like ensuring adequate representation, conveying their own neutrality, giving citizens influence over the decision, and treating citizens respectfully" (Smith 2000, p. 186).

Smith (2000) offers a theoretical framework for perceived fairness, which specifies how contextual factors affect fairness and how fairness affects trust in decision makers. The three parts of the framework are (1) the decision-making context, (2) citizen evaluation of the experience and, (3) consequences of the citizen evaluation.

The *decision-making context* includes three factors. The first factor is the agency, including agency culture, level of government, and agency resources. The second factor is the situation, including the participation technique, amount of conflict, type of power distribution, and prior respectful relationships. The third factor has to do with the characteristics of the citizens, including prior level of involvement in decision-making, age, gender, and education.

Citizen evaluations of experience consists of ways citizens evaluate a decision-making process in terms of fairness and the fairness of the outcomes. "Justice theory suggests that fair outcomes and fair process are very important to citizens" (Smith, 2000, p.28). Although different, process and outcome judgments may influence each other, and Smith believes they are positively related.

The *consequences of the citizen evaluation* factor is the need of the decision maker to be trusted by citizens to better ensure compliance with decisions and regulations manifested in citizen support for decisions, citizen satisfaction with the agency making

the decision, and good relationships between citizens and decision makers. Trust in agencies increases when citizens believe decision making processes and outcomes are fair.

To study his contextual framework, Smith (2000) compared different cases in agencies at the national, state, and community levels. All agencies were related to natural resource management. All agencies had citizen participation programs and had mailing lists available for these participative groups. All of the agencies were located in Michigan. Questionnaires were mailed to citizens recently involved with agency decision making and to employees within the agencies. The questionnaire measured agency factors, such as agency beliefs about citizens; situation factors, such as the participation technique; citizen factors, such as the level of involvement with the agency being evaluated; the evaluation of experience variables, such as fair outcome; and consequence of evaluation variables, such as trust in decision makers.

Smith (2000) makes a strong case for collaboration in modern resource management and the need for trust in order to collaborate. But, the mistrust resulting from the historical framework of neutral natural resource decision-making; leaving the decision up to the professionals without question, makes it hard to change to the collaborative accountability needed in modern natural resource decision making. Social and psychological research have shown that fairness is a pervasive human need and that the results of decisions, i.e., distributive justice, are evaluated on principles of fairness.

Smith (2000) found that agency factors such as level of government and agency culture, explained fairness differences among different agencies. He also found that

people are motivated to participate out of a strong concern for the topic. He found fair process leads to fair outcomes and together, positively affected trust.

Finally, based on his research, Smith (2000) suggests several management strategies to improve relations between citizens and decision makers and none of these strategies are provided in NEPA, especially not through the scoping document and proposed action. These proposed strategies include developing an agency culture that values fairness and holds citizens in high regard, using participation techniques that emphasize discussion to increase the diversity and fairness of decision-making processes, balancing power that is the result of imbalances of information by providing easy-to-understand technical information, and increasing fairness and decreasing conflict by using conflict resolution techniques. In the case of distributive justice on the Boulder Ranger District and recreational shooting, no matter what the outcome, Smith's work suggests that the time it would take to carry out his management strategies would be well spent and perhaps create an atmosphere of trust that will make future resource decisions easier.

Hypotheses

Based on a review of the literature and the elements of the NEPA process, I predict that conflict results from the Forest Service using NEPA to make decisions that concern particular groups. The scoping document, typically in the form of a scoping letter, a required initial step in the NEPA process for the Forest Service, often contains a proposed action before there has been any public participation.

When people interested in the results of a Forest Service decision do not receive the results they want, they feel deprived. As more people use National Forest System lands in more and different ways, conflicts occur. Off-highway vehicles travel on the same roads as hikers, people camp in areas that are near private land, and shooters and non-shooters argue over the right to bear arms versus the right to safe and quiet recreation. Many times, when decisions are made, there are winners and there are losers. Whether it is a personal comparison, like a married drafted man comparing himself to a married un-drafted man as suggested by Stouffer et al. (1957), or an in-group and out-group comparison as suggested by Davies (1959), not being deprived is preferred. Interested parties are immediately placed into have and have not categories. Thus, one of the groups is already experiencing relative deprivation, a complex combination of numerous sociological effects.

In addition, according to procedural justice tenets, providing a decision before public participation has occurred negatively affects people's feelings of justice because

such a move may appear to shut out public participation in the decision-making process. These negative feelings are reinforced by the suggestion of Thibaut and Walker (1975) who concluded the most just procedure for resolving conflict is the type that places the majority of the control over the process in the hands of the disputants.

Further support for the proposed action in a scoping document causing conflict is found in Blader and Tyler's (2003) four-component model. This model relates perceptions of justice in terms of rules and policies about how decisions are made and how group members are treated.

The proposed action in a scoping document also affects people's feelings concerning distributive justice. As suggested by Walster et al. (1973), the essence of distributive justice is the perceived fairness of the allocation of rewards or, in the case of the Forest Service, the allocation of resources. When an allocation appears to have been made based on the proposed action in the scoping document and one group gets what it wants and another does not, at least one group will feel there has not been a fair distribution of the resource. In terms of recreational shooting, if a shooting closure is proposed in the scoping letter, shooters may feel they have been unfairly treated and may immediately be opposed to the proposal.

Sondak et al. (1999) suggested that people are not necessarily self-serving and that distributive fairness is a complex process influenced by relational, situational and cognitive factors; however, none of these factors can be addressed when a scoping letter is the interested public's initial introduction to a proposed action and is the beginning of the public decision-making processes.

In the social justice literature, procedural justice is often described as a more robust type of justice; people react more positively to processes in decision making than to the distribution of resources. Therefore, my first hypothesis is:

Hypothesis 1

People who read a scoping letter with a proposed action will have a more negative attitude toward the Forest Service than will people who read a scoping letter that outlines a decision making process for a proposed action.

