Political & Social Viability of Predator Compensation Programs in the West

Final Project Report
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Chapter 1 Executive Summary

Introduction

Predator conservation and associated conflicts are prevalent social concerns in the United States. For example, on-going wolf restoration efforts in Arizona, Idaho, Montana, and across the West have faced significant controversies. Further, wolf managers anticipate that social conflict over wolf management will continue far into the future even when and if the wolf is delisted under the Endangered Species Act (Bangs, personal communication 2002). Naturally occurring wolf populations in Minnesota, Alaska and Canada have long been a source of controversy. Similarly, existing grizzly bear populations and proposed reintroductions in areas like Montana and Colorado are significant sources of controversy. A management technique used to deal with conflicts associated with predator conservation and restoration is compensation programs. Compensation programs for wildlife damage are widespread throughout the United States and Canada and their effectiveness is relatively unknown (Wagner et al, 1997).

Purpose of Study

This research project explored questions related to the perceptions of predator compensation programs from the perspectives of livestock owners and the general public. The project explored how individuals frame the underlying issues and conflicts related to predator compensation, how individuals conceive of concepts like equity, fairness, individual versus societal responsibilities, and the public interest in regard to predator conservation and compensation, and views about compensation program administration and funding. The study was conducted in the western states of Idaho, Montana, and Wyoming. Currently four compensation programs exist within these states including Defenders of Wildlife's Wolf Compensation Trust, which operates in all three states of interest (Idaho, Montana, and Wyoming); Defenders of Wildlife's Grizzly Bear Compensation Trust which operates in Montana and Idaho; Wyoming Game and Fish Department which compensates for grizzly bear, black bear, and mountain lion depredation; and Idaho Department of Fish and Game which compensates for black bear and mountain lion depredation.

Design of Study

Three research initiatives were utilized for gathering data. The first approach consisted of in-depth interviews with livestock producers in four communities: Augusta, MT; Salmon, ID; Dubois, WY; and Kaycee, WY. A total of 79 interviews with 104 individuals were conducted. The second approach consisted of mail surveys sent to randomly selected livestock owners in 12 communities in each state. A total of 1200 surveys were sent out with an overall response rate of 51.1%. The third approach consisted of a general public mail survey sent to a randomly selected state-wide sample in each of the three states (Idaho, Montana, and Wyoming). A total of 1959 general public surveys were sent out and the overall response rate was 43.9%.

Key Insights

Compensation is a complex and multifaceted issue. No one question from the survey or interviews adequately portrays the views and values people have with respect to predator compensation programs. In other words, any one question from the surveys or interviews only tells part of the story. For example, consider the issue of whether or not the public endorses or

supports predator compensation programs. Over 74% of the respondents to the mail surveys indicated that a compensation program would be desirable as part of a government policy for managing grizzly bears, mountain lions, and wolves. However, endorsement drops to 50% when respondents were asked if they thought that a state run compensation program is acceptable for endangered predators and only 29% indicated they would vote in favor of a state run predator compensation program. Thus, each of those questions alone only partially characterizes the extent of public endorsement for compensation. One needs to look at the data collectively to fully understand the public's views about predator compensation programs. The purpose of the project report is to provide an in-depth summary and analysis of the study data to help policy makers develop a comprehensive understanding of public sentiment about predator compensation programs. The body of the project report contains a detailed discussion of results. The remainder of the executive summary highlights some of the key insights.

The study results indicate that predator compensation is widely viewed as desirable by both livestock owners and the general public. Considered collectively, the project data suggest that the widespread sentiment that compensation is desirable stems from underlying beliefs about the question of how society should distribute the costs associated with predation. In the interviews, livestock owners commonly expressed the view that some losses to predators are expected. However, chronic losses in conjunction with restrictions on a livestock owner's ability to respond to those animals responsible for predation were not viewed as normal business costs. For these reasons, many livestock owners viewed predator reintroduction efforts and restrictions on livestock owners' ability to control problem predators (through legislation like the Endangered Species Act) as creating a responsibility for society (or the government) to compensate those whose livelihood has been impacted (see Chapter 3). The survey results suggested that this perspective was also prevalent among the general public. The majority of respondents in the general public sample (59%) disagreed with the idea that "losses caused by predators are a cost of doing business and should not be compensated." Further, a discriminant analysis of the survey data (see Chapter 4) indicated that the most influential factors distinguishing those who indicated a government program for compensation would be desirable from those who indicated such a program would be undesirable were: (1) normative views related to whether predator losses should be considered a normal cost of doing business borne by the livestock owner and (2) beliefs about whether compensation spreads costs more fairly in society.

As the results above suggest, perceptions about the desirability of compensation appear to stem from notions of social responsibility and fairness in relation to the costs of predation. Additionally, the project data indicate that this perspective comes from a public that widely believes that ranching produces valued societal benefits such as wildlife habitat and open space. Among the general public, 63% of the respondents agreed with the view that "benefits to society occur from ranching." Not surprisingly agreement among ranchers was higher (80% of survey respondents). However, the interviews also suggested that many ranchers see themselves as "stewards of the land." These interview respondents characterized the rancher's role of benefiting wildlife as an important contribution to a society that values that wildlife, and compensation, then, is seen as justifiable as a societal means of sharing costs for the benefits ranching provides.

The interview data also provide deeper insight into what livestock owners mean when they indicate that compensation programs are a desirable management alternative. Although

many respondents see compensation as desirable, the interview data indicate that by itself, compensation is not seen as a wholly adequate solution because it does not deal with the "cause of the problem." In other words, there is a perception that those predators that kill livestock will continue to do so and compensation will not stop that from happening. Interviewees who found compensation desirable tended to characterize it as a means of making losses (rather than predators themselves) more acceptable (see Chapter 3). Among these livestock owners, compensation was valued as a means of distributing the costs of predation more fairly rather than as a solution to the problem of predation. Control issues, meaning either giving livestock owners the ability to kill problem animals and having hunting seasons, was one of the most discussed issues in the interviews. Issues of control are seen by many of the interviewees, both those who do and do not find compensation desirable, as a preferable solution because it is a way of actually solving the problem by removing the offending animal. In fact, several (but not all) of the interview respondents commented that they would not need to be compensated, if they were allowed to take care of the problem animals. The survey data provide additional support for these observations. In both survey samples (livestock owners and general public) giving livestock owners the right to kill predators attacking livestock and hunting by the public received more widespread endorsement as a management alternative than did compensation (see Chapter 3).

While the perception that compensation does not deal with the cause of the problem is one of the major reasons interview respondents characterized compensation as a desirable but not sufficient tool for dealing with predator management, other issues that compensation does not address are of concern as well. Concern about impacts of predators on elk and deer numbers was prevalent – 77% of the livestock owner survey respondents and a 52% of the general public respondents agreed that this was a real concern. This concern over reduced game numbers is also reflected in the interviews. Many of the interviewees think that the predators are impacting deer and elk populations and that is affecting the hunting situation.

A majority of livestock owners (68%) agreed that human safety issues were a real concern that was not addressed by compensation as did a majority of the general public sample (53%). Human safety concerns were also brought up by many of the interviewees either voluntarily or in response to questions about what it was like to live in an area with predators. Although the survey question did not specifically identify the predator species in which human safety was a concern, the interview respondents discussed which species they were particularly concerned about. Overall, interviews with livestock owners suggested human safety concerns were more commonly associated with grizzly bears and mountain lions. Human safety concerns towards wolves were somewhat less prevalent but did occur among some interviewees, especially in relation to population increases and concerns over possible attacks on children.

Finally, another issue of concern not addressed by compensation that was revealed in the interviews dealt with loss of property rights. Many of the interviewees expressed the belief that the current system of predator management does not allow them the ability to take care of problem predators and protect their livestock and that this equates to a loss of private property rights (see Chapter 3). Overall these interviews clearly communicate the idea that "people don't like their private property rights stepped on." Many of the interviewees believe that private property rights are important and that they should have "every right in the world to protect my personal property". In discussing this issue many interviewees emphasize that they are advocating only for the ability to control those problem animals that are actually causing

damage, and not all bears and wolves. Concern about these types of issues does not necessarily mean that compensation would not be desirable to these respondents; however, these findings do indicate that the respondents have additional concerns about predators not addressed by compensation.

Although the data show that compensation is widely seen as desirable, there is a subgroup, in both the surveys and interviews, who did not find compensation desirable. Interestingly, interviewees who indicated compensation was not desirable brought up the same issues and concerns as those who found it desirable. In other words, many of the same practical and political concerns or "objections" (such as a belief that compensation does not solve the cause of the problem; political concerns over private property rights; and a belief that the broader public, those who value predators, should share responsibility for the costs of predation) were held by both those interviewees who found compensation desirable and those who did not. What appears to be most different is how heavily each group weighs these concerns. For example some of those finding compensation undesirable expressed the sentiment that they do not raise livestock to feed the predators, but instead "raise cattle to feed people". In other words, for these individuals, the whole concept of compensation was simply too contradictory to the goal of the activity that was to be compensated to be acceptable. In addition, some interviewees who found compensation unacceptable held the view that taking compensation is saying that it is okay for the predators to kill your livestock and that you fall under "their" line of thinking, meaning that you agree with the groups that pushed for the predators to be there in the first place.

Considering that predator compensation programs are widely seen as desirable, it is worth noting the potential compensation programs may hold in serving a "relationship building" function. A number of the interviewees who indicated compensation was desirable indicated they valued compensation programs in part because they are tangible evidence that costs of predator reintroduction are recognized by the broader society that seeks to reintroduce and conserve predators (see Chapter 3). Understanding what underlying beliefs are influencing support or opposition toward predator compensation programs provides a basis to help identify the common ground among people with disparate values with regards to endangered species and wildlife. The project data suggest that what supporters of compensation programs tend share in common is a desire to address the social costs generated by predator conservation. The data also provide insights into possible sources of conflict that could be avoided if various groups seek to work collectively to address the social costs of predator conservation. For example, if livestock owners or the general public perceive groups as promoting compensation as a tool for education or for changing values towards wildlife they may well be seen as not addressing the real issue. Understanding the beliefs that differentiate supporters and opponents of compensation also might have implications for how agencies and organizations pursuing compensation programs might focus their communication efforts. For example, since differences in views about the need to distribute costs of predator conservation more fairly were an important factor in shaping views about the desirability of compensation, rather than focusing on educating people on the importance of predators to the environment, a more effective strategy might be to focus on the importance of ranching (versus the possible alternative of subdivisions) to maintaining wildlife habitat.

While the preceding discussion has focused on the widely held (74% overall) view that a compensation program is a desirable part of a governmental predator management program, as noted above endorsement drops when respondents were asked whether they found a state run

program acceptable (50% indicated it was acceptable) or whether they would vote for a state run program (29% indicated they would). The discriminant analyses indicated that considerations related to the appropriateness of funding sources played a role in distinguishing those who found a state run compensation program acceptable from those who did not (Chapter 4).

The descriptive analysis of the surveys and interviews also explored funding issues and the question of public perceptions of the economic feasibility of compensation programs. Concerns about the economic feasibility of compensation programs appears to be widespread. A majority of both the general public (61%) and livestock owner samples (78%) believed that there would not be enough money to pay for all the losses once predators are well established.

The survey also explored views related to funding mechanisms. Overall, funding via sources directly linked to livestock owners (tax per head of livestock, private insurance) were seen as inappropriate by a larger percentage than those finding such funding appropriate, even among the general public sample (see Chapter 3). The majority in both samples believed that funding through general state taxes was not appropriate. The pattern of responses to both the livestock/insurance funding questions and the state funding possibly reflects a belief that predator conservation represents a broader national interest and that costs should not be borne solely by livestock owners themselves or state residents. This possible explanation is supported by the results that suggest people value compensation because they see it as a means of more fairly distributing the costs of predator conservation within society. This possible explanation is also supported by the survey findings that federal taxes, a tax on tourists, and hunting license fees all received at least a plurality of support among some "subpopulations" (that is, some states/communities) (see Chapter 3). However, each of these potential funding mechanisms was deemed inappropriate by a larger percentage in other "subpopulations" of survey respondents. While the results suggest that the question of how to fund predator compensation programs would likely be a difficult issue to resolve given the diversity of perspectives, it is worth noting that the majority of respondents (74% of livestock owner sample and 76% of the general public sample) endorsed at least one of the four broader societal funding mechanisms (federal tax, tax on tourists, hunting fees, state tax). In other words, while there was disagreement among respondents about the most appropriate means by which to generate funding, 3/4 of the respondents did indicate that they would find a broader "societal funding mechanism" appropriate (as opposed to finding only private donations or funding via the livestock owners themselves as the only appropriate basis).

The interviews provided additional depth of insight into this issue. When given greater freedom to direct the conversation about administration of compensation programs with respect to various institutions through less directive interviews, the nature of the issues raised did vary by institutions (see Chapter 3). Discussions in support of federal government involvement tended to reflect the theme of "responsibility for funding" as a consequence of either the "federal action" of reintroducing wolves or the fact that wolf conservation serves the values and interests of the broader public who should therefore contribute to the costs. Support for state government involvement tended to reflect themes related to "efficiency in administration" and/or greater confidence in motivations of a state run program compared to privately run programs. Discussions in support of private programs tended to focus on the desirability of a funding mechanism where only those who want wolves pay and on concerns about the inefficiency of governmental bureaucracy with respect to such programs.

Issues related to perceptions of feasibility were also explored in relation to the

verification process (see Chapter 5). Views about the verification process were addressed only by livestock owners, both in the survey and the interviews. A majority (62%) of the livestock owner survey sample believed that the verification process for compensation was too strict, while only 9% disagreed with this sentiment. Similarly, only 17% of the livestock owner survey respondents expressed confidence that they would be compensated if they experienced a loss to a predator covered by an existing compensation program while a majority (60%) were not confident they would be compensated.

Concerns over verification and the possibilities of livestock owners taking advantage of the program were some of the most discussed issues in the interviews. As with the livestock owner survey, many of the interviewees believe that the verification process for compensation is too strict, and that "you've almost got to photograph the wolf or bear killing to ever be reimbursed for it". A large part of the frustration with the verification process is that oftentimes livestock owners and verifying agents cannot find the carcasses or evidence in time to be able to confirm that a predator killed the livestock. Part of this problem of not finding carcasses was attributed to the predators being able to consume the entire carcass in a short amount of time and to the fact that other predators and scavengers will help to consume the carcass before it is found or can be verified as a confirmed kill. Many of the livestock owners interviewed also recognized the need for a quick response by verifying agents in order for there to be enough evidence to confirm the losses, especially if the criteria for confirmation is going to be strict. Overall, most livestock owners see why there is a verification process, but many think it is too stringent. Some also believe that it takes too long for verifying agents to come out and that a delay in getting there allows for evidence to be lost. Moreover, some livestock owners recognize that some of them may get tunnel vision and think all their losses are predator related.