Social justice literature also suggests that equity is the most common context for distributive justice. In the case of shooting, both groups are working hard on the issue. Therefore, both groups would believe, based on their efforts, that they deserve a favorable decision. This is the basis of my second hypothesis.

Hypothesis 2

People who read a scoping letter with a proposed action that does not favor their position on shooting will have a more negative attitude toward the Forest Service than will people who read a scoping letter with a proposed action that favors their position.

Tyler (1989) suggested that neutrality of the decision making procedures, trust in the third party and evidence of social standing were important measures of procedural justice. I believe that these elements, especially trust and social standing, are important foundations for how people feel about organizations. Natural resource decision making is

often perceived as a political as well as a scientific process. The perception of politically-influenced decisions, for example the Forest Service supporting timber companies, puts the Forest Service in a biased rather than a neutral decision-making framework. This bias also affects people's trust of the Forest Service and how they feel about their social standing.

Tyler (1994) suggested that relational motives shape justice motives. Providing a resource allocation decision in the scoping letter does not allow an opportunity for relationship building. To measure these effects I propose my third and fourth hypotheses.

Hypothesis 3

For people with a negative attitude toward the Forest Service, those who receive a scoping document that explains the processes that will be used to develop a proposed action will have more positive feelings of justice than those who receive a scoping document containing a proposed action that suggests increasing or decreasing shooting opportunities.

Hypothesis 4

When a proposed action is unfavorable to a group, members of that group who hold positive attitudes toward the Forest Service will have more positive feelings of justice than will members who have negative attitudes toward the Forest Service.

Methods

This quasi-experiment tested the effects of a NEPA scoping letter on people's attitudes toward the Forest Service and their feelings of justice about the decision making process. It measured how people feel justice has been served when a scoping letter provides a proposed action versus when it outlines a process for decision making.

Participants

This study used a convenience sample of adults. It used members of the Poudre Wilderness Volunteers (PWV) organization. This group was chosen because, though its members work with the Forest Service, they represent a diverse group of interests and professions. Therefore, some of the subjects were assumed to be shooters and others were not. Also, each member was assumed to have had different experiences with Forest Service decision making.

These subjects were chosen over people involved with an actual decision process because they can be provided with multiple types of scoping documents, which is impossible in reality. Recreational shooting is a national, emotional issue, and the decision made through the NEPA process could be precedent setting. Interference in a regulatory process would be, at the least, closely scrutinized by Forest Service officials. Further, based on experience, samples taken in public meetings related to recreational shooting would be biased by the attendance. In general, meetings are only attended by

people with strong feelings about shooting and they are advocates or staunch opponents of the action. On both sides there are often opinion leaders who dominate the meetings and end up speaking for everyone in attendance. Even if the meeting is facilitated, there is polarization, the atmosphere can become hostile, and the whole group can become dysfunctional.

Stimuli

Three scoping letters (Appendix A) were developed. The first and second scoping letters stated “There ‘are’ three significant problems with recreational shooting on the Boulder Ranger District” (Appendix A, letters one and two). The third letter stated that the Boulder Ranger District, “‘believed’” there are some problems with recreational shooting on the Boulder Ranger District” (Appendix A, letter three). All of the letters stated the problems were a safety and public nuisance problem, a problem with natural resource degradation, and a problem managing recreational shooting in relation to other resources. The first scoping letter provided a proposed action that decreased recreational shooting opportunities by closing a large portion of the District to shooting. The second scoping letter provided a proposed action that maintained recreational shooting opportunities by identifying large areas of the District on which recreational shooting would be the featured recreational activity. The third scoping letter described an inclusive process that would be used to confirm the existence of the problems and if there were problems, provide information to interested publics through multiple communication channels and through public meetings. Based on the findings in these meetings, the

District would decide whether the environmental assessment process, NEPA, should take place. All three of the letters concluded with contact information if people had questions.

Questionnaire

The questionnaire (Appendix B) contained 38 statements. It contained 26, 7-point Likert-type scale (1= agree, 7= disagree) statements measuring participants' attitude toward the Forest Service and their feelings of justice in the decision-making process. The rest of the questionnaire measured the readability of the scoping documents, demographic information and recreational shooting activity.

Variables

Participants' gender, age, and education Level

Some demographic information was gathered to determine the extent to which the study sample matched the typical shooter.

Types of justice in the decision making process

Justice was operationalized by the creation of the three scoping letters. To operationalize distributive justice, one scoping letter provided a decision that allows recreational shooting to continue on the entire District and the other scoping letter provided a decision that prohibits shooting on most of the District.

To operationalize procedural justice, a third scoping letter was created that did not include a proposed action. Instead this letter described an interactive process with all interested publics to give people a chance to identify the problem, give people a voice in

the decision-making process and to recognize all interests in recreational shooting. It proposed personal interviews to gather information and listen to people's concerns. The letter based the need for an environmental assessment, and thus NEPA, on what recommendations resulted from the public input process. Finally, the document said the Forest Service recognized the need for an inclusive public process to address NEPA, not necessarily through public meetings, and left the development of the process up to participants.

Attitudes toward the Forest Service

Attitudes were operationalized by nine statements that were located right after the scoping letters; the statements used a Likert scale (1= agree, 7= disagree). Four of the statements were positive for example, "I am satisfied with the decisions the Forest Service makes." Five of the statements were negative for example, "The Forest Service caters to special interest."

Predisposition toward shooting

Disposition toward shooting was operationalized by asking each participant two specific questions: Do you own a firearm? Do you target shoot? If the participant answered yes to both questions, he or she was assumed to support shooting. If the participant answered no to both questions, he or she was assumed not to support shooting.

Feelings about justice in the decision making process

Feelings about justice in the decision making process were operationalized by 17 statements measured using a Likert-scale (1= agree, 7= disagree). Ten of the questions were framed to measure distributive justice for example, “The Forest Services’ decision will lead to all people receiving the recreational opportunities they want on National Forests.” Seven of the questions were framed to measure procedural justice for example, “The Forest Service’s procedures led to a decision based on facts, not on agency bias or opinions.”

Assumptions about relative deprivation, gun ownership and target shooting activity

Based on research, it was assumed that relative deprivation occurred for participants who did not receive the decision they wanted in their scoping letter. Those who feel deprived will feel individually deprived and deprived as a group. Also assumptions provided by Davies (1959) are assumed to apply: (1) participants who are shooters feel they have lost something and they feel that non-shooters have gained something, (2) participants feel they receive differential treatment in their group, (3) participant who receive what they desire feel superior to participants who do not receive what they desire and vice versa, and (4) participants who are shooters feel their deprivation status is different than non-shooters and vice versa.

It was assumed that any participant answering “yes” to questions about firearm ownership and to target shooting was predisposed to support shooting. It was assumed that those who answered “no” to questions about firearm ownership and to target shooting did not support shooting.

Pretest

After receiving study approval from CSU's IRB, both the stimuli and the questionnaire were pilot tested before they were presented to the actual study participants. For the pilot test, a packet was prepared that included all of the information that would be given to the participants: the cover letter, the individual stimuli, the questionnaire and the debriefing letter. The pretest packet was loaded on Survey Monkey and administered to the nine members of the governing board of the PWV; six completed the survey. The key finding from the pretest was that participants could not accurately identify the decision outlined in the scoping letter they read. As a result, all three scoping letters were revised. In the letters decreasing and increasing shooting opportunities "proposed action" was added to the text. The letter suggesting a process did not have "proposed action" in the text. The changes were submitted again for review and were approved by CSU's IRB.

Procedure

Survey Monkey was used to administer the experiment. Poudre Wilderness Volunteers were randomly divided into three groups. To introduce the study to the 284 PWV members and provide incentive for completing the questionnaire, the email with the experiment attached included a message from the PWV board encouraging members to participate because PWV was receiving a \$100 donation for participating in the

experiment. Then, the experiment was introduced by a cover letter with a brief explanation of the NEPA process and the purpose of a scoping letter. The intent of the study was described: to gather people's feelings, concerns and suggestions about the actions described in the scoping letter. Some background information was provided about recreational target shooting on portions of National Forest System lands, and participants were asked to consider themselves an interested public in terms of feelings and actions related to recreational target shooting. Finally, the cover letter identified the researchers conducting the experiment, and people were told they could opt out of the experiment at any time with no penalty.

Once the participant read the cover letter, he or she was asked to read one of the three versions of the scoping letters. After reading the scoping letter, participants filled out the questionnaire.

The first questions participants answered addressed their attitude toward the Forest Service. Questions related to feelings about justice followed the attitude questions. Once participants had finished with the questions related to justice they were asked to answer questions about the readability of the scoping letters, their gun ownership and target shooting activities, and demographic questions.

One problem arose in the process of loading the experiment onto Survey Monkey—questions 18, 19, 20, 21 and 22 were repeated. These five questions were about people receiving the recreational opportunity they want, the Forest Service not wanting help making decisions, Forest Service guidance toward favorable decisions and the Forest Service taking everyone's needs into account. Following the repeated questions, the experiment continued with normal numbering and with the questions in the

correct sequence. To address this question duplication problem in the data analysis, participants' answers to questions 18, 19, 21 and 22 from the first time they were asked were used in the analysis.

A debriefing letter followed the experiment. It explained the true purpose of the study and details on how the stimuli were used to deceive the participants. This letter concluded with a statement asking participants not to share information about the study with anyone else. To avoid any concerns about the involvement of the U.S. Forest Service in the study, only the Colorado State University logo appeared on all of the study materials.

Ninety-two people received the scoping letter prohibiting shooting on a large area of the District. The scoping letter that allowed shooting over large areas was distributed to 96 people. The letter that outlined a decision making process was distributed to 96 people. Originally, participants were given three weeks to complete the study. However, after two weeks, only 50 people had completed the experiment, and so an email was sent to remind participants about the study and one extra week was added onto the experiment resulting in a four-week experimental period.

Scale Construction

Attitudes Toward the Forest Service

Nine questions in the questionnaire were used to measure attitudes toward the Forest Service (see Questions 1 through 9 on page 9 of Appendix B) Cronbach's alpha for the attitude scale was 0.85, which is an acceptable level of reliability.

Feelings of Justice

The original plan was to use two scales to measure participants' perceptions of justice—one for distributive justice and one for procedural justice. Ten questions were developed to measure distributive justice (see Questions 10, 12, 15, 17, 18, 20, 21, 23, 24, and 25 on pages 5 and 6 of the Appendix 1), and seven were developed to measure procedural justice (see Questions 11, 13, 14, 16, 19, 22, and 26 on pages 5 and 6 Appendix B). Reliability analysis of the separate scales indicated that both scales were reliable (Cronbach's alpha of 0.91 for the distributive justice scale; Cronbach's alpha of 0.92 for the procedural justice scale).

While these two types of justice are conceptually different, they are related. Consequently, a Pearson correlation was run on the two scales to determine the extent to which the scales were related. The resulting correlation of 0.91 demonstrates that the scales were highly correlated; thus the two scales were combined into a single scale, and this single scale was used in hypothesis testing. The Cronbach's alpha on the combined justice scale was 0.95, which indicates the single scale is reliable.