Closely related to verification and other processes related to implementation is the question of trust (see Chapter 5). Three questions in the livestock owner survey explored respondents' views regarding relationships and trust. Overall, 90% of respondents indicated that there was a lack of trust from livestock owners toward wildlife mangers. A second question asked whether the respondents themselves would be more willing to work with agency personnel (for example informing agency personnel about grizzly bears seen) if there were assurances that doing so would not hurt their livelihood. Eighty-one percent of respondents agreed with this sentiment. These two results indicate the importance of focusing on relationship building as part of the predator compensation and management process. At the same time, it is worth noting again that respondents were also aware of the need for verification and the possibility that some people might take advantage of a compensation process without verification. Sixty-nine percent of the respondents in the livestock owner survey expressed concern that some people would take advantage of a compensation program for unconfirmed losses. Thus, while relationship and trust issues may be of concern to livestock owners, they do recognize the need for a verification process.

An important goal of the research was to explore what types of underlying beliefs and other characteristics influence people's willingness to endorse compensation programs (in terms of their willingness to vote for or against a state run program, their views about the desirability of compensation as a management alternative, etc.). The results discussed above provide important insights into this issue. Additionally, using discriminant analyses it was possible to explore this issue within the survey data sets (Chapter 4). Considered collectively, the results of these analyses suggest that there were meaningful relationships between certain types of

underlying beliefs and a person's willingness to endorse the concept of compensation. Specifically, the results suggest that differences in willingness to endorse compensation programs are driven more by differences in opinions about compensation as a legitimate means of addressing a social concern (does it indeed distribute the costs of predator conservation more fairly; is predator compensation a role government should play or a cost that should be borne by individuals) than by background variables reflected in socio-demographic characteristics. Differences in views about the importance and role of predators in contemporary society appeared to be influential in explaining differences in willingness to endorse compensation only when the predator was clearly identified as endangered. With the current survey data set, it is not possible to definitively determine why differences in views about the value of predators became salient once a species was identified as endangered. However, several factors likely have a role in explaining this shift. For example, identifying the predator as endangered may trigger a greater concern for and focus on the predator itself among those individuals who value predators as a part of contemporary society. At the same time, focusing on an endangered predator may trigger an opposite reaction among people who do not value the role predators play in contemporary society causing them to increasingly question whether the species is worth society going to such trouble in the first place. This latter suggestion is supported by the fact that beliefs focusing on issues that compensation does not address/skepticism about compensation programs also became salient when predators were clearly identified as endangered. Whatever explains the shift, it is important to note that the nature of the public debate does shift depending on whether or not the predator is identified as endangered. At the same time it is also important to remember that even though there is a shift in the salience of these types of beliefs due to the status of the predator, beliefs related to whether or not compensation spreads costs of predator conservation more fairly in society and beliefs about the appropriateness of funding compensation through a general tax base play an important role regardless of predators' status.

In summary, the results of the discriminant analysis are consistent with the insights from a careful consideration of the descriptive analyses. Both sets of analyses suggest that the public debate about compensation programs is not a debate about the value of predators themselves per se (the focus of public debate underlying decisions related to reintroduction). Rather, the debates about compensation appear to revolve around issues related to the how society should view and handle social and individual costs caused by predator conservation. Specifically, the results suggest that among those who find a compensation program desirable there is an expectation that when a predator has been reintroduced or livestock owner's ability to deal with predators has been restricted, society at large has a responsibility to compensate those whose livelihood has been impacted. That is, if the public determines that predators are valuable then the public should have to share the responsibility for associated costs. For the majority of respondents, livestock losses caused by predators are not seen as a normal cost of doing business and ranching is recognized as producing societal benefits (e.g. wildlife habitat and open space). However, livestock owners tend to view compensation programs as a limited tool because they address the costs of predation but not the cause. Lethal control, giving those affected by predator losses the power to solve the problem by eliminating the offending animal, is therefore an important part of the equation in the minds of many the livestock owners. Under the current system of predator management, the livestock owner's inability to remove problem predators and protect livestock is equated with a loss of private property rights. While this is likely to remain

one of the difficult tensions to resolve, compensation programs may have the potential to help build relationships among groups with different views in a way that could help address the concerns associated with this issue.

Chapter 2 Study Design and Methodology

This research project explored questions related to the perceptions of predator compensation programs from the perspectives of livestock owners and the general public. More specifically, it explored how individuals frame the underlying issues and conflicts related to predator compensation; views about issues related to equity, fairness, individual versus societal responsibilities, and the public interest in regard to predator conservation and compensation; and views about compensation program administration and funding. The study was conducted in the western states of Idaho, Montana, and Wyoming. Currently four compensation programs exist within these states including Defenders of Wildlife's Wolf Compensation Trust, which operates in all three states of interest (Idaho, Montana, and Wyoming); Defenders of Wildlife's Grizzly Bear Compensation Trust which operates in Idaho and Montana; Wyoming Game and Fish Department which compensates for grizzly bear, black bear, and mountain lion depredation; and Idaho Department of Fish and Game which compensates for black bear and mountain lion depredation. Because livestock owners are more likely to be interacting with a compensation program the views of this population were studied more in-depth than those of the general public. We utilized three research initiatives, which included in-depth interviews with livestock owners, a mail survey sent to livestock owners, and a mail survey sent to the general public.

Interviews

The research questions and goals underlying this study required a research design capable of providing an empirically based, in-depth understanding of: (1) the constellation of beliefs, values, meanings, and perceived conflicts that characterize livestock owners' perceptions of predators and predator compensation programs; (2) views about the administration and effectiveness of compensation programs; (3) how individuals frame the underlying issues and conflicts related to predator conservation, and; (4) how individuals conceive of concepts like equity, fairness, individual versus societal responsibility, and the public interest in regard to predator conservation. Because a detailed understanding of livestock owners' perceptions about predator compensation programs and predator conflicts is essential to understanding the impact of compensation programs, typical mail surveys alone were seen as providing only adequate depth of understanding. As a result, one phase of the study consisted of in-depth interviews with livestock owners'.

Interviews were conducted with individuals in four different communities. We chose to focus on conducting interviews from a community rather than state-wide scale based on the belief that perceptions about the issue of compensation may be influenced by community characteristics. For example, tangible/physical characteristics associated with communities such as types of predators and types of livestock in the area, as well as differing population and demographic statistics may be related to views about compensation. Secondly, intangible features of communities, such as their culture and character may influence views on compensation-related issues. Furthermore, perceptions are often socially influenced by the environment in which one lives, therefore, looking at communities allowed us to explore the actual environment in which perceptions are being created. Logistically, it was more feasible to conduct interviews within specific communities versus randomly selecting livestock owners across the three states.

Emerging out of a prior literature review (Montag and Patterson, 2001), the research

questions, and workshop discussions with stakeholders interested in the study, we identified seven factors on which to evaluate communities for selections. The seven factors were:

1. Type of Program—private versus state run: This factor lead us to explore the differences in administration as well as perceptions by livestock owners about a state run compensation program and a private run program.

2. State of Residence—MT, ID, WY: All three states have some sort of compensation program for predator damage. Currently four compensation programs exist within these states including Defenders of Wildlife's Wolf Compensation Trust, which operates in all three states of interest (Idaho, Montana, and Wyoming); Defenders of Wildlife's Grizzly Bear Compensation Trust which operates in Idaho and Montana; Wyoming Game and Fish Department which compensates for grizzly bear, black bear, and mountain lion depredation; and Idaho Department of Fish and Game which compensates for black bear and mountain lion depredation.

3. Type of Predator—wolves, grizzly bears, black bears, mountain lions: The type of predator may influence livestock owners' perceptions about depredation issues. Differences in perceptions may arise from the type of predator causing the damage.

4. Type of Livestock—cattle, sheep, etc: Differences in perceptions may arise from the livestock type being preyed upon.

5. Type of Livestock Producer: The type of livestock producer, whether it be a traditional rancher, a corporate rancher, absentee owner, or "hobby farmer," etc, may influence perceptions about the depredation issue.

6. Involvement in Compensation Program—have they been compensated, denied compensation, not sought compensation for a loss: We feel it's important to include livestock owners who have had different levels of involvement in compensation programs, as well as some who have had no involvement to date.

7. Public Land Grazing Permit: Incorporating differences in whether livestock owners have public land grazing permits allows for exploration of issues pertaining to livestock depredation on both private and public lands, as well as public land policies that may impact livestock owners' perceptions.

Keeping in mind these factors, we mapped out where compensation payments have been made by the three compensation programs. The data mapped from Defenders of Wildlife include compensation payments from August 1987 through June 2001, the data from Wyoming's program was from January 1998 through May 2001, and the data from Idaho only included fiscal year 2000-2001. In addition to mapping out payment areas, we created a table that broke down payments by location, by what program, by predator and by livestock type. From this table and the map, we created a new map that highlighted areas with the most compensation payments. We then looked at what predators were causing the damage and what livestock was being lost in

those areas. Through this process we ultimately chose four communities that reflected diversity in the facets described above. The following indicate the primary reasons the communities were selected.

Augusta, MT was chosen for the following reasons:

- wolf and grizzly bear activity in the area
- it has a naturally recolonized wolf population
- public land is nearby for the potential of public land grazing
- there was a mixture of livestock producing types

Salmon, ID was chosen for the following reasons:

- wolf activity in the area
- the wolf population was reintroduced
- grizzly bear reintroduction had been proposed and approved (though it was indefinitely put on hold with the change of administrations)

Dubois, WY was chosen for the following reasons:

- the area has had compensation payments by both the Defenders of Wildlife and by Wyoming's programs
- public lands nearby
- mixture of livestock losses
- wolf and grizzly bear activity in the area

Kaycee, WY was chosen for the following reasons:

- there were black bear and mountain lion losses (predators that were not reintroduced/listed as endangered)
- there were both sheep and cattle losses in the area, but predominately sheep

Rather than randomly selecting individuals within communities, this phase of the study employed a purposive sampling approach common to in order to insure that the sample included respondents with a diversity of characteristics (Patterson and Williams, 2001). First, interviews were conducted only with livestock owners[1]. In selecting livestock owners we ensured that the sample from each community included a number of individuals in each of the following categories: those who had received compensation for livestock depredations, those who had applied for compensation and were denied; and livestock owners who live in the geographic area but have not sought compensation. How a person was classified according to this criterion was based on their self-report. Initial community contacts helped the researcher gain the trust of the community and identify potential interviewees. Subsequent interviewees were also used to help

[1] The term 'livestock owner' was broadly defined for this project as individuals who have livestock or livelihood that potentially could be impacted by predators. This includes livestock owners that own any number of cattle, sheep, horses, goats, poultry, etc., as well as beekeepers, and outfitters that own horses and dogs that can be killed by predators as well. The majority of the sample is livestock owners that run traditional livestock such as cattle and sheep in these three states.

identify additional respondents. In addition to prior history with compensation programs, the following factors were used in selecting study respondents: the type of predators causing problems, the type of livestock owned, type of livestock producer (for example, traditional ranchers, corporate ranchers, absentee owners, 'hobby', outfitter, etc.), and whether they have public land grazing permits. These latter characteristics were used to ensure that the sample included respondents with a variety of backgrounds. A total of 79 interviews with 104 individuals were conducted. The breakdown by community was: Augusta, MT: 21 interviews, 30 individuals; Dubois, WY: 20 interviews, 21 individuals; Kaycee, WY: 18 interviews, 29 individuals; Salmon, ID: 20 interviews, 24 individuals. No one refused to participate in an interview.

Instead of a question/answer interview format common to many opinion polls, the interviews for this study were conducted using a format that is often referred to as a "directed conversation" (Charmaz, 1991; Patterson and Williams, 2001). Under this interview approach, the role of the interviewer is to lead the respondents to discuss certain topics without directing them what to say about those topics (Kvale, 1983) and to do so in a way that is adaptable to the way the respondent thinks and communicates while at the same time remaining systematic and focused enough to cover relevant and comparable (across interviews) information. This was accomplished through an interview guide that consisted of a list of research topics to be explored as well as multiple lead-in questions that could serve to initiate a discussion about those topics. The interview guide emphasized issues related to ranching in the West, predator concerns, views about the general idea of compensation, and views about the administration of compensation programs. The interviewer used follow-up probes during the course of the interview to ensure that topics were adequately explored and relevant topics were explored when they emerged during the course of the interview (Kvale, 1983; Patterson and Williams, 2001). This type of interview process allowed new or unexpected ideas to come from the respondents and be incorporated in the analysis, unlike mail surveys where findings are limited by the scope and wording of the specific questions asked. Furthermore, this interview process allowed the opportunity to clarify the meanings of questions and responses, as well as allowed the researcher to better understand why people held the values and views that they did. Interviews were tape recorded and transcribed, unless the interviewee did not want to be tape recorded and then extensive notes were taken. A more detailed discussion on the interview analysis process is presented in the following chapter.