Ease of Reading Scoping Document

Because the three scoping documents varied to some degree in their wording, it was important to determine whether participants found them to be equally readable. Four Likert-scale statements were used to gauge participants' perceptions of reading ease (i.e., "The scoping letter was easy to read." "The scoping letter was easy to understand." "The

scoping letter was well written.” “The scoping letter made sense.”) The Cronbach’s alpha for this scale was 0.95 indicating it is a reliable scale.

A univariate analysis of variance was run to measure the ease of reading among the three groups in regard to all four questions. Participants in the three experimental groups did not differ on their assessments of the readability of the document ($F(2, 88) = 1.59, p = 0.21$).

Results

Participants

Of the 284 members of PWV who were invited to participate in the study, 125 began the study, and 99 participants completed the questions necessary to test the hypotheses (i.e., questions 1 through 26).

As the above data indicates, there was a high dropout rate; 25 participants dropped out of the experiment after question nine, and one participant began the study but did not answer any questions.

Participants drop out of studies for various reasons. When a study is conducted via Survey Monkey, it can be harder to determine why participants drop out because the researchers do not observe people as they participate. To the extent possible, it is important to determine whether those who drop out of a study are different from those who complete a study. In the current study, the attitudes toward the Forest Service that the 25 dropout participants held was compared to the attitudes toward the Forest Service that the 99 participants who largely completed the study held. Results comparing the two groups indicate that the groups were not significantly different ($t = 0.87$, $p = 0.39$). The mean score in the attitudes toward the Forest Service scale for the dropout group ($n = 25$) was 23 and the mean for the group that continued the survey ($n = 99$) was 25. Thus,

for at least one variable of interest, attitudes toward the Forest Service, those who dropped out of the study were similar to those who largely completed the study.

Demographic Characteristics of Participants

Eighty-four of the 125 participants who started the study completed the demographic questions related to age, gender, gun ownership and target shooting activity. Many of the participants skipped some of the demographic questions. Participants could have been sensitive about providing certain information or, in an effort to finish the survey as fast as possible, could have skipped questions that they thought were irrelevant to them. The average age of participants providing demographic information was 61.67 years; the age range was 33 to 79 years and the median age was 62 years. This age range is roughly equivalent to national data. In a telephone survey conducted by the Responsive Management National Office titled, *Sport Shooters' and Archers' Attitudes on Shooting and Appropriate Behavior on Public Lands and the Messages To Which They Respond* (2008), the mean age of shooters was 53.48 years and although the range of ages in this survey was from 18 to 65 years or older, in the five states surveyed i.e., (California, Arizona, Virginia, Oregon, and Colorado), 92 percent of the shooters surveyed were between 35 and 65 plus years old.

Table 3 shows the breakout of gender, firearm ownership, and target shooting activity for the 84 participants who provided gender, firearm ownership and target shooting information; data are provided for each experimental group. The vast majority (75 percent) of the males providing information on gun ownership owned guns, while most of the females (62 percent) providing information on gun ownership did not own

guns. In *Sport Shooters' and Archers' Attitudes on Shooting and Appropriate Behavior on Public Lands and the Messages To Which They Respond* (2008), the Responsive Management Office reported, "Males make up the overwhelming majority of shooters (p. 269)." Thus the demographic data of participants in this experiment generally matches the findings of the general population described by the Responsive Management Office survey. In the current experiment, both men and women reported more gun owners than target shooters. Reasons for this difference could not be determined; however, it may be that many of the gun owners are hunters and they did not consider themselves target shooters.

Table 3 Gender, Gun Ownership and Participation in Target Shooting by Experimental Group

	Decrease Shooting				Increase Shooting				Inclusive Process			
	Own Gun	No Gun	Target Shoots	No Target Shoot	Own Gun	No Gun	Target Shoots	No Target Shoot	Own Gun	No Gun	Target Shoots	No Target Shoot
Male	33%	10%	23%	21%	23%	8%	15%	17%	19%	6%	15%	10%
Female	8%	22%	6%	25%	22%	14%	11%	25%	8%	25%	11%	22%

Hypothesis Testing

Hypothesis 1 predicted that people who read a scoping letter with a proposed action will have a more negative attitude toward the Forest Service than people who read

a scoping letter that describes a decision-making process for a proposed action. An independent samples t-test was used to determine whether the mean for the people who received a scoping letter with a proposed action ($n = 72$, $M = 56.11$, $SD = 20.66$) differed from the mean for the people who received a scoping document describing a process ($n = 27$, $M = 44.70$, $SD = 16.68$). The difference between the two groups was statistically significant ($t = 2.57$, $p = 0.01$). As predicted, people who received a scoping document outlining a proposed action had a more negative attitude toward the Forest Service than people who received a scoping document that outlined a process for making a decision.

Hypothesis 2 predicted people who read a scoping letter with a proposed action that does not favor their position on shooting will have a more negative attitude toward the Forest Service than people who read a scoping letter with a proposed action that favors their position. Counter to the prediction, participants who received a proposed action that did not favor their position on shooting did not have a more negative attitude toward the Forest Service ($n = 34$, $M = 57.59$, $SD = 21.25$) than participants who received a proposed action that favored their position on shooting ($n = 38$, $M = 54.79$, $SD = 20.33$), $t = 0.57$, $p = 0.57$.

The third hypothesis predicted, for people with a negative attitude toward the Forest Service, those who receive a scoping letter that explains the decision-making process that will be used to develop a proposed action will have more positive feelings of justice than those who receive a scoping letter containing a proposed action that suggests increasing or decreasing shooting opportunity. Results from an analysis of variance did not support the proposed interaction. The feelings of justice for those with a negative

attitude toward the Forest Service who received the process letter was not significantly different from those who received a decisional scoping letter, $F(1, 95) = 0.36, p = 0.55$).

Hypothesis four posited, when a decision is unfavorable to a group, members of that group who hold positive attitudes toward the Forest Service will have more positive feelings of justice than members who have negative attitudes toward the Forest Service. The result did not support the hypothesized interaction, $F(1, 68) = 1.09, p = 0.30$.

Discussion

One important point of this study is the assumption that those reading the scoping letter with a decision experienced relative deprivation. A decision provides the context for a deprived or non-deprived state as described by Davis (1959), and it follows that this would create feelings of relative deprivation. The existence of relative deprivation can motivate individuals to come together in groups, and then to participate in collective action as the group becomes an agent of change (Beaton and Tougas, 1997). Therefore, scoping letters may start the process of relative deprivation and this reinforces the effects of justice issues in NEPA.

The results of this study suggest people who receive a scoping letter with a decision; whether or not they are in favor of the decision, have a more negative attitude toward the Forest Service than people who receive a scoping letter that describes a decision-making process that will be used to work through an issue. This result aligns with research findings on justice systems and the importance of who controls the procedures, a third party decision maker, in this case the Forest Service line officer, or the disputants, in this case members of PWV. Based on their research Thibaut and Walker (1975) proposed that the most just procedure for resolving conflict that results in litigation (many NEPA decisions result in litigation) is the type that places the majority of the control over the process in the hands of the disputants, with limited control in the hands of the decision maker. Therefore, the most just process would put the majority of

control of the process in the hands of the disputants, in this case PWV. Since Forest Service decision makers must follow NEPA, whether the decision is made by a Forest Service line officer or a judge, the majority of the control over the process belongs to the decision maker. Thus, it would be expected that people who received the decision would not feel they had been justly treated and would have more negative attitudes toward the Forest Service. Adding to the negative attitude is the lack of consideration of the social system in which the disputants, PWV, exists. Even a group who volunteers for the Forest Service, which would suggest a generally positive attitude toward the agency, was affected by the perceived lack of justice. In this study, participants who received a proposed action were mistreated by not being provided a neutral decision-making procedure. This lack of recognition may make the group feel disrespected. A scoping letter with a decision cannot be neutral, an important component of just decision making. Scoping letters or any other introductory effort in NEPA, such as a public meeting, that propose an action rather than a process ignore justice principles and may result in a more negative attitude toward the Forest Service.

The study also found that people, who do not get what they want from a decision, do not have a more negative attitude toward the Forest Service than people who get what they want from the decision. This result makes sense in light of the sample used in this study. Poudre Wilderness Volunteers work very closely with the Forest Service providing information and advice to people using trails on National Forest System lands. Their central issue is the long-term maintenance and support of hiking and hiking trails on National Forest System lands. A decision on shooting would not have the effects that a decision on hiking and trails might have. If this study would have taken place using

people who are very involved in shooting issues, the results could have been much different because of the effects of distributive justice principles like equity, equality and need (Deutsch (1975). In addition, shooting is a very emotional issue founded on one side by the constitutional right to bear arms and personal protection, and on the other side by a fear of injury, destruction of natural resources and the perceived intrusion on the peace and tranquility provided by natural settings. In general, PWV members have common values and are a very cohesive group, and their most important values do not necessarily align with the values of people seriously involved with shooting. In reality, shooters and non-shooters do not have common values.

In this study participants with a negative attitude toward the Forest Service who received the scoping letter outlining a decision-making process did not have more positive feelings of justice than those who received a scoping letter containing a decision. Once again the use of PWV as the participants may have affected these results. PWV members with negative attitudes toward the Forest Service would be unusual. In fact, neutral feelings toward the Forest Service could be the most negative feeling a PWV member might have toward the agency. This reality sits in contrast to the typical Forest Service decision situation. Most parties interested in Forest Service decisions, especially those who have been hurt by or perceive they have lost something from a Forest Service decision, have more negative feelings toward the agency. Many of the people who attend public meetings or put their name on mailing lists to receive scoping letters do so because they are very interested in an issue or they have been affected by a decision in the past, usually negatively so. Therefore, many people who get involved with NEPA decision making do not like the Forest Service. They also don't trust the Forest Service. Trust is

identified as an important element in both procedural and distributive justice. In his descriptions of procedural justice, Tyler (1989) described trust in terms of benevolent intentions and the desire to treat people fairly. In regard to distributive justice, Smith (2000) found that in decision making, “citizen evaluations of fairness in decision making have substantial impacts on trust in the agency and the support of decisions.” Poudre Wilderness Volunteers’ trust level in the Forest Service is high, and, thus, even those study participants who received a letter with a decision, probably had more trust in the Forest Service than the general public, especially those who have had bad experiences with the agency’s decision-making process. Therefore, negative or positive feelings toward the Forest Service and the effects of justice tenets were probably not as strong in this study as they might be in real NEPA decision making.

Finally, the results of this study suggested that there was no significant difference in feelings of justice between people with a positive attitude toward the Forest Service who received an unfavorable decision and people with a negative attitude toward the Forest Service who received an unfavorable decision. Once again the sample used may have affected these results. Since shooting is not a key issue for PWV, even if the decision was unfavorable, justice tenets like those suggested by Tyler (1989), trust in the third party (Forest Service) and the neutrality of the decision maker would not be as affected.

In real NEPA decision making, this is never the case. All of these elements come into play throughout the decision-making process. In fact, since there is always a third-party decision maker, a line officer in the Forest Service or a judge, justice tenets play a

strong part in how people feel at the end of the decision-making process and many of these people get involved in all types of Forest Service decisions.

Study Limitations

This research was limited to a group of relatively like-minded individuals. Since the Poudre Wilderness Volunteers organization is focused on the long-term maintenance and support of hiking and hiking trails on National Forest System lands, shooting might not be an important issue for most of the members. Therefore, they would be less inclined to become emotionally involved with this issue. Relative deprivation and justice are affected by emotion and involve sociological concepts like social frame of reference and other complex sociological concepts.