Surveys

Livestock Owner Survey

The second research initiative was a mail survey sent to livestock owners in 12 communities. Surveys allowed us to obtain livestock owners' opinions about predator compensation programs and policies related to them on a broader scale, though in less depth than through the interview initiative. We continued to follow a "community based" sampling approach for the mail survey of livestock owners. We sent surveys to three of the four communities in which interviews were conducted (Augusta, MT; Salmon, ID; and Dubois, WY). Nine additional communities were selected using the same criteria used to select the interview communities. The following reflect the primary reasons the communities were selected:

Marion, MT was chosen for the following reasons:

- an area with naturally occurring wolf population
- both wolf and grizzly bear depredations
- primarily cattle depredations
- Defenders of Wildlife compensation programs active

Ninemile Valley, MT was chosen for the following reasons:

- a naturally occurring wolf population
- focus is mostly on cattle depredation
- Defenders of Wildlife compensation program active

Paradise Valley, MT was chosen for the following reasons:

- a reintroduced wolf population
- both wolf and grizzly bear depredations
- a mixture of livestock types
- Defenders of Wildlife compensations program active

Cody, WY was chosen for the following reasons:

- considerable amount of grizzly bear activity
- mountain lion activity
- mostly cattle, however sheep have been lost in area

Ten Sleep, WY: Ten Sleep was chosen for the following reasons:

- predators other than grizzly bears and wolves such as black bears and mountain lions
- sheep losses primarily

Big Piney, WY was chosen for the following reasons:

- grizzly bear depredations
- cattle depredations primarily

Challis, ID was for the following reasons:

- reintroduced wolf population
- grizzly bear reintroduction had been proposed and approved (though it was indefinitely put on hold with the change of administrations)
- public land is nearby for the potential of public land grazing

Hagerman, ID was chosen for the following reasons:

- wolf depredation on sheep
- some depredation has occurred on cattle

Weiser, ID was chosen for the following reasons:

- both wolf and mountain lion depredation
- sheep losses primarily
- both Idaho's Compensation program and Defenders of Wildlife program active

One hundred mail surveys were sent to each community. A random sample was drawn from a database of livestock owners in the three states by the Montana Agricultural Statistics Service, a state statistical office of the National Agricultural Statistics Service, USDA. We believed that this was the best available database from which to derive a sample of livestock owners. Due to the Statistics Service's policies for protecting the privacy of respondents in the database, the actual sample was drawn by the Statistical Service and mailings were sent from their offices. In order to generate a large enough sample size, it was necessary to expand the sample beyond the mailing addresses linked to the specific communities listed above. So, in order to obtain 100 respondents per area, a random sample was drawn from zones centered around the specific communities listed. Respondents were mailed a survey with a letter explaining the nature of the study. This initial mailing was followed up by a postcard reminder/thank you card mailed approximately a week after the first mailing. Approximately 2-3 weeks after, a second survey packet was sent to those who had not returned the earlier survey. The final response rate (adjusted for those that could not be delivered due to wrong addresses) was: 52% (Idaho), 51% (Montana), and 50% (Wyoming). Analyses and a discussion of issues related to response rate are discussed in more detail in Chapter 6.

The livestock owner survey was designed after interviews in Augusta, MT, Dubois, WY and Salmon, ID so that an understanding of the issues raised in these interviews could be incorporated into the mail surveys. The survey emphasized issues related to what people think about compensation (is it desirable, what are appropriate sources of funding, is it acceptable to have a state run program, views about the design and implementation of compensation, etc.). The survey also assessed views about wildlife and sociodemographic characteristics so that it was possible to explore the relationship between these respondent characteristics and views on compensation. The complete survey along with frequencies of response by state are included in the Appendix of the report. A more detailed discussion of the analyses conducted on the survey responses is presented in the following chapters.

General Public Survey

The third research initiative focused on the general public's opinions regarding predator compensation programs. Like the second research initiative, this initiative used a mail survey. The survey for the general public was identical to the livestock owner survey except approximately 3.5 pages of questions dealing with compensation experiences and specifics of the design/implementation of compensation were not included. The complete survey along with frequencies of response by state are included in the Appendix of the report.

For each state, a random sample of 653 residents was generated from a database on state residents/contact information from a commercial company that maintains and updates this type of information for survey researchers. The sample was limited to people over the age of 18. In an effort to achieve a good response rate, individuals were first mailed a letter telling the potential respondent that the survey was on its way to them, what it was for, and requesting their participation. Two days later, the survey and a cover letter were sent. The cover letter again described, in more detail this time, the purpose of the study, seeking to communicate that the survey was evaluating existing and proposed programs; that everyone's views were relevant because wildlife management and compensation programs involve public funds, governmental agencies, & private donations; and that the survey was supported by a diverse set of

organizations. One week later, a reminder/thank you postcard was sent. Two weeks after the postcard mailing, a second survey was mailed. The final response rate (adjusted for those that could not be delivered due to wrong addresses) was: 42% (Idaho), 49% (Montana), and 42% (Wyoming). Analyses and a discussion of issues related to response rate are discussed in more detail in Chapter 6.

Chapter 3 Views about the Concept of Compensation

Views about the concept of compensation are complex. In order to develop a meaningful understanding of the public's views about compensation, it is necessary to take into consideration the full range of issues explored in the study. With regard to both the surveys and interviews, data from any single question may be misleading if not interpreted in conjunction with questions exploring other dimensions of the public's views about compensation. One must look at the data collectively and not just at a single question in order to gain a full understanding of the public's views about compensation.

This section of the report presents a descriptive analysis of study respondents' endorsement of the concept of compensation; beliefs about the role of compensation in society and the extent to which compensation addresses concerns associated with predator conservation; and views about who should be responsible for funding and administering compensation programs. An analysis that looks at these variables collectively and that also seeks to identify characteristics that help explain/predict differences in voting intentions, perceived desirability of predator compensation programs, and views about acceptability of compensation programs is presented in the following chapter. In other words, this chapter characterizes respondents' current opinions about issues related to the concept of compensation while the following chapter explores relationships among characteristics that influence views about compensation.

Because decision making bodies differ across the three states and because the two surveys in the study represent different populations, the survey data in the presentation below are summarized by state (Idaho, Montana, Wyoming) and by survey (livestock owner, general public). Recall that the livestock owner sample was a random sample of livestock owners in four communities in each state rather than a random sample of livestock owners across the three states (12 communities for the entire study). Analysis of variance was conducted to determine if differences in opinions across communities were statistically significant. When statistically significant differences were observed, results are summarized by community. The general public survey was a random survey of state residents across the three states.

Due to the interest in whether responses from a sample of the general public differ from responses of a sample of livestock owners, chi-square analyses were conducted on the survey data. Since the interest was in the general public versus livestock owners rather than on differences across states, these analyses were conducted on a combined data set (pooling all states) rather than by individual states.

From a policy making standpoint, an understanding of the nature of the differences across populations is as important as the knowledge that there are differences. For example, if the difference is due to the proportion of each population in the highly desirable and highly undesirable categories, from a policy making standpoint one might weigh the information differently than if the difference in a population is primarily attributable to the proportion of individuals in the strongly desirable versus neutral categories. Therefore, chi-square analyses were conducted to identify statistically significant differences and standardized residuals were analyzed to determine more specifically the nature of those differences (Sheskin, 1997). Interview data are included throughout this chapter in order to give more depth to the complexities involved with the public's views about compensation.

Desirability of Compensation and other Management Programs

Survey Results

One section of the survey explored the desirability of compensation and 10 other management alternatives (Figure 3-1). Consistently compensation was the third (livestock owners) or fourth (general public) most widely desirable management alternative (as indicated by combining percent of respondents in the highly and moderately desirable category). Across the four communities in each state, 85% or more of the livestock owner survey respondents rated compensation as either highly or moderately desirable. A clear majority (64-67%) of respondents in the state-wide general public surveys rated compensation as moderately or highly desirable. The difference in endorsement across the two samples was statistically significant ($\chi^2 = 137.502$, $p < 0.001$). Examination of the standardized residuals indicated that this difference was driven in part by the fact that respondents to the livestock owner survey were more likely than expected to say this option was highly desirable and less likely to rate it as any of the remaining options. In contrast, respondents to the general public survey were more likely than expected to find it moderately desirable, neutral, or moderately undesirable and less likely to rate it as highly desirable. In summary then, while the majority of survey respondents in both samples found compensation to be a desirable management alternative, livestock owners as a group were more likely to find compensation highly desirable and the general public respondents were more likely than livestock owners to be moderate or neutral in their views. Though it is important to note that only 13% of the general public overall were neutral and only 10% of the general public found it moderately undesirable. This serves to illustrate the importance of keeping an eye on the actual percentages when interpreting the meaning of statistically significant differences in a policy making context.

Among livestock owners, only two management alternatives (giving livestock owners the right to kill predators that attack livestock and using hunting to control predator numbers) received more widespread endorsement than compensation ($\geq$ 90% rating it desirable) (Figure 3-1). Further, not only were these lethal management programs somewhat more widely endorsed than compensation, the data indicate that giving livestock owners the ability to kill predators attacking livestock was seen as more desirable to livestock owners than compensation. This is indicated by the proportion of respondents rating the two options as ***highly*** rather than just ***moderately*** desirable. Across the communities in the three states, a larger proportion rated giving livestock owners the right to kill predators attacking livestock as ***highly*** desirable compared to compensation (85-91% versus 67-70%, respectively). Further, when responding to a question that asked if they would be "willing to give up compensation in exchange for greater freedom to kill predators on my own," the majority of livestock owners agreed with the statement (Idaho = 73%, Montana = 72%, Wyoming = 80%).

Endorsement for these two lethal management programs (livestock owners' right to kill predators that attack livestock, hunting by the public as a means to control predators) was also consistently more widespread (71-77%) than for compensation (64-67% of respondents rating as desirable) within the general public sample. However, among the general public, a monitoring program to inform livestock owners about the location of predators also consistently received more widespread endorsement than compensation (77-82% of respondents rating as desirable). A monitoring program was also widely endorsed by livestock owners (77-84% of respondents rating as desirable) but it consistently ranked slightly behind compensation in terms of the percentage supporting it (though the difference was not great).

Three other management alternatives dealing with monetary incentives were considered in the survey (Figure 3-1). Among livestock owners, two of these incentives (tax credits for predator losses and reimbursing for preventive measures) were endorsed by a clear majority, though support was somewhat less widespread than support for a compensation program (62-70% compared to ≥85%, respectively). The final monetary incentive, paying individuals for successful denning efforts received slightly more "undesirable" than "desirable" ratings. Within the general public survey, both the tax credit and the reimbursement for preventive measures alternatives were seen as desirable by at least a slight majority of respondents (53-64%). As with the livestock owner sample, a larger percentage of the general public sample found paying for denning unacceptable except in Wyoming where the percentage of acceptable and unacceptable was nearly identical.

One notable difference between the livestock owner and general public survey was with respect to the desirability of the trapping/relocating and nonlethal harassment management programs (Figure 3-1). Across the communities in all three states, a majority of the livestock owners (54-64%) indicated that trapping/relocating of predators was an undesirable management alternative. In contrast, a majority of the respondents to the general public survey in all three states (60-63%) rated this management program as desirable. The difference in the two samples was statistically significant ($\chi^2 = 141.185$, $p < 0.001$). Examination of the standardized residuals indicated that respondents in the livestock owner sample were less likely than expected to say this program was either highly or moderately desirable and more likely to rate it as highly undesirable. In contrast, respondents to the general public sample were more likely than expected to rate this alternative as highly to moderately desirable and less likely to rate it as highly undesirable. In other words, in the case of this management alternative the difference between the two populations is an issue of desirability versus undesirability. One possible explanation is that livestock owners do not support the trapping/relocation because they do not see it as a permanent solution or see it as simply moving the problem to a new location. Additionally, evaluating the public survey for another analysis Sutton (2003) found results suggesting permanent versus nonpermanent might be a better basis than lethal versus nonlethal for characterizing how the public conceived of management options.

In the case of a nonlethal harassment program, a majority (59-65%) of livestock owners in all communities except Cody, Wyoming indicated that this was an undesirable management alternative. In Cody, only a slight plurality[2] (41% undesirable versus 39% desirable) indicated that such a management program was undesirable. The general public sample had a larger plurality indicating that this was a desirable management alternative (43-48% desirable versus 33-37% undesirable). The difference in the two samples was statistically significant ($\chi^2 = 141.185$, $p < 0.001$). Examination of the standardized residuals indicated a similar pattern to the trapping/relocation program although livestock owners were also less likely to be neutral with respect the nonlethal harassment program.

Interview Results

The interviews conducted with livestock owners provide a basis for a more in depth

[2] In this report, the term "plurality" is used when less than 50% of respondents express a particular position, but a larger portion of respondents express one perspective (for example, desirable) than the other (undesirable).

exploration of livestock owners' views related to desirability of compensation as a management alternative. It is important to note that the summary of qualitative data is different from the summary of quantitative data. Excerpts from the interviews are presented in the accompanying tables and represent the data for the interpretation/discussion. Given the volume "data" from the interviews, it is not possible to provide an example of every comment from every interview related to a theme. The purpose of the presentation of interview excerpts in this section is not to present a detailed description of every individual interviewed, but instead to represent the views evident within the whole set of interviews.

Two criteria were used to guide the selection of specific interview quotes in the report. First, collectively, the quotes presented in the report represent the diversity of views within the whole set of interviews (that is no viewpoint has been excluded in the presentation). In other words, the excerpts in the tables do reflect the range of viewpoints towards the issues. Second, the excerpts were chosen based on their clarity of meaning and succinctness, (that is, did the excerpt accurately portrayed the individual's meaning and intent).

Three additional issues should be kept in mind when evaluating the excerpts. First, the number of excerpts does not represent the number of people who discussed these issues. The issues presented in the report are significant in that they were issues that were brought up repeatedly across interviews. The number of excerpts in a given table is reflective of the diversity of viewpoints regarding the theme, not the number of respondents raising it. Second, it is also important to realize not only the complex nature of people's views on compensation, but the interrelatedness of all of the components that are discussed throughout this report. In other words, the issues raised in this section of the report are related to, not only desirability, but to the ideas in other sections of the report as well. For example, as illustrated below verification issues which are part of the design of compensation programs also are a factor that influence views about desirability. Unlike the survey which separated these two questions, the interviews allowed for the integration of these issues in a manner which reflects the way people think about compensation. It becomes apparent in the interviews that issues pertaining to compensation were not always considered as separable and distinct. Finally, the analysis of interviews is not broken down by community in part to protect the anonymity of the interviewees and in part because the compensation-related issues focused on in the project report (those most relevant for a focus on policy decision making) reflect themes that were common across communities.

The survey data indicated that over 85% of the livestock owner survey respondents indicated that compensation was desirable (moderately or highly). Based on a thorough analysis and understanding of the interviews, the interviewees could also be categorized into whether they found compensation desirable or undesirable. Table 3-1 presents the perspective of those who found compensation desirable. The nature of the interview responses provide a better indication of what a "desirable" response to the survey may mean, that is the context in which it is perceived as desirable. Generally speaking, many of the interviewees did view compensation as a "big help" because it does take the "hurt" out of livestock losses (T3-1#2, T3-1#4, T3-1#5, T3-1#7, T3-1#15). This is especially true when there were a great number of losses. Several of the livestock owners interviewed expect one or two losses to predators but they found compensation especially desirable when there were large or drastic numbers of losses. Maxwell explains that with increasing predator populations, as a landowner, you would expect some conflicts and losses to occur. He wouldn't look for compensation if he lost just one calf, but if several bears came in and killed 10 head of cattle, a drastic loss, then he would want

compensation (T3-1#10).