Since PWV works with the Forest Service there is already a relationship developed. Therefore, measuring members' feelings about the Forest Service does not portray a very accurate picture of how the public in general might feel about the Forest Service. Further, most people can hardly distinguish the Forest Service from other resource management organizations like the Park Service. Poudre Wilderness Volunteers are familiar with the Forest Service and with people in the Forest Service; their regard for the Forest Service is based on a more knowledgeable and respected frame of reference than many publics involved in natural resource decisions. This familiarity may have limited the effects of experimental stimuli.

In this study the urban-versus-rural orientation of participants was not measured; this orientation may have affected participants' feelings toward target shooting, which could have affected their responses to the scoping documents. Rural shooters may be more familiar with shooting in an environment in which their shooting doesn't threaten

others. Also, people with a rural orientation could have been raised to recognize shooting as part of their lifestyle. People on farms and ranches, and people from very small, isolated communities may recognize guns as a tool to kill predators or to hunt for food, while people from a major metropolitan area may not see a need for guns and view them as dangerous and threatening. In this experiment the approach used to measure participants' interest in target shooting was not very strong. Participants were asked whether they target shoot, and, if so, how often they do so and where they target shoot. The study did not ascertain whether participants had been exposed to primarily responsible target shooters or irresponsible target shooters. Most shooters follow the laws and care about the well-being of others. However, there are shooters who might be called "irresponsible." They have no interest in the well-being of others, are not really familiar with gun safety or etiquette, and may make bad choices like drinking alcohol while they shoot. Therefore, there are categories of shooters from those who recognize they are using a deadly weapon and know and respect shooting safety, to thrill seekers and uncivil ne'er do wells. The extent to which people have been exposed to less responsible shooters may influence their attitudes toward a proposed action about shooting on National Forest System lands.

This study also did not measure people's orientation toward nature or their orientation toward public land. Depending on a person's values, guns may or may not be an essential element of these two orientations. That is, many people don't recreate on public lands without carrying a gun. For them, a natural relationship is humans against nature and guns may be a vital part of the natural experience. Others may be inclined to believe humans are a part of nature. Thus, guns are not a vital part of the natural

experience. Feelings of deprivation related to orientation toward nature might be stronger if one believes guns are a part of their natural experience.

One of the limitations of this study may have been the use of an online study tool. In Survey Monkey, there was no notice at the end of each page of the questionnaire telling participants that there were more questions to complete. Therefore, any page could have been perceived as the end of the experiment. This could be the reason for the high number of incomplete surveys and the pattern of where people stopped participation. Further, on-line studies do not require any interaction between participants and experimenters. This relationship might affect participant's feelings of responsibility for finishing the study. Further, since the experiment did not address an issue important to the participants, they might have been less inclined to participate than someone for whom shooting is an important issue.

Another study limitation involved the placement of the questions measuring attitudes toward the Forest Service. These attitudes were measured after participants had read the scoping letters. Therefore, there is no measure of participants' attitudes prior to the reading of the letters, and the scoping letters could have affected participants' attitudes. This limitation could have been addressed by measuring attitudes before and after participants read the scoping letter. By having the before and after measures, the effect of the letter on participants' attitudes could have been evaluated.

Finally, the high dropout rate in this experiment is of concern, not only the number of dropouts, but the inconsistency in when the participants dropped out. There was no clear pattern related to dropouts. This makes it harder to modify the study to make it more effective.

Future Research

Because the Forest Service is required to make decisions using the NEPA process, more evaluative research of the processes and their possible effects is necessary. Further study in real-life situations is highly recommended. Groups emotionally involved in shooting or any other resource issue would provide better information on the limits of NEPA. Results from real-life NEPA oriented decision making, especially the social effects, would help modernize decision-making models.

Further, recreational shooting, depending on where it takes place, is a very polarized issue. It is a blend of historic right, rural settings switching to urban settings, and the dynamics of the audience involved with this change. More research is needed to determine if it is the NEPA process or the controversy surrounding shooting that makes managing shooting on public lands so challenging.

Urban audiences may be less knowledgeable about guns and gun safety. In fact for many, guns may be related only to violence. Or, they may be that part of video game that is used to kill make-believe villains and monsters. For those who view guns as part of their lifestyle, guns are a tool—a tool that should be used correctly with knowledge and respect. Therefore, future research would benefit from studying the context of recreational shooting with a concentration on the audience's knowledge of guns.

The context for natural resource decision making is becoming more complex. Technology is providing instantaneous information and bringing people together faster. The National Environmental Policy Act is 36 years old, and despite some modification, like using the Internet to provide and to some degree gather information, there have not

been any regulatory changes that make use of dialogic tools like blogs, electronic conversation tools Internet messaging, and sites like “twitter,” facebook” and “YouTube.” There should be some research efforts, especially by agencies using NEPA, to understand their audiences and incorporate this knowledge into NEPA. This would help make decisions not only environmentally sound, but more socially sound also.

Future research should answer the question about who the decision maker should be. Currently, NEPA portrays the Forest Service line officer as the decision maker. Yet, in many cases the decision may end up being the result of numerous reviews and modifications by different layers of the agency or a decision may be handed down by a court. There are many modern decision-making models that, based upon who is determined to be the real decision maker, might better serve public discourse and then decision making.

In conjunction with determining the decision maker, future research could explore and identify how the audience for a decision might be more appropriately identified and participate. Currently, at certain times in the process, anyone can get involved in a NEPA decision. A more accurate decision-making model might be more specific about who should get involved and when they should get involved. Since the inception of NEPA, audiences have become larger and more diverse, and decisions have become more complex and far-reaching. Further, there are many more ways to reach these audiences and for the audiences to get involved.

Another common statement by Forest Service line officers is, “I am an expert on the NEPA process.” In fact, many Forest Service decision makers measure decisional success by whether their decision is upheld through hierarchical and legal scrutiny. In

this case, the focus is on a step-by-step process —from the local Forest Service decision maker to the Washington Office—and possibly beyond to the court system. So the research question becomes, “Do Forest Service decision makers focus on the NEPA process or do they focus on coming up with socially and scientifically acceptable decisions that might be better supported and less costly in the long run?”

Conclusion

This study found that people who receive a scoping letter with a proposed action have a more negative attitude toward the Forest Service than people who receive a scoping letter that suggests a decision-making process that is inclusive and provides the majority of the control of the process to people interested in the decision. Therefore, it appears that process and involvement in the process of decision making can influence how people feel about a decision. It also seems that providing a decision before any process has taken place puts the decision maker in a position of disfavor no matter what the decision.

Natural resource decisions continue to be controversial. In all natural resource decision making efforts by the Forest Service, some form of NEPA must be used. Scoping is considered the collaborative beginning of the NEPA process and sometimes the end of the decision-making process is litigation by interested parties who don't get the decision from NEPA they want. Many people involved in NEPA and many line officers who make decisions based on the NEPA process argue that people will not get involved with a decision unless you provide them with an action. Hence, scoping letters, often the first engagement with interested publics, almost always include a proposed action. The results of the current study suggest that this act of providing a proposed action may backfire.

NEPA is also a very prescriptive process and many of those processes do not follow proven decision-making tenets. By following NEPA, Forest Service decision makers may be coming up with less creative and acceptable decisions than they would through a process designed by the interested parties. The latter may result in processes specific to the development of and solution of the problem.

The National Environmental Policy Act is a good thing. Prior to NEPA there was no formal public involvement even though decisions made on National Forest System lands affected the public in many ways. NEPA was demanded by public outcry and resulted in more open decision making. But, despite its openness, NEPA is heavily weighted toward analysis and not toward public participation. There are public meetings and comment periods, but these all focus on proposals that have already been developed. There are many more ways to participate today—social media, Internet and interactive media, for example. Forest Service decisions affect more people because more and more people are moving closer to National Forest System lands. Any process needs to be updated to address changing audiences and context. NEPA is no different. Providing the public with the opportunity to come up with decisions in a participative, fair way might lead to greater acceptance of decisions, and better decisions. Integrating well-known justice tenets and thoughtfully addressing social paradigms to develop this process for participation is a timely investment in future decision making, especially since natural resource decisions are becoming harder to make.

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Appendix A
Scoping Letters

Scoping Letter

File Code: 1900

Date: June 11, 2010

Dear Interested Party:

There are three significant problems with recreational target shooting on the Boulder Ranger District. They are: 1) public safety and public nuisance problems, 2) problems with natural resource degradation, and 3) the problem the District has adequately managing other recreational uses in areas where shooting takes place. Therefore, the District is preparing an environmental analysis in which the proposed action is to decrease the opportunities for recreational shooting by prohibiting recreational shooting on large areas of the district.

Many public safety and nuisance issues arise when shooting occurs near homes adjacent to National Forest System lands. Homeowners are concerned about people being hit by stray bullets and are bothered by the noise from shooting. These same public safety and nuisance issues occur when shooting occurs near Forest Service roads and trails; road and trail users may be hit by stray bullets and they are also alarmed by the noise from shooting.

Natural resource degradation issues include the trash from spent bullets and targets used at shooting sites. In many areas shooters use trees as targets; weakening, killing, or chopping down the trees with their bullets.

And finally, the District's limited management resources can be better deployed if we can address specific activities occurring in specific places.

In recognition of National Environmental Policy Act guidelines, the following activities are proposed.

1. Scoping meetings will be held to introduce interested agencies, communities and interested individuals to the proposed action. These meetings will also be used to gather input on the proposed action.
2. Information gathered through the scoping process will be used to modify the proposed action. Information may also be used to develop new alternatives if the Forest Service believes it is necessary.

After the public scoping process is concluded, the environmental analysis will be prepared. Specialist reports will be created to address the proposed action and alternatives to the proposed action. Once the environmental assessment is prepared, it will be released to the public for comment before the final environmental assessment is written.

If you are interested in being informed about and involved in the environmental assessment process, please contact John Bustos, Planner, at 970-295-6674.

Sincerely,

District Ranger

Scoping Letter

File Code: 1900
Date: June 11, 2010

Dear Interested Party:

There are three significant problems with recreational target shooting on the Boulder Ranger District. They are: 1) public safety and public nuisance problems, 2) problems with natural resource degradation, and 3) the problem the District has adequately managing other recreational uses in areas where shooting takes place. Therefore the District is preparing an environmental analysis in which the proposed action is to maintain the opportunities for recreational shooting on the entire district by identifying large areas where shooting will be the featured recreational activity.

Public safety and nuisance issues that arise from people's concerns about being hit by stray bullets and the noise produced from target shooting can be mitigated by designating large areas where shooting will occur and other recreation activities will be prohibited.

Natural resource degradation must also be mitigated in areas where shooting is allowed. To mitigate resource degradation, management will provide for trash removal, especially for spent bullets and targets.

Finally, the District's limited management resources can be better deployed if we can address specific activities occurring in specific places.

In recognition of National Environmental Policy Act guidelines, the following are proposed.

1. Scoping meetings will be held to introduce interested agencies, communities and interested individuals to the proposed action. These meetings will also be used to gather input on the proposed action.
2. Information gathered through the scoping process will be used to modify the proposed action. Information may also be used to develop new alternatives if the Forest Service believes it is necessary.