If the predator has been reintroduced, allowed to increase in populations or control measures are restricted due to status (such as endangered species) livestock owners expect there to be compensation (T3-1#6, T3-1#8, T3-1#14). A common sentiment reflected by these excerpts is the view that the respondents' did not want the predators, its therefore only reasonable that those responsible pay.

The desire, or one might say expectation, for compensation is especially strong when livestock owners are limited in their ability to take care of the problems. Like Mark, several livestock owners believe that, if you cannot take care of the problem yourself, there should be compensation (T3-1#8). There is the sense by many of the interviewees that predator populations can have a significant impact on livestock owners' livelihood and those owners need to be compensated in order to make a living (T3-1#9, T3-1#11). But that view is often expressed in conjunction with the "restrictions" on livestock owners ability to control or reintroduced predators and is "qualified." Walter provides another illustration of this type of "qualified" expectation. He doesn't really like compensation because he doesn't like to get "something for nothing," but he supports ranchers receiving it because they can lose enough livestock to predators that they don't make a profit (T3-1#9). This excerpt illustrates a very telling story in that many of the interviewees believe that there is an undue hardship put on livestock owners from reintroducing predators while at the same time restricting livestock owners' ability to control predators themselves.

Considered collectively, the excepts in Table 3-1 suggest that even though there is widespread support for the idea of compensation, this support comes with qualifications. It is a cautious endorsement, one in which livestock owners suggest compensation helps, but it is not, by itself, a wholly adequate solution to the problem' (T3-1#3, T3-1#4, T3-1#5, T3-1#7). Across the interviews comes the thought, that yes compensation "helps, but they're not doing enough" (T3-1#4); and "at least somebody is trying to do something, but they should do more of it" (T3-1#5). While these excerpts emphasize the sentiment that not enough compensation is occurring, across the interviews it is also clear that respondents believe that compensation alone is not sufficient; there needs to be control measures as well (T3-1#3, T3-1#5, T3-1#12).

This qualified endorsement of compensation reflects the depth to which livestock owners think about this issue. They are thinking about the implications of compensation and the roles it may play. Compensation may play a role in dealing with predator/livestock losses, but as times change, and predator populations change, the role of compensation also changes. Compensation is not seen as "the solution" (T3-1#3, T3-1#4, T3-1#5, T3-1#7) but as a "political" tool and it's role may evolve over time (T3-1#13). Finding compensation highly desirable does not mean that one does not also see the need for other management techniques, such as individual control or hunting. Many of the interviewees saw that it does not have to be all one way or the other, but that by having multiple tools, such as control measures and compensation, a middle ground of give and take could be found (T3-1#10).

Overall, the analysis of interviews in which respondents felt that compensation was desirable reveals a number insights. There is an expectation that reintroduction and restrictions on ability to control predators does create a responsibility for society to compensate those whose livelihood is impacted. However, that expectation or sense of entitlement does appear to be bounded in that livestock owners did mention that they expected a certain level of loss to predators and some were uncomfortable with the idea of "taking something for nothing,"

although they felt forced in a position to do so. Compensation was seen as desirable not just because of the financial need but also because it was tangible evidence that the costs of reintroduction and preservation of endangered species were recognized and society was seeking to address them even if compensation did not address the whole problem. At the same time it is important to note that perceptions that compensation was "desirable" often reflect a more cautious or qualified endorsement than might be assumed from the survey question (consider, for example, the first language in the first three excerpts in Table 3-1) and endorsement of compensation is often linked to the need for additional management approaches.

The preceding discussion explored the perceptions of individuals who could be characterized as finding compensation desirable, Table 3-2 and the following discussion focuses on those interview respondents who did not find compensation desirable. Thus their views are likely reflective of the 15% of the livestock owner survey respondents who were neutral or who found compensation undesirable. The lack of endorsement for compensation by this group is based upon many factors. Some expressed the sentiment that they do not raise livestock to feed the predators (T3-2#1, T3-2#6, T3-2#7), but instead "raise cattle to feed people" (T3-2#7). In other words, for these individuals, the whole concept of compensation was simply contradictory to the goal of the activity that was to be compensated. Closely related to this view is the sentiment among these livestock owners that compensation does not address the actual problem, which is a specific predator is eating their livestock. Instead of a solution, compensation is seen as a band aid that doesn't really take care of their problems such as lost production, genetics, etc. (T3-2#1, T3-2#2, T3-2#6, T3-2#7, T3-2#8). In addition, some interviewees held the view that taking compensation says that it is okay for the predators to kill your livestock and that you fall under "their" line of thinking, meaning that you agree with the groups that pushed for the predators to be there in the first place (T3-2#1, T3-2#3, T3-2#8). Moreover, some individuals do not support compensation because it is not worth their time (T3-2#4) or they believe that compensation infringes upon their private property rights (T3-2#5). The link between compensation, predator management, and private property rights is one that comes up throughout the interviews, both from those who support compensation (T3-1#6, T3-1#12) and those who are more hesitant to (T3-2#5).

The verification process was also a basis for influencing some interviewees who were characterized as finding compensation undesirable. Many of the livestock producers do not believe that they will be compensated for their actual losses because the losses will not be found or verified (T3-2#2, T3-2#6). This issue of verification is one of the most contentious and most discussed issues in the interviews. It is an issue that is brought up across all the interviews by both those people who see compensation as desirable or helpful (T3-1#5, T3-1#9, T3-2#10) as well as those that don't (T3-2#2, T3-2#6).

Clearly livestock owner interviewees who did not find compensation desirable prefer other management options. However, even among those interviewees who were able to see desirable aspects of compensation, compensation alone is not seen as "the" answer or the solution to the livestock loss issue. Among these interviewees, compensation is seen as one tool of many that can be used to deal with these predators issues, but (consistent with the survey results) control techniques are seen as even more desirable (Table 3-3). Control issues, meaning either giving livestock owners the ability to kill problem animals and having hunting seasons, was one of the most discussed issues in the interviews. Many of the interviewees stated the real issue with livestock losses is having control and this perspective is supported by interviewees

that have been compensated, denied compensation, and haven't tried for compensation (T3-3#1, T3-3#6, T3-3#8, T3-3#9, T3-3#12). Even those individuals who did not find lethal control efforts appealing, indicate that there is a breaking point and the need for control efforts to be used. For example, Debra discussed how she does not think shooting is the answer and perhaps a nonlethal strategy could be utilized (joking about the idea of prisons), but she also thinks lethal control methods should be used after a certain amount of conflict (T3-3#25).

Issues of control are seen as preferable solutions because it is seen as way of actually solving the problem (T3-3#4, T3-3#8, T3-3#12, T3-3#17, T3-3#19, T3-3#22, T3-3#24) because it removes the offending animal (T3-3#1, T3-3#3, T3-3#5, T3-3#23, T3-3#24). Control of problem or offending animals is really seen as getting rid of the problem because if the problem animal was not controlled, the losses would continue. The view of so many of the livestock owner interviewees is reflected in the following comment by Rick: "They pay me for [the loss]. Well, that's not solving the problem. You've still got something out there killing [livestock]. You've got to deal with that aspect of it too" (T3-3#22). In other words, their view is that you need to take care of the problem and that means using lethal control methods.

The perceived desirability of control efforts was so strong for several of the livestock owners interviewed, that they indicated they would not need compensation if they had the ability to control or take care of their problems (T3-3#8, T3-3#10, T3-3#23). This sentiment was found among some of the interviewees who also support compensation as a management tool (T3-1#5 and T3-1#12 [which is the same quote as T3-3#8]). The belief that control of problem predators provides a solution is so strong among the individuals identified in these excerpts, that they express the belief that compensation would not have to be available if ranchers could control problem predators directly. However, not all interviewees went so far with respect to control versus compensation. Some believe that even with control efforts, compensation is necessary because it is impossible to completely control the problem of predation and because one becomes aware of the problem only after losses occur (T3-3#13).

Although hunting does not target the specific problem animals, it was seen as a way to solve a lot of the problems livestock owners have with predators (T3-3#14, T3-3#15, T3-3#16, T3-3#17). These individuals see hunting as a tool that deals with several issues people have with living with predators including: human safety concerns, keeping predators wary of humans, and eliminating problem animals. Kevin, for example, uses the grizzly bear for an example when he discusses how hunting would solve many problems, "For the grizzly if you pick areas and put one permit in each area, I'm willing to bet 80% of the time you are going to take the problem animal. Because he's down, he's the one causing the problem, he's down low. The rest of them are up away because they don't want to be around humans. The problem ones are getting used to humans, so they are the ones that are more likely the one[s] to [be taken]. Yes, [hunting] would solve a lot of problems" (T3-3#17). Hunting would not only help control the population (T3-3#2, T3-3#21) but there is the sense that it would also help reduce conflicts by keeping predators more 'wild' and wary of people (T3-3#7, T3-3#14). Many also see the benefit of having either a hunting season, or a controlled hunt of problem animals in that it could bring in a lot of money that could be used for a compensation program (T3-3#18, T3-3#19).

The support by livestock owners for lethal control measures should not be equated with a desire to eliminate all predators. While some may hold this view, many of the interviewees are not advocating elimination of predators. Instead their focus is on dealing with the problem animals (T3-3#3, T3-3#4, T3-3#5, T3-3#16, T3-3#20, T3-3#21). Several of them even realize

that if hunting were to occur on certain species, such as the grizzly bear, it would have to be closely monitored so that the bear would not end back up on the endangered species list (T3-3#20).

As the survey results indicated, relocation is seen as undesirable. Many of the livestock owners interviewed expressed the view that relocation was not a solution to the problem, but instead it just moved the problem somewhere else (T3-4#2, T3-4#3, T3-4#4, T3-4#5, T3-4#6). Why give someone else the problem to deal with, was a sentiment expressed by many. In addition, some believe the same problem animal will return, thus not creating a permanent solution. However, relocation is seen as useful by a few, especially when used in conjunction with compensation and control. In fact, one respondent described compensation as a means of making trapping and relocation (especially during the period of time before a problem animal could be trapped) more "palatable" (T3-4#1).

Preventive measures are another tool that can be used in dealing with livestock losses (Table 3-5). As indicated by a number of the excerpts in Table 3-5, many of the livestock owners interviewed are taking preventive steps such as changing calving times, using guard animals, burying carcasses, spending more time in the range and have more aggressive livestock (T3-5#2, T3-5#3, T3-5#7, T3-5#10, T3-5#16, T3-5#17). So for many livestock owners, practicing prevention is normal since they want to reduce and avoid conflicts when possible (T3-5#6). However, a few interviewees did express the belief that if you have to go through all those preventive measures, then perhaps it is not worth being in the livestock business (T3-5#1). This is a view that may be linked to the sentiment raised earlier that compensation conflicts with the goal of raising livestock for people rather than for predators. But even among those who viewed preventive measures as a normal practice, the perceived limitations of such approaches including there is too much cost involved (T3-5#14, T3-5#20), it's unrealistic to do (T3-5#19), or the simple fact that there isn't time (T3-5#2) were oftentimes emphasized. And there is a belief that there is only so much a person can do and though you can try things, they don't always work (T3-5#8, T3-5#13). It gets more complicated as well, when there are multiple predators in the area because one technique will not work for all of them (T3-5#4, T3-5#5). One strategy that got support was being informed of where problem animals were so that livestock owners could keep a better eye on livestock and possibly move them out of that area (T3-5#9, T3-5#12, T3-5#15). This, however, requires trust and communication between the livestock owners and agency personnel, a topic that will be discussed in Chapter 5.

Summary – Descriptive Analysis of Desirability of Compensation

In summary, a program compensating for predator losses/damage was widely seen as a desirable management alternative in both the livestock owner survey sample and the general public survey sample across all three states. In fact, in the livestock owner survey sample, over 60% of respondents indicated that compensation was highly desirable. Compensation was the most widely endorsed of the management alternatives employing financial incentives. However, in all samples, giving livestock owners the right to kill predators attacking livestock and hunting by the public both received more widespread endorsement. And among the general public sample, monitoring programs also received more widespread support than compensation.

The interviews shed more light on the discussion of desirability of compensation and the complexities involved in thinking about the issue of compensation. As with the surveys, there was support for compensation by many of the interviewees. The interviews reflect that there is

especially support or desirability for compensation if the predator has been reintroduced, allowed to increase in population or control measures are restricted due to status (such as endangered species). Even though there is widespread support for compensation, this support comes with qualifications. It is a cautious endorsement, one in which many of the livestock owners believe compensation helps, but it is not, by itself, an adequate solution. Although there was widespread support for compensation, that does not mean that the interviewees did not also see the need for other management techniques, such as control and hunting. In addition, those interviewees that did not support compensation clearly preferred other management options. Control issues, meaning either giving livestock owners the ability to kill problem animals and having hunting seasons, was one of the most discussed issues in the interviews. Issues of control are seen by many of the interviewees, both those that do and do not find compensation desirable, as preferable solutions because it is a way of actually solving the problem by removing the offending animal.

Beliefs About the Role of Compensation in Society

This section explores respondents' beliefs about issues related to the role that compensation, predators, and ranching play in society that may be related to their willingness to endorse the concept of compensation. This section of the report provides a descriptive analysis that characterizes respondents' opinions and views on these issues. The following chapter presents an analysis exploring the extent to which differences in opinions on these issues (and other factors) actually are related to differences in support for predator compensation programs.

Beliefs Related to the Positive Social Consequences of Compensation

One set of questions in the survey sought to obtain respondents' opinions about issues that might lead someone to either support predator compensation programs or to see such programs in a positive light (Figure 3-2). The first question explored whether respondents viewed predation as a normal cost of business and therefore something that should not be compensated. The vast majority (>80%) of the randomly livestock owning respondents in the 12 communities sampled disagreed with this perspective. Among the general public sample, a majority of respondents (55-63% depending on the state) also disagreed with this perspective. However, the difference between the two samples was statistically significant ($\chi^2 = 144.292$, $p < 0.001$). Analysis of the standardized residuals indicates that livestock owners were more likely to strongly disagree with this perspective; 2/3 of the livestock owners strongly disagreed while only 1/3 of the general public survey respondents strongly disagreed. The general public was more likely than expected in all the other responses categories (mildly agree, neutral, mildly disagree, strongly disagree). In other words, the analysis indicates that the general population sample differs from the sample population of livestock owners in that they are less likely to strongly disagree that predator losses are a cost of doing business that should not be compensated and more likely to show any other of the other views. However, across all three states combined, only 25% of the respondents in the general public sample held the view (either strongly or moderately) that predator losses were a cost of doing business and should not be compensated while 59% held the opposite view. Also worth noting here is the fact that the question did not specify whether the predator was endangered or not endangered. Analyses presented later (the section below on whether it is acceptable for state or federal agencies to run a predator compensation program and the analysis presented in the following chapter) suggest

that this distinction makes a difference in how people perceive the appropriateness of predator compensation programs.

While the responses to this question suggest the majority of people would be willing to consider compensation as a means of addressing livestock predation (since they do not consider it a normal cost of doing business), it is also worth noting that the majority of respondents were also supportive of granting livestock owners greater latitude in dealing with problem predators as shown in the desirability of management alternatives results from the preceding section. Even in the general public sample, the majority of respondents (71-77%) indicated that this was a desirable option and the trend was for slightly more widespread endorsement of this alternative compared to compensation.

A second question explored a related issue, the extent to which respondents believed that compensation is a means of spreading the costs of predator conservation more fairly in society (Figure 3-2). Among the sample of livestock owners, a slight majority (51-54%) of respondents in the Idaho and Montana communities agreed with this belief while in Wyoming, a plurality (49%) agreed with the statement. Among the general public sample, a plurality (38-50%) agreed with this view. However in Idaho, the proportion expressing a neutral opinion (36%) approached the proportion agreeing with this belief (38%). Although the differences between the two samples was statistically significant ($\chi^2 = 36.178$, $p < 0.001$), analysis of the standardized residuals suggests that the observed difference was due primarily to the higher proportion of the livestock owner sample and lower proportion of the general public sample ***strongly*** agreeing with this statement. Agreeing with this statement clearly provides an indication that a respondent believes that a predator compensation program achieves a more fair distribution of costs. However, a "disagree" response is more difficult to interpret as it may suggest one of several possibilities. One is that the respondent is disagreeing with the premise underlying the question (that is, it is more fair to distribute the costs of predator conservation through compensation than to leave the burden on livestock owners). Alternatively, disagreeing with this sentiment may reflect a belief that compensation programs do not, in the end, achieve this goal (that is, compensation programs do not, in the end, achieve a more equitable distribution of costs). Never-the-less the results do suggest that at least a plurality of respondents do interpret compensation as a means of more fairly distributing the costs of predator conservation. This finding is consistent with the results from the interviews discussed above from Table 3-1 in which livestock owning respondents characterizing compensation as desirable often linked such programs to the idea of who should bear the responsibility for costs of reintroduced predators when livestock owners' ability to deal with the problem is restricted. Also worth noting here is that the analyses in the following chapter indicate that differences in opinion on this issue are consistently related to differences in extent to which compensation programs are endorsed.

A third question explored the extent to which respondents believed that broader societal benefits accrued from ranching. Although the specific question people were responding to did not mention compensation, the instructions preceding the question did direct the respondents to frame their thoughts in the context of compensation by presenting this and other statements in this section of the survey as "reasons why people support or oppose compensation" (see Appendix). Consistently across the livestock owner sample, approximately 80% of the respondents agreed that ranching produces broader societal benefits while approximately 63% of the general public sample agreed (Figure 3-2). In fact, among the general public sample, 68% of the respondents who rated compensation as a desirable management program agreed that

ranching produces societal benefits (compared to only 52% agreement among respondents in the general public sample who were neutral or rated compensation as an undesirable management alternative, $\chi^2 = 23.503$, $p < 0.001$). Thus, the majority of respondents do feel that ranching produces societal benefits and the results suggest there is a relationship between that view and seeing compensation as a desirable management alternative.

Also explored in this section on beliefs about the concept of compensation are views about whether compensation influences a person's tolerance for predators. Due to possible differences in perceptions based on the specific predator in question, this question was asked on a species specific basis. Specifically, respondents were asked if tolerance for a predator "would decrease if predator compensation programs were no longer available." Although somewhat more complicated than asking if compensation increases tolerance, in terms of policy analysis, responses to the "negative" question are a more meaningful measure of whether compensation programs have an impact. Among livestock owners in the four Idaho and four Montana communities, 52% of the respondents indicated that their tolerance for wolves would decrease in the absence of a compensation program, while 63% of livestock owners in the Wyoming communities agreed with the statement (Figure 3-2). Among the general public sample, the proportion disagreeing that tolerance for wolves would decrease in the absence of compensation exceeded those agreeing with the statement (38-42% versus 30-33%, respectively). With respect to grizzly bears, 45% of the livestock owner survey respondents in the four Montana communities, 53% of respondents in the four Idaho communities, and 62% of respondents in the four Wyoming communities indicated that their tolerance would decrease if compensation programs were not available. Among the general public sample, the proportions disagreeing/agreeing with the statement were quite similar to the pattern seen in regard to wolves (39-43% indicated tolerance would not decrease versus 29-31% agreeing that it would). Finally, with respect to mountain lions, while at least a plurality of livestock owners indicated their tolerance would decrease without a compensation program (40-52%), in each state, this was lower than the percentage agreeing with regard to wolves and grizzly bears. In addition, the intensity with which respondents agreed with this statement (strongly versus mildly) was also lower. For example, in the case of wolves, 41-53% strongly agreed that tolerance would decrease while in the case of mountain lions only 28-38% strongly agreed. Within the general public sample, the pattern for mountain lions was quite similar to the previous two species, 40-42% indicated tolerance would not be impacted by the absence of the program while 27-28% indicated it would.

With respect to the question of tolerance for predators in relation to a compensation program, in all three states somewhere between one quarter and one-third of the general public sample felt tolerance would decrease. However, a somewhat larger percentage of the general public indicated that compensation programs did not influence their tolerance (that is that tolerance would not decrease in the absence of compensation) than indicated it did. Differences across the three species were not notable. In contrast, species did make something of difference among livestock owners. With respect to wolves, over half the respondents indicated tolerance would decrease without a compensation program. The proportion was lower with respect to mountain lions although a plurality agreed tolerance would decrease for this species in the absence of compensation. Perceptions about grizzly bears were more like those for wolves in Idaho and Wyoming, but more like perceptions for mountain lions in Montana. Interestingly, among livestock owners, Wyoming respondents consistently showed more widespread

agreement that compensation impacted tolerance. This pattern was not evident among the general public sample.

The interviews reveal greater depth of insight into livestock owners' views about whether predator losses area normal cost of doing business (Table 3-6). There was a tendency for interviewees to express the view that losing a few livestock to predators as part of the normal course of business, it is expected, but at some point chronic losses may indicate a problem above and beyond a normal cost of doing business (T3-6#1, T3-6#2, T3-6#3, T3-6#4, T3-6#5). Many also feel that they are responsible for the losses because if you are losing too many then you are not managing your problems, but when livestock owners ability to manage predator problems on their own, predation obviously becomes problematic for a livestock owner (T3-6#1). Livestock owners expect some losses, but when they're not able to take care of the problem, or if the losses are too great, then it is no longer considered a cost of doing business. In addition, for a few of the livestock owners the question of predation is not framed simply as a cost of doing business, rather it is a question of loss of livelihood (T3-6#6, T3-6#7). These losses are a real threat to their livelihood, and Jerry wonders (as did several other interviewees) how would other people react if their livelihood was being threatened, would they consider it just a cost of doing business (T3-6#7)?

Several of the livestock owners also agreed with the belief that societal benefits accrue from ranching (Table 3-7). Many see ranchers as "stewards of the land" (T3-7#2) or "true ecologists" (T3-7#3) who provide food and habitat for wildlife (T3-7#1, T3-7#3, T3-7#4). These interviewees characterized rancher's role of benefiting wildlife as an important contribution to a society that values that wildlife; a role for which the interviewees would like to see greater public awareness (T3-7#1, T3-7#3). Additionally ranchers are seen as producing important societal benefits beyond wildlife such as open space and the resources that feed a nation (T3-7#5, T3-7#6, T3-7#7). Among these respondents, compensation then is seen as justifiable as a societal means of sharing costs for the benefits ranching provides (T3-7#4).

However, other interviews expressed frustration at the idea of supporting predators through livestock losses characterizing it as counter to goals of ranching (T3-7#7, T3-7#8). And as previously indicated through excerpts in Table 3-1, sentiment among some livestock owners interviewed was that compensation is justifiable for predators in particular because presence of predators is seen as reflecting values imposed by outsiders. This viewpoint is further elaborated in Table 3-8. Many of the livestock owners interviewed believe that since the general public wants these predators that they should be the ones to share the cost (T3-8#1, T3-8#2, T3-8#3, T3-8#4, T3-8#5). Derek captures the sentiment well when he said, "If somebody back in California or New York City wants to have a wolf in my backyard, they have to share the responsibility. They get to help pay for it, their tax dollars get to help pay for it." Because so many of the interviewees discussed how they were not the ones that wanted these predators (seen in Tables 3-1 and 3-2) they see compensation as a way to spread the cost of living with predators to those people that want them, but do not have to deal with the conflicts.

The survey results indicated that for a majority of the livestock owner sample tolerance for wolves and bears would decrease if compensation was not available. The interview results provider greater depth of understanding regarding livestock owners' views with regard to the question of compensation in relation to tolerance (Table 3-9). Compensation was seen by many interviewees as having a positive impact – but it was more typically described in terms of making losses (rather than the predators themselves) more acceptable (T3-9#1, T3-9#2). And as

already discussed in regard to Table 3-3, it was common for respondents to express the view that compensation helps address problems arising from predation on livestock but that compensation by itself should not seen as of being capable of fully solving the problem (T3-9#3, T3-9#4, T3-9#5, T3-9#6). Some respondents did indicate that compensation would lessen the desire to use lethal control in response to predators in recognition that most predators are not problems (T3-9#7), but there was a greater tendency to express the view that lethal responses to dealing with predators was preferable to compensation (T3-9#8, T3-9#9, T3-9#10 see also Table 3-3).

Table 3-3 and Table 3-4 yield insights into why this perception exists that compensation (and relocation) are not seen as solving the actual cause of the problem. The discussion on desirability of management alternatives presented earlier (Table 3-1) suggested than even among interviewees finding compensation as desirable, that support was a qualified endorsement in the sense that compensation was not seen as the sole answer. The same could be said about compensation as a tool for maintaining tolerance towards these predators. As a number of the excerpts in Table 3-9 indicate, compensation does help, but it is seen as only part of the solution. The survey results indicated that 72-80% of livestock owners were "willing to give up compensation in exchange for greater freedom to kill predators on my own". But this was a 'forced choice'. The interviews provided respondents greater flexibility in how they could respond to this issue. The excerpts in Table 3-9 suggest that the survey question posed something of an artificial choice for many respondents. Seeing other management tools as more desirable does not mean that an individual does not see compensation playing an important role. However, the data does seem to suggest that there is a tendency among livestock owners to value compensation as a means of dealing with the more fairly distributing the costs of predation but not as a solution to the problem of predation. Finally, as in the survey, some interview respondents did express the view that compensation would not increase tolerance. These individuals often tended to see too many gray areas for compensation to work effectively such as what should and should not get compensated, what variables do you measure to include in value determination, as reasons to be cautious in their endorsement (T3-9#11).

Beliefs Related to Concerns Not Addressed by Compensation

In addition to looking at beliefs that might lead respondents to see compensation in a positive light, the survey also included a series of questions that explored either the extent to which respondents were concerned about predator related issues that compensation does not address (for example, the impact of predators on elk and deer populations) or the extent of skepticism about the feasibility of compensation (for example, would there be enough money to pay for compensation) since these issues are often raised by various parties expressing concerns about compensation.

The first potential issue of concern that compensation does not address is the impact of predators on elk and deer populations. Within the livestock owner sample, there was widespread agreement (86% in Idaho communities, 67% in Montana communities, 78% in Wyoming communities) that the effect of predators on elk and deer populations was a major concern and not addressed by compensation (Figure 3-3). Agreement was somewhat less widespread in the general public sample, but still reflected a majority or near majority in each state (58% in Idaho, 50% in Montana, 50% in Wyoming).

This concern over reduced game numbers is also reflected in the interviews (Table T3-10). Many of the interviewees think that the predators are impacting deer and elk populations

(T3-10#1, #3, #4, #5, #6, #7). Some interviewees contended that it is not the predators, but the loss of habitat that is causing decreased numbers of game (T3-10#2). However, predominately, interviewees believe that predators are decreasing the number of game and it is affecting the hunting situation (T3-10#4, T3-10#6).

A second concern about predators that compensation programs could not address is the sentiment that residents simply do not want predators in the area. This sentiment was also widespread (Figure 3-3). Among the livestock owner sample 78-80% of Idaho and Wyoming community respondents agreed with this statement while 61% of Montana community respondents agreed. Among the general public, a definite plurality of Idaho (48% agree, 35% disagree) and Montana (46% agree, 33% disagree) respondents agreed while in Wyoming the proportion agreeing and disagreeing were similar (38% agree, 36% disagree).

A third issue not addressed by compensation explored in the survey was concerns related to human safety. A majority of livestock owners agreed that human safety issues were also a real concern that was not addressed by compensation (76% in Idaho communities, 62% in Montana communities, 67% in Wyoming communities). Within the general public sample, a majority of Idaho (59%) and Montana (53%) residents agreed with the statement while a plurality of Wyoming residents agreed (46%).

Human safety concerns were also brought up by many of the interviewees either voluntarily or in response to questions about what it was like to live in an area with predators (Table 3-11). Table 3-11 illustrates the nature of the safety concerns expressed by respondents for whom safety was an issue. First, as might be expected, the species of predator in question did influence the degree of concern. Concern about the possibility of grizzly bear attacks and possible loss of life was widespread (T3-11#2, #3, #4, #5, #6, #7, #8, #10, #11, #12, #16). Interviewees expressed this concern through discourse that centered on how the grizzly bear could hurt you or even kill you, such as one interviewee that stated, “God knows we don’t need no grizzly bears. They will eat people” (T3-11#7). In contrast, many of the interviewees did not have the same human safety concerns for wolves that they did for grizzly bears (T3-11#3, #5, #8). They did not worry so much about wolves attacking them except under unusual circumstances, and they clearly indicate that grizzly bears are “a whole different deal” or “a different animal” with respect to the question of safety (T3-11#5, T2-11#8). However, some interviewees do have safety concerns over potential human-wolf interactions, especially if the wolf population continues to increase (T3-11#1, #13, #14). There was also a tendency to see mountain lions as a definite human safety concern in areas where they occurred (T3-11#15, T3-11#16).