After the public scoping process is concluded, the environmental analysis will be prepared. Specialist reports will be created to address the proposed action and alternatives to the proposed action. Once the environmental assessment is prepared, it will be released to the public for comment before the final environmental assessment is written.

If you are interested in being informed about and involved in the environmental assessment process, please contact John Bustos, Planner, at 970-295-6674.

Sincerely,

District Ranger

Scoping Letter

File Code: 1900

Date: June 11, 2010

Dear Interested Party:

The Boulder Ranger District believes there are some problems with recreational target shooting on the Boulder Ranger District. They are: 1) public safety and public nuisance problems, 2) problems with natural resource degradation, and 3) the problem the District has adequately managing other recreational uses in areas where shooting takes place. Therefore, the Boulder Ranger District is exploring the need for an environmental assessment to confirm problems with recreational target shooting and developing alternatives to address the problems if necessary. In recognition of the need for an inclusive public voice in decision-making and to recognize the diverse interests in recreational shooting, the following action is proposed.

1. Personal interviews will be conducted over the next two months to determine if there are problems associated with recreational target shooting. The interviews will include a diverse sample of people who participate in different activities on National Forests. Therefore, it may include interviews with four wheelers, hikers, hunters, and recreational shooters. It will also include interviews with people who own land adjacent to National Forest.
2. All of the information gathered in the interviews will be presented to the public through three channels (the World Wide Web, community newsletters and newspapers) and presented at a series of public meetings.

Public safety and nuisance issues arise when shooting occurs near homes adjacent to National Forest System lands. Homeowners are concerned about people being hit by stray bullets and are bothered by the noise from shooting. These same public safety and nuisance issues occur when shooting occurs near Forest Service roads and trails; road and trail users may be hit by stray bullets and they are also alarmed by the noise from shooting.

Natural resource degradation issues include the trash from spent bullets and targets used at shooting sites. In many areas shooters use trees as targets; weakening, killing, or chopping down the trees with their bullets.

Finally, the District's limited management resources can be better deployed if we can address specific activities occurring in specific places.

If the decision is made to proceed with an environmental analysis, recognizing that the Forest Service is ultimately responsible for making the decision, a small, diverse group of interested parties will be assembled and asked to develop a process to include public comment and dialogue, sharing information, and opportunities to discuss and make recommendations to address the problems.

If you are interested in being interviewed please contact John Bustos, public affairs officer, at 970-295-6674.

Sincerely,

District Ranger

Appendix B
Questionnaire

Public Feelings Toward US Forest Service Decision Making (2)

Please read the following statements about the United States Forest Service and mark the extent to which you agree or disagree with each statement.

	Agree						Disagree
1. The Forest Service possesses the knowledge to make good decisions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. The Forest Service is mainly concerned about the agency and makes decisions accordingly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I am satisfied with the decisions the Forest Service makes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. The Forest Service can make good decisions without my input.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. The Forest Service just fights forest fires.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I don't trust the Forest Service because it is part of the government.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. The Forest Service does its job well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. My experiences with the Forest Service have been negative.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. The Forest Service caters to special interest groups.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please read the following statements about the United States Forest Service and mark the extent to which you agree or disagree with each statement.

	Agree						Disagree
10. The Forest Service's decision provided the most desirable outcome.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. The Forest Service applied procedures consistently across people and situations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Because of the Forest Service decision, people doing other activities will not be able to use the area.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Overall the Forest Service's procedures were fair.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. The Forest Service's procedures led to a decision based on facts, not on agency biases or opinions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. The Forest Service's decision is not good for anyone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. It is hard to tell who is affected by the Forest Service's decision.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. The Forest Service's decision treated all groups involved with the decision equally.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. The Forest Service's decision will lead to all people receiving the recreational opportunities they want on National Forests.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. The Forest Service doesn't want people to help them make decisions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. The Forest Service's decision will lead to people receiving favorable outcomes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. The Forest Service's decision process takes everyone's needs into account.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. The Forest Service's procedures are equally fair to everyone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Public Feelings Toward US Forest Service Decision Making (2)

Please read the following statements about the United States Forest Service and mark the extent to which you agree or disagree with each statement.

	Agree						Disagree
18. The Forest Service's decision will lead to all people receiving the recreational opportunities they want on National Forests.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. The Forest Service doesn't want people to help them make decisions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. The Forest Service's decision will lead to people receiving favorable outcomes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. The Forest Service's decision process takes everyone's needs into account.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. The Forest Service's procedures are equally fair to everyone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. The Forest Service's decision discriminates against people who want to recreate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please read the following statements about the Forest Service's decision, as outlined in the document you just read. Mark the extent to which you agree or disagree with each statement.

	Agree						Disagree
24. The Forest Service's decision process resulted in a fair distribution of opportunity to all National Forest users.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. The Forest Service's decision is biased toward one group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. The Forest Service's decision was made in a fair way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Remember you may click on PREV to return at anytime to any previous screen to reread the letters or to change a response to any of the questions until you click DONE and submit your survey.

27. To what degree do you agree with the following statements.

	Agree						Disagree
The scoping letter was easy to read.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The scoping letter was easy to understand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The scoping letter was well written.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The scoping letter made sense.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

28. What was the decision provided in the scoping document? Please check your choice.

- To allow shooting on National Forest System land
- To limit shooting on National Forest System land
- To identify a process for making decisions about shooting on National Forest System lands
- I don't know what decision was made

Please share some information about yourself.

Public Feelings Toward US Forest Service Decision Making (2)

What is your age

Age

Are you:

Male Female

What is your racial/ethnic background?

- Asian American
 African American
 Caucasian
 Native American
 Latino/Hispanic
 Mixed ethnicity

What is your education level?

- High School
 Bachelor's Degree
 Graduate Degree
 Post-Graduate
 Other (please specify)

What is your profession?

Do you own a firearm?

Yes No