These safety concerns stemming from living and working in areas with large predators (especially grizzly bears) has impacted how some of the interviewees conduct their business and lives (T3-11#3, #10, #12, #15). This includes having bear dogs for protection (T3-11#3), not allowing children play in creek bottoms (T3-11#10), not taking your family and camping in bear areas (T3-11#12), and for one interviewee changing the time of day when he checks his traplines (T3-11#15). One outfitter believed that safety concerns are impacting his business because some clients feel “their lives are in jeopardy” in areas with grizzly bears (T3-11#11). Similarly, some interviewees also indicated that they no longer feel as safe and do have worries about recreating in areas where grizzly bear populations have recently expanded (T3-11#6, T3-11#10). However, with respect to grizzly bears, other interviewees who grew up in areas with a grizzly population indicated that they had always recognized the responsibility that individuals should take when

they are out in bear country. For example, one individual concluded that today people are almost "lackadaisical", "don't think there is anything out there that can hurt them", and are used to having someone else take responsibility for their safety which is "not very good when you are living in area[s] with grizzly bears" (T3-11#9).

A fourth possible issue of concern not addressed by compensation that was examined in the survey were respondents' views about how financially viable they thought compensation programs would be. Within the general public sample, the majority (57-64%) indicated they believed that there would never be enough money to compensate for all the losses once predator populations were well established (Figure 3-3). Among livestock owners, this opinion was even more widespread, the vast majority (76-81%) believed that there would never be enough money to compensate for all the losses once predator populations were well established (Figure 3-3). In fact, the majority (57-63%) strongly believed this to be true. Additionally, the livestock owner survey also asked respondents if they were confident they would be compensated if they suffered a predator loss. Consistently approximately 60% of the respondents indicated that they were not confident they would be compensated while only 15-20% felt confident they would receive compensation in the event of a loss. However, it should be noted that this question may also reflect views towards the verification process as well.

Finally a question in the mail survey asked respondents about their views regarding predator compensation programs funded by environmental groups. An opinion sometimes voiced in editorials criticizing compensation programs is that programs run by environmental groups are merely publicity stunts rather than a sincere attempt to address the real issues associated with predation. Therefore, the survey assessed respondents' opinions regarding this view. Among the livestock owner sample, respondents widely agreed (80-87% depending on the state) that compensation programs by environmental groups are "publicity stunts that do not address the real issue." A chi-square analysis indicated a statistically significant difference between the two samples with respect to opinions on this issue. Respondents in the livestock owner sample were more likely than expected to strongly agree and the respondents in the general public more likely to be neutral or disagree. However, overall the majority of respondents in the general public sample (55-63%) still agreed with this perspective. Interestingly, a later question asked respondents how desirable it would be to have a compensation program run by Defenders of Wildlife. A majority of respondents in both the livestock owner sample (58%) and the general public sample (55%) indicated that they viewed this as desirable. Results were almost identical when the same question was asked in respect to the Nature Conservancy. The apparent discrepancy in response to this question relative to the widespread skepticism when asked about whether compensation programs by environmental groups is simply a publicity stunt may reflect a number of different issues. For example, in not identifying a specific environmental group, respondents may have been expressing their view of "environmental groups in general" rather than an opinion about an actual, existing program. Another possibility is that while, ideally, respondents find a privately run program desirable, currently a great deal of skepticism exists about the real motivations of environmental groups as currently understood by respondents to the survey.

In relation to the topic of issues not addressed by compensation, a theme not specifically explored in the survey emerged as a significant issue in the interviews (Table 3-12). Emerging from the interviews was a discourse in which many of the interviewees expressed the belief that current system of predator management of these does not allow them the ability to take care of

problem predators and protect their livestock and that this equates to a loss of private property rights (T3-12#1, #2, #3, #4, #5, #6, #7, #8, #9, #10, #11, #13, #15, #16, #17, #18). Overall these excerpts clearly communicate the idea that "people don't like their private property rights stepped on" (T3-12#4). Many of the interviewees believe that private property rights are important and that they should have "every right in the world to protect my personal property" (T3-12#3). In discussing this issue many interviewees emphasize that they are only advocating the ability to control those problem animals that are actually causing damage (T3-12#3, #4, #9, #10, #11, #13, #15, #16, #17), and not all bears and wolves. However, they do recognize that "there is a fine line" and that some individuals would "take advantage" of the situation by trying "to shoot every [predator] they see" (T3-12#4, T3-12#9). But the predominant perspective reflected in these excerpts is that the loss of private property rights is a greater of the two harms.

Many of the interviewees discussed private property rights in relation to both private and public land situations. Many viewed livestock as their property, and believed they should be able to protect them on both public and private land (T3-12#4, #18 are explicit). However, there do exist those people who see their public land lease areas differently from private land and feel as though different expectations about the ability to respond to predators apply in the two situations (T3-12#3).

Summary – Descriptive Analysis of Beliefs about the Role of Compensation in Society

Overall with respect to beliefs that might predispose people to be supportive of compensation then, the majority of livestock owners and the general public believe that general societal benefits accrue from ranching and disagreed that predation should be considered a normal cost of business and therefore not compensated. When asked more directly about the possible positive consequences of compensation programs approximately half of respondents in the livestock owner sample agreed that it spread costs of compensation programs more fairly throughout society. Less than half of the general public sample held this view, however more respondents agreed with this belief than disagreed. A majority of the livestock owner sample indicated their tolerance for wolves and grizzly bears would decrease if compensation programs were not available; however, among the general public a greater percentage indicated that tolerance would not decrease in the absence of compensation. In other words, the majorities in both samples hold opinions about ranching and predation which might help make compensation programs a viable option and at least a plurality saw compensation as a means of more equitably distributing costs of predator conservation. However livestock owners were far more likely (55% overall for wolves) than the general public (32% overall for wolves) to indicate tolerance for predators was linked to compensation.

The interviews lend greater depth of insight into beliefs about the role of compensation in society. Although several livestock owners expect some losses, when they are unable to control or manage the problem, or the losses are too great, then it is no longer considered a cost of doing business. As with the survey, many of the livestock owners agreed with the belief that societal benefits accrue from ranching, with many seeing ranchers as "stewards of the land." These respondents characterized the rancher's role of benefiting wildlife as an important contribution to a society that values that wildlife, and compensation is then seen as justifiable as a societal means of sharing costs for the benefits ranching provides. While compensation was seen by many interviewees as having a positive impact, it was more typically described in terms of making losses, rather than the predators themselves, more acceptable. The interviews suggest

that there is a tendency among livestock owners to value compensation as a means of dealing with more fair distribution of the costs associated with predation, but not as a solution to the problem of predation.

With respect to issues not addressed by compensation (impacts to elk/deer, human safety, simply not wanting predators in the area, private property rights) survey and interview results indicated there was widespread concern. Concern about these types of issues does not necessarily mean that compensation would not be desirable to these respondents (an issue explored in the analyses presented in the next chapter). However, these findings do indicate that the public has additional concerns about predators not addressed by compensation. Somewhat more directly linked to the question of the social viability of compensation (that is the extent to which a compensation program would be endorsed by the public) are: (1) the widespread skepticism in both samples about whether there would be enough money in such programs to cover losses once predator populations are well established, (2) skepticism among livestock owners about whether they would be compensated if they did experience a loss, (3) the widespread view that programs run by environmental groups are simply publicity stunts (in spite of the fact that respondents widely believed that having compensation programs run by environmental groups would be desirable), (4) the widespread concern over human safety when living and working in areas with predators, especially the grizzly bear, and (5) the widespread belief by many of the livestock owner interviewees that the current system of predator management does not allow them the ability to take care of problem predators and protect their livestock and that this equates to a loss of private property rights.

Views About Who Should Administer/Fund Compensation Programs

This section explores respondents' views about what type of social institutions (federal government, state government, private groups) should be responsible for administering and funding compensation programs. The question of administration will be explored first. Prior to survey construction, initial analysis of interviews from three communities suggested that it was important not only to explore the public's views about whether compensation was a federal versus state responsibility but also that it was important to distinguish between different situational contexts in which compensation might occur (for example, whether the predator was endangered versus not endangered). Four different situational contexts were explored: predators that are reintroduced, situations in which livestock owners' ability to harass/kill predators is restricted, predators that are endangered, and predators that are not endangered.

Program Administration - Montana Respondents

In Montana, a majority of respondents (62-63% in the livestock owner sample respondents and 54-56% in the general public sample) believed that federal administration of a compensation program was acceptable when predators had been reintroduced, where the predator was endangered and livestock owners' ability to harass/kill was restricted, and where the predator was endangered (Figure 3-4). In contrast, for predators that were not endangered, more respondents (48% in the livestock owner sample, 56% in the general public sample) indicated that a federally administered program would be unacceptable than indicated it would be acceptable (41% and 27%, respectively).

With respect to the acceptability of a state administered program: 55-57% of the livestock owner sample and 51-52% of the general public sample supported a state administered

program when predators have been reintroduced, where livestock owners ability to harass/kill was restricted, and where the predator was endangered. In situations where the predator is not endangered, the proportion finding state run programs acceptable or unacceptable was approximately equal (43% versus 44%, respectively) in the livestock owner sample. However, among the general public, the percentage of finding a state run program for nonendangered predators unacceptable (51%) exceeded the proportion indicating it was acceptable (31%).

Program Administration - Wyoming Respondents

In Wyoming, a majority of respondents (66-69% in the livestock owner sample and 54-61% in the general public sample) believed that federal administration of a compensation program was acceptable when predators had been reintroduced, where the species was endangered and livestock owner's ability to harass/kill was restricted, and where the predator was endangered (Figure 3-4). For species that were not endangered, a larger proportion of livestock owners found a federal program acceptable than found it unacceptable (49% versus 42%). In contrast, among the general public sample 51% indicated a federally administered program would be unacceptable in this situation while only 33% indicated it would be acceptable.

The pattern for a state run program was somewhat different. Within the livestock owner sample, a slight majority (51-56%) indicated a state run compensation program was acceptable no matter what the context. However, among the general public the pattern was different. A slight majority (50-52%) of respondents found a state compensation program acceptable when there were restrictions on livestock owners ability to harass/kill predators or when the predator was endangered and a plurality (45% acceptable, 39% unacceptable) found a state program acceptable when predators had been reintroduced. However, when the predator was not endangered a larger percentage of the general public sample respondents indicated a state run program would be unacceptable (47%) than indicated it would be acceptable (35%).

Program Administration – Idaho Respondents

With respect to the acceptability of a federally administered compensation program, Idaho was similar to Montana and Wyoming (Figure 3-4). A majority (60-64%) of the livestock owner respondents indicated a federally administered compensation program would be acceptable for all situations except for when the predator was not endangered. Only 39% indicated a federal program was acceptable in the latter situation whereas 51% indicated it would be unacceptable. The general public sample demonstrated a similar pattern. A slight majority (51%) indicated that a federal program would be acceptable for endangered predators and where there were restrictions on killing/harassing predators while a plurality (46% acceptable versus 38% unacceptable) indicated that a federal program would be acceptable for reintroduced species. However, the majority (54%) responded that a federal compensation program would be unacceptable for nonendangered predators.

With respect to the acceptability of state run programs, Idaho presents a somewhat more complicated picture due to the fact that, compared to other communities, livestock owners from the Challis area expressed a significantly different perspective on the acceptability of state run compensation programs for all contexts except when predators were not endangered (Figure 3-4). For predators that were not endangered, 50% of the respondents to the livestock owner sample indicated that a state administered compensation program was not acceptable and only

37% considered a state administered compensation program acceptable. In the case of other contexts a slight majority (53-55%) or a plurality (48%) in all communities except Challis indicated a state run compensation program would be acceptable. However, in Challis a majority of respondents (65-69%) indicated a state run program would be unacceptable in all three of the contexts. Within the general public sample, respondents were fairly evenly divided with respect to reintroduced species (43% acceptable versus 40% unacceptable). Differences were greater when the predator was described as endangered (48% acceptable versus 37% unacceptable), when there were restrictions on livestock owners ability to kill or harass (48% acceptable, 41% unacceptable), or when the predator was not endangered (30% acceptable versus 54% unacceptable).

Opinions on Appropriateness of Different Sources for Funding Compensation Programs.

Another set of questions in the survey explored respondents' views about the appropriateness of different sources for funding compensation programs (Figure 3-5). Despite the widespread opinion that compensation programs by environmental groups are publicity stunts, the vast majority (>70%) of respondents in all states and both samples believed that environmental groups were an appropriate source for funding. However, no other potential funding mechanism received such widespread endorsement. A federal tax was seen as an appropriate source of funding by a slight majority (51%) respondents in the livestock owner samples in Montana and Wyoming. However, 50% of Idaho livestock owners indicated this was inappropriate and, except in Wyoming, a greater percentage of respondents in the general public sample indicated that a federal tax was inappropriate (47-50%) than indicated this funding source was appropriate (37-38%). In both the livestock owner and public samples in Montana and Wyoming, slight majorities or at least a plurality of respondents indicated that a tax associated with tourists would be an appropriate basis for funding compensation programs, but in Idaho the plurality was in the other direction (a larger percentage indicated a tax placed on tourists would be inappropriate). Hunting fees were viewed as an appropriate source of funding by 50% of respondents to the Montana general public sample and by a slight plurality (48%) in the Wyoming general public sample. However, a majority of respondents in both the Idaho general public sample and in the livestock owner samples for all three states indicated that hunting fees were inappropriate as a basis for funding compensation. A majority of respondents to the livestock owner sample (>79%) and a plurality among the general public sample (43-50%) indicated private insurance was an inappropriate funding source (although in Wyoming the difference in percentage of appropriate/inappropriate was not great – 43 versus 41%, respectively). A majority of respondents in both samples (≥ 58%) indicated state taxes were not an appropriate funding source while a tax on livestock similarly was more widely (>55%) seen as an inappropriate funding source also.

Interview Results

The interviews with livestock owners explored respondents' views about various social institutions (federal government, state government, private groups) in relationship to the administration and funding of compensation programs in a less directive way than the survey. In other words, rather than having to respond to a predetermined set of narrowly focused questions about particular roles of each institution, the interviews allowed respondents the freedom to define how they viewed specific institutions in relation to compensation programs. During the

interviews respondents did tend to focus on a different set of issues depending on the particular institution being considered.

The most prevalent theme among those advocating federal government involvement in compensation was an underlying view that the very presence of wolves was a consequence of federal action ("the federal government put these animals here") (T3-13#1, T3-13#2, T3-13#3, T3-13#4, T3-13#5). Thus, among many of those calling for federal involvement in compensation, the rationale was that the "federal government's" choice to pursue wolf reintroduction carried an obligation for them to cover the costs (including compensation) wolf management imposed on the states and private citizens. Some respondents advocating a role for the federal government viewed the presence of wolves, not so much as a consequence of an action by the federal government, but rather more as a reflection of values held by the broader public (T3-13#6, T3-13#7). However, even from this perspective, the cost of management, including compensation, was viewed as being a responsibility of the broader public.

When state government became the focal point of discussions about predator compensation programs, the discussion among those advocating a governmental role in compensation shifted from a theme of governmental responsibility for funding (which was the focus of those advocating federal involvement) to a theme of effectiveness in administration. In general, the state was seen as a more desirable institution to interact with in an administrative sense because of issues such as accessibility, the ability to adapt to and incorporate changes, and other issues related to effectiveness in administration (T3-14#1, T3-14#2, T3-14#3). Other advocates of state government having a role in the administration of compensation programs made the case that the state would be more desirable than the existing situation in which compensation programs are run by private environmental groups. Some advocates of state run programs expressed greater confidence in the motivations and intentions of state government compared to private environmental groups (T3-14#4, T3-14#5, T3-14#6, T3-15#7). One advocate of state government administration was so concerned about giving private or federal institutions a toehold into state affairs he advocated state funding to prevent this situation (T3-14#7), but respondents were more likely to discuss only an administrative role for the state or to suggest a dual role where the state monitors and administers while other institutions are responsible for funding (T3-14#8).

When private programs became the focal point of discussions about predator compensation, among those advocating a role for private institutions, the theme of funding appears as a prevalent rationale again. For example, Mark (T3-15#1) initially begins by suggesting that the government should pay the costs of predator conservation incurred by private livestock owners because it was the public who wanted wolves. But then he realizes that not all the public was in favor of wolves and shifts to environmental groups as the appropriate source of funding for that reason. In his view, funding through private donations provides a mechanism whereby only by those who wanted wolves need pay the costs; a situation seen as desirable by other respondents advocating a role for privately run compensation programs (T3-15#2, T3-15#3, T3-15#4, T3-15#5). In fact, some respondents suggested that an additional benefit of privately funded programs was that such programs were a means of increasing the credibility of wolf advocates because it is "putting your money where your mouth is" (T3-16#4) and even creates an opportunity for bringing different sides together (T3-16#5). Though a concern among some respondents was that separating funding of programs like compensation from management through initiatives like privately funded compensation programs may result in simply

perpetuating the real problem (T3-15#5). Finally, some advocates of privately run compensation programs referred to concerns about the inefficiency of government bureaucracy and either the hope that privately run programs could help address that (T3-15#4, T3-15#6, T3-15#7) or more pessimistically that at least if privately funded programs were used, the costs would only be borne by those who wanted wolves (T3-15#3).

Summary – Descriptive Analysis of Who Should Administer/Fund Compensation Programs

Regarding the question of whether federal and/or state government administration of a predator compensation program is acceptable, some clear patterns emerge from the surveys. Across both the livestock owner surveys and the general public surveys, a majority of respondents found a federally administered program acceptable when the predator is endangered, reintroduced, or there are restrictions on livestock owners' ability to harass/kill predators that attack livestock. However, when the predator is not endangered (and presumably has been continually present and there are no "added" restrictions on livestock owners' ability to respond to predators), a larger percentage of respondents in both survey samples believed that a federal compensation program was inappropriate than considered such a program appropriate.

Opinions with respect to the acceptability of a state run compensation program showed a similar pattern with respect to situations where the predator is endangered, reintroduced, or there are restrictions on livestock owners' ability to harass/kill predators that attack livestock. However there was a trend toward a slightly smaller percentage of respondents finding a state run program acceptable compared to a federal program. A major exception in the livestock owner survey was livestock owners in the vicinity of Challis, the majority of whom found a state run program unacceptable in these circumstances. In general, when the species was not endangered (and presumably has been continually present and there are no "added" restrictions on livestock owners' ability to respond to predators) a larger percentage of respondents expressed the view that a state run program in this circumstance was unacceptable. The major exception was in the case of Wyoming respondents to the livestock owner survey where a majority felt a state run program in this circumstance was acceptable.

Funding provides a more complicated picture. There was widespread agreement that funding via environmental groups was appropriate despite the skepticism revealed in the preceding section about the motivations behind such programs. Overall, funding via sources directly linked to livestock owners (tax per head of livestock, private insurance) were seen as inappropriate by a larger percentage than those finding such funding appropriate, even among the general public sample. The majority in both samples believed that funding through general state taxes was not appropriate. The pattern of responses to both the livestock/insurance funding questions and the state funding possibly reflects a belief that predator conservation represents a broader national interest and that costs should not be borne solely by livestock owners themselves or state residents. This possible explanation is supported by results presented in the preceding results sections which suggest people value compensation because they see it as a means of more fairly distributing the costs of predator conservation. This possible explanation is also supported by the survey findings that federal taxes, a tax on tourists, and hunting license fees all received at least a plurality of support among some "subpopulations" (that is, some states/communities). However, each of these potential funding mechanisms was deemed inappropriate by a larger percentage in other "subpopulations" of respondents. While the results suggest that the question of how to fund predator compensation programs would likely be a

difficult issue to resolve given the diversity of perspectives, it is worth noting that the majority of respondents (74% of livestock owner sample and 76% of the general public sample) endorsed at least one of the four broader societal funding mechanisms (federal tax, tax on tourists, hunting fees, state tax). In other words, while there was disagreement among respondents about the most appropriate means by which to generate funding, 3/4 of the respondents did indicate that they would find a broader "societal funding mechanism" appropriate (as opposed to finding only private donations or funding via the livestock owners themselves as the only appropriate basis).

The interviews provided additional depth of insight into this issue. When given greater freedom to direct the conversation about administration of compensation programs with respect to various institutions through less directive interviews, the nature of the discussion did vary by institutions. Discussions in support of federal government involvement tended to reflect the them of "responsibility for funding" as a consequence of either the "federal action" of reintroducing wolves or the fact that wolf conservation serve the values and interests of the broader public who should therefore contribute to the costs. Support for state government involvement tended to reflect the themes related to "efficiency in administration" and/or greater confidence in motivations of a state run program compared to privately run programs. Discussion in support of private programs tended to focus on the desirability of a funding mechanism where only those who want wolves have to pay and on concerns about the inefficiency of governmental bureaucracy with respect to such programs. Overall, the interviews indicate respondents generally support compensation because they see it as spreading the costs of living with these predators. Funding mechanisms through the federal government and private organizations are seen as appropriate sources because they spread those costs to those people who are either responsible for putting wolves, or predators in the area (federal government) or those who want these predators around (private organizations).

Voting Intentions with Respect to a State Run Compensation Program

Near the end of the livestock owner and general public surveys, after questions asking respondents their opinions about the desirability of predator compensation and other management alternatives; their thoughts about issues often raised in support or opposition to predators/predator compensation; their opinions about appropriate sources of funding; and their views about which institutions should administer a compensation program, respondents were asked if they would vote for or against a state run compensation program to pay for losses/damages caused by predators in an upcoming state election. Within the livestock owner sample, consistently across all three states, approximately 1/3 of the respondents (30-34%) of the respondents indicated that they would vote in favor of a state run compensation program (Figure 3-6). In Idaho, 30% of the livestock owner sample indicated that they would vote against a state run compensation program while 27% of Montanans and 24% of Wyoming respondents indicated they would vote in opposition. However, across all three states, the largest percentage of respondents in the livestock owner sample were undecided (37-44%). Among the general public sample, a little more than 1/4 of respondents (26-28%) indicated that they would vote in favor. However, the largest group of respondents (34-44%) indicated that they would vote against a state run program while between 1/4 and 1/3 of the respondents were undecided. The difference between samples was statistically significant ($\chi^2 = 32.998$, $p < 0.001$). Analysis of the standardized residuals indicates that the proportion in each sample voting in favor were similar. In contrast, the general public was more likely than expected to vote against while livestock

owners were less likely to vote against but more likely to be undecided.

Overall, because of the large percentage of undecided voters, it is hard to anticipate what the outcome a ballot initiative concerning a state run compensation would be. Analyses presented in the previous sections indicate that compensation programs are widely seen as desirable, the public recognizes that ranching produces societal benefits, and that the majority of respondents believe that predator losses are not a normal cost of doing business. At the same time, the results indicate that concern about issues not addressed by predator compensation programs are also widespread and it is not clear how those factors might influence people's voting intentions. Additionally, although the majority of respondents in both samples (74-76%) supported at least one of four broader societal mechanisms as an appropriate basis for funding compensation programs, there was a fair amount of diversity in terms of which funding mechanisms might be most appropriate. Also, in light of the complexity of the issue of compensation and related views, it is likely that the fact that no specific details for the design of the state run program contributed to the large percentage of undecided voters. At the same time, the majority of respondents (56-70% depending on survey population and state) were ready to indicate which way they would vote. The analyses in the next chapter explore the importance of factors that are related to differences in voting intentions.

Table 3-1. Interview excerpts reflecting positive desirability towards compensation

T3-1#1 ***Financially [compensation's] not going to help me much***. Mentally it makes me feel that ***at least there's someone that cares a little bit***. (Chris, both compensated and denied compensation)

T3-1#2 Oh, I think ***[compensation] helps take some of the hurt out of it***. (Rick, both compensated and denied compensation)

T3-1#3 Well, I think ***[compensation's] a very nice thing to do. I think that that should be done, but I don't think it's an answer to anything***, certainly. I think that the real issue is being able to,…like just with the grizzly bears too, having some sort of season to be able to control that population. (Lauren, has not tried for compensation)

T3-1#4 Well ***[compensation] helps, but they're not doing enough of it***. (Hugh, has not tried for compensation)

T3-1#5 Can they [livestock owners with losses] ever prove it good enough to get compensation? No. If they get compensation and that bear kills, if they catch him killing one calf, how many did he kill before he got that, that they didn't get compensation for? ***No, compensation isn't the thing. It's control….You don't get compensated enough, but it's a help***. I think it puts a better taste in the rancher's mouth. At least somebody is trying to do something, but they should do more of it. They shouldn't be so nit picky on what's done. (Keenan, has not tried for compensation)

T3-1#6 The federal government has introduced this new predator, and it's their responsibility to control it, and their responsibility to clean up after it. (Derek, has not tried for compensation)

T3-1#7 ***[Compensation] is one of the big things***. There are two things in my opinion that can soothe this wolf thing over, and compensation is one of them. (Lenny, denied compensation. He comments later in the interview that the other important thing to soothe the wolf thing is control.)

T3-1#8 If we're going to have predators, the compensation program is going to have to continue, I think. Because, as long as there are predators, there's going to be livestock loss…Well, ***if they're not going to let the rancher protect his livestock, there's got to be some kind of compensation, because basically, he's taking the hit for what the general public want to see running around out there***. (Mark, has not tried for compensation)

T3-1#9 From the outfitting standpoint, I don't think there would be enough of it that a person really needs to worry about compensation, ***but I think having cows on the***

range or sheep or whatever it is, I think those people should be compensated. The problem with the compensation now is a pack of wolves would, you know, let's say they kill a yearling steer or a calf, they eat him up to nothing, and the only think you find out is when you round up in the fall you're short so many animals. You don't know what happened to them. So how do you prove it? That's what they are not paying, and it has really hurt some of the ranchers….I'm just really not one of those people [that] likes to compensate, you now, that's just my basic lifestyle. You know, I don't like something for nothing. I do feel really sorry for the ranchers that are running cows out there because they can lose enough that they make no profit, or can lose money in a year…***I think for the livestock industry, the farmers and ranchers, you've got to compensate those people somehow***. (Walter, has not tried for compensation)

T3-1#10 When you talk about compensation for livestock, the wolf issue ***I'm in full support that there needs to be compensation***. Because that's a back induced species that developed numbers. The grizzly, they've allowed them to increase in numbers, we are going to have some conflict and kills there too. I think as a landowner, we accept some of those. We know that unless it gets to be drastically severe, I'm speaking of me personally, I'm not looking for compensation unless it's drastic. Say we had a grizzly, or three or four grizzly come in and kill ten head of cattle. That would need compensation, if we lose a calf, or we are missing a calf, I'm not one that's going to be looking for compensation. So I don't know what that middle ground is, but there has to be give and take between environmentalist pressing and the wildlife being allowed to be there. And then the rancher being allowed to have, he's paid for that land, it's his, I mean, he has the right to protect his livestock too…So I just think that it's a medium ground that has to be there. But I don't think that either side can have 100% control and say well there shouldn't be any livestock in this area or there shouldn't be any wildlife, it should all be done away with. There has to be that medium ground of give and take. ***So compensation is a fair middle road for the keeping of numbers of grizzlies and livestock being in [a] closer area***. (Maxwell, has not tried for compensation)

T3-1#11 ***I think we need compensation***, because a lot of people, well, even us, you can't afford to try to make a living and then have the bears and wolves have it, and I think we should be paid for it. (Debra, denied compensation)

T3-1#12 It's good to have these programs. ***If they're going to protect these animals, I think they have to have the program to compensate. But if they would take the endangered species thing off,*** at least to a large extent so we could take care of the problem, then I'd say, no, ***we wouldn't need any compensation***. (Andrew, both compensated and denied compensation)

T3-1#13 ***I think you certainly need [compensation] for PR purposes***. For a political tool, I would say yeah [you need compensation]. You know you're asking a certain

group of people to sustain the highest loss for the perpetuation of certain species. The guy who has a computer business in Helena doesn't have to worry that he's going to lose, you know, five percent of his annual income to a grizzly bear. So yeah, for that reason ***I would say compensation programs seem like a logical tool for a long period of time. But I think that as those populations gain in population, it's probably something to revisit***. (Anne, has not tried for compensation)

T3-1#14 We're not the ones that wanted to bring the wolves in. ***If they want to bring the wolves in, then they can pay for it*** because they're hiring helicopters and lots of men. They're spending lots of money on them. (Russell, both compensated and denied compensation)

T3-1#15 I think ***it would be nice if the people that are losing livestock know that they can be compensated for it. I think that's a big help*** and I don't know how many years they've finally started helping people, but I've heard of some. (Walker, has not tried for compensation)

Table 3-2. Interview excerpts reflecting negative desirability towards compensation

T3-2#1 ***[Compensation's] not a solution***. I'm not in the business to feed bears. ***I'm in the business to raise honey, not feed bears***. And by just paying me money and not dealing with the bear, that's just making me feed bears. That's all it is, plain and simple….Because again, still it's boiling down to I'm feeding bears. They want the bear alive. Whoever, what organization, they want the bear alive, they don't want me to say "oh, I'm getting compensated"…so what? All I'm doing is feeding bears. Should I be sitting in my warehouse just building hives just to feed bears? That's not the idea of what my job is. ***My job is to feed a nation, not a bear***. (Jerry, denied compensation and has refused compensation)

T3-2#2 And that ***compensation doesn't work***. If you don't catch them, you don't get anything. That compensation thing if, like a lot of times if it's a calf and say this thing goes in and they kill this calk. Okay these guys are going to come in and write you a check for this calf. Well, that's fine, but a lot of times if that cow loses a [calf] early, she's not going to breed back [so] you've lost your cow too. I mean you'll get the salvage value but the genetics and everything is gone…***That compensation thing is, makes you feel good for a little bit, but in the long run it's not really doing a lot***. (Kevin, denied compensation)

T3-2#3 What we've lost is no real big deal but it just seems like ***if you take it you fall under their hypocrisy, their line of thinking***. (Peter, has been compensated "but didn't want to do it")

T3-2#4 And if I'm riding up in the forest, for instance, and if I should come across anything that has been killed by grizzly or wolves or whatever, I'm not going to be in a position to say okay folks, I'll see you around, I'm going back to get somebody to prove that the wolves had killed one of our cows. You just can't do it, I mean it's not worth it. ***You might get, I don't know, $600 or $800 for the cow but your time is worth a lot more than that. And it's hard enough to hang on to business in this country without taking time to mess with something like that***. If you are not using your day to make more money than that, you are going to be the hell out of there in a hurry. (Joel, has not tried for compensation)

T3-2#5 ***Participating in a program of which you don't really approve because it essentially removes control of managing of our property***. (Robin, both has not put in claims as well as been compensated. She does discuss later in the interview that she does recognize that some people are hit hard by predators and need compensation.)

T3-2#6 Sometimes ***I don't know if them paying is the answer***. It's kind of like you are giving them permission to let these animals, instead of destroying them, ***you're giving them permission to come and eat my calf as long as you buy it from me***….***The compensation is probably the dumbest thing I've ever heard of***

because of the verification. Most people don't realize the type of land that we run cattle in. And that we don't, it's different than if you had a herd of dairy goats and you're getting them in everyday. There's a lot of times that I will, most of the time in the summertime, if I lose a calf, if I find any sign of them it's rare…It looks good on paper I guess. But in practicality it just, it just isn't going to work. (Patrick, has been compensated)

T3-2#7 I don't know, it just seems to me like such a terrific waste of money…It just, it's completely asinine to be putting money out to save something that is, that is taking production. I don't know anything they could do with the program that would make me in favor of it…I just can't see, we raise cattle to feed people. We don't raise them to feed wolves. That's just, it's ridiculous, the thinking is way off…[Compensation] does nothing whatsoever for me other than irritate me. (Howard, has not tried for compensation)

T3-2#8 ***I don't think [compensation] is the way to go***. I think they should control the wolves, not the kill. I get paid for what they kill that is kind of a left handed way to go at it in my books…***I am all for control and that compensation is a backhanded way to go that just eases their conscious***. ***Well then the do-gooders can say well we paid him for it***. That is kind of iffy. (Charles, refused compensation on verified claim)

T3-2#9 ***I don't like the whole idea of holding my hand out to the government or some charity for help. I like to stand on my own two damn feet and take are of myself***. And the thing that I don't like about [predator management] is being prevented from doing that. (Joel, has not tried for compensation)

T3-2#10 I denied the first [payment]. In fact I denied the next [payment]…***I thought it was a little hypocritical to accept compensation from an organization that was so intent on spoiling the western way of life, so to speak***. But then I got to tallying up my expenses incurred with not just the loss of livestock, the loss of livestock didn't excite me that much, but when I started adding up the hours I spent away from my operation and my telephone bills alone were so astronomical that I thought, hummm, I'd better take another look at this thing…So I said, baloney, I am going to keep that compensation. You know what, ***that didn't even compensate me for a fifth of my time, much else my losses***. (Dylan, has been compensated)

Table 3-3. Interview excerpts reflecting views on alternative management techniques – control and hunting

T3-3#1 We've had calves eaten and I've seen the wolves eating on them and I realize, they don't want to pay anyone [they] have to because they don't have a budget to do it. ***But I still think the landowner should have the right, if they're in there devastating their herd or whatever, [to] shoot them***, you know. ***Why chase them off and give somebody else the heartache?*** (Phil, both compensated and denied compensation and will no longer try for compensation)

T3-3#2 Well, I think [compensation's] a very nice thing to do. I think that that should be done, but I don't think it's an answer to anything, certainly. I think that ***the real issue is being able to,…like just with the grizzly bears too, having some sort of season to be able to control that population***. (Lauren, has not tried for compensation)

T3-3#3 And ***all I'm advocating is control of the problem bears, not all bears***, because I'm fully aware that there are bears that don't bother our hives. And ***I really think that I should have the right to defend my property***. It's at a stage now, I'd have a better chance of shooting a human being than if I was to shoot a grizzly. I would stand a better chance of not going to jail or paying a fine and that's ridiculous if you're protecting your own property. It just seems ridiculous. (Jerry, denied compensation and has refused compensation)

T3-3#4 ***I think that [livestock losses will] be more palatable, that people will accept it more if they will have more control over taking [problem animals]***. If they have a problem wolf harassing [livestock], if they can go up and take care of it, you know, shoot that, or kill that one wolf, they know it's [done]. If they can get compensated for their definite, confirmed kills, but not [the others], I think they're just going to have to accept the other as another cost related thing to raising cattle…I think they'd feel better about [control] than, trying to [go] through their books, or something, and submitting a bill on weight gain, or missing cattle, or something like that [for compensation]…I had a neighbor who's had two or three yearlings killed by a mountain lion, but he contacted the Fish and Game, and they took care of it. ***I don't think you should be able to just go out and shoot anything, anytime***. (Derek, has not tried for compensation)

T3-3#5 You have both options right now [compensation and control]. We can't take the bear anyway unless Fish and Game tells we can. They are in the driver's seat there anyway. Right now, I go to Fish and Game and get them to put a trap in that would be the first thing. They will set a trap there at night and see if we can take him. In one case in one yard, we waited a week for the bear. We just couldn't get it so we took the bear….***It would make waiting for a four a five day period much more palatable if we have a compensation program*** or otherwise, you're down there every morning with Fish and Game saying, well, we didn't catch it, so let's

do this, let's do that. ***You're pushing to destroy the bear and they are pushing to save the bear***. (Richard, has not tried for compensation)

T3-3#6 ***I don't think [compensation] is the way to go. I think they should control the wolves, not the kill***. I get paying for what they kill that is kind of a left handed way to go at it in my books…I am all for control and that compensation is a backhanded way to go that just eases their conscious. Well then the do-gooders can say well we paid him for it. That is kind of iffy. (Charles, refused compensation on verified claim)

T3-3#7 ***You get some compensation after the fact. But you know that is not solving any problem***, that is not solving [the problem], you know. They come after people have had these big wrecks and then they say, 'well we could trap or we could do this and that, or you know whatever"….I think the guys, the powers that be should really get the [grizzly bear] delisted or get a good plan in that is workable and get like ***I say a little hunting and scare the bears a little bit. And get them a little more wild***. (Ryan, denied compensation)

T3-3#8 It's good to have these programs. If they're going to protect these animals, I think they have to have the program to compensate. But ***if they would take the endangered species thing off, at least to a large extent so we could take care of the problem, then I'd say, no, we wouldn't need any compensation***. (Andrew, both compensated and denied compensation)

T3-3#9 Can they [livestock owners with losses] ever prove it good enough to get compensation? No. If they get compensation and that bear kills, if they catch him killing one calf, how many did he kill before he got that, that they didn't get compensation for? ***No, compensation isn't the thing. It's control***. (Keenan, has not tried for compensation)

T3-3#10 ***I don't think all this compensation would be required if we had some sort of predator control*** and some sort of guidelines [when] these animals are killing domestic livestock on deeded land they should automatically be, you can do away with them. (Cliff, has not tried for compensation)

T3-3#11 I don't like the whole idea of holding my hand out to the government or some charity for help. ***I like to stand on my own two damn feet and take are of myself. And the thing that I don't like about [predator management] is being prevented from doing that***. (Joel, has not tried for compensation)

T3-3#12 ***By killing the wolf that was just as good to me as getting [the] compensation, whether we had got compensated or not***. If we had never taken the money at least they took care of the problem real quick because we had a problem wolf that was just going to keep it up. (Jacob, has been compensated)

T3-3#13 ***Even if you're able to use lethal means on something that is bothering your livestock, the chances are that you're going to have losses before you realize where it's coming from***. And before you'll be able to get [the problem animal] it would be to the point that you'd have to either spend twenty-four hours a day watching them all the time, which you can't afford. And so I think it would have to be, to make it where you still have compensation because otherwise you'd just end up having to go back to where they were before they reintroduced the wolves, you'd have to pretty much take them all out! (Mark, has not tried for compensation)

T3-3#14 Well, ***by not having a grizzly bear season, I think we're training these wild animals to become problems***. Where as [when] we grew up, if there was a damaging animal, it was taken care of by someone and we kept them being wild animals instead of half domesticated. (Andrew, both compensated and denied compensation)

T3-3#15 Having some hunting seasons and some of these problems out there are there because there are too many of those animals. ***And [if we] hunted them down and eliminated a few more of them***, I don't think they're going to be extinct but ***we would still push them back away from the rural areas where some of these problems are at***. (Robert, has been compensated)

T3-3#16 ***I think it'd really help to open up a hunting season on [grizzlies here]. Not back in the wilderness, just [here] where there's conflicts***. I think it would keep the bear a little more educated if they're hunted. I think it would help on some bear/human conflicts too. ***I don't mean to wipe them out either because I don't think [controlled hunting] would.*** And I'm sure that's not going to answer all the problem[s], but I think it would help some. (Chris, both compensated and denied compensation)

T3-3#17 ***For the grizzly if you pick areas and put one permit in each area, I'm willing to bet 80% of the time you are going to take the problem animal***. Because he's down, he's the one causing the problem, he's down low. The rest of them are up away because they don't want to be around humans. The problem ones are getting used to humans, so they are the ones that are more likely the one[s] to [be taken]. Yes, [hunting] would solve a lot of problems. (Kevin, denied compensation)

T3-3#18 I would say ***they should definitely have a hunting season on wolves and grizzly bears*** even if they sold the tickets for a hundred thousand dollars a piece to help pay for some of the compensation on these cattle. (George, has been compensated)

T3-3#19 ***I think it would be nice if a guy could just take care of the problem if he's got one***. I mean it seems like they give them too many chances. ***If [the predator's]***

in killing livestock he needs to go. And they give them too many chances and they kill more livestock…There's probably people out there that would pay some pretty big dollars to go on a grizzly bear hunt that's in an area that's doing some damage to somebody's livestock. It's a way for the state to make some money. (Walker, has not tried for compensation)

T3-3#20 If they take [the grizzly bear] off the endangered species [list] and they put it on a hunting season we are going to have to be very careful on that limited number. I think they would go right back to that endangered species [status] awfully quick if it wasn't seriously watched and controlled. ***So there could be that controlling factor with that hunting season, but it would have to be very closely monitored***. (Maxwell, has not tried for compensation)

T3-3#21 ***I've never wanted to see any one thing killed off completely***. Especially the bear, but I've never wanted to see them in the numbers we have them because it's too harmful for everybody. (Keenan, has not tried for compensation)

T3-3#22 ***They pay me for [the loss]. Well, that's not solving the problem***. You've still got something out there killing [livestock]. You've got to deal with that aspect of it too. (Rick, both compensated and denied compensation)

T3-3#23 I guess when a predator becomes a problem and they start, like this bear got to where he started killing cattle. I think if they would've had the manpower and I'm not saying that they have the manpower right now, but ***if they did have the manpower and the resources to go ahead and try to track that animal down, hunt him down and eliminate him, and eliminate those problems, I guess I'd be happier with that than I would with the compensation really***. (Jay, has been compensated)

T3-3#24 If they could take out the problem animals, I don't think that we would have the death loss. So ***if you could eliminate the problem with the bears or the wolves then there would probably be very little compensation needed***…I think we need [compensation], yeah I do. (Harvey, both compensated and denied compensation)

T3-3#25 I don't know if shooting is the answer. They build all these big prisons for our bad guys, maybe they can build a prison for these bad wolves and bears. I don't know what the answer is. Maybe they can take these old prisons and give them to the bears….But if they're real bad, ***I think they do need to be three strikes and you're out***. (Debra, denied compensation)

Table 3-4. Interview excerpts reflecting views towards the relocation of problem animals

T3-4#1	There are a lot of bears. ***If you have predator bears, then just might as well get rid of the problem bear. If you can't trap it and move it somewhere else, then you better get rid of it***. I think that's probably my impression of where we are now. Even with the Fish and Game people we deal with, the first thing [is] let's try to trap it. Sometimes they are successful. If they are not, it's just a whim. How many days do you have to go? It might be a little more palatable if you had some compensation coming during that time period. (Richard, has not tried for compensation)
T3-4#2	They don't want to pay anyone [they don't] have to because they don't have a budget to do it. But I still think the landowner should have the right, if they're in there devastating their herd or whatever, [to] shoot them. ***Why chase them off and give somebody else the heartache?*** (Phil, both compensated and denied compensation and will no longer try for compensation)
T3-4#3	Now they take [a] problem bear from here and move it over there. It causes problems there, they move it over there, [it] causes problems. ***Most of the time they just keep moving [it] around. I mean, it goes from one place to the other and causes problems***. I think if bears got shot at more often, they'd get scare[d] of humans. Nowadays I think they've been tranquilized so much, a lot of these bears, that whenever they see a human they turn their butt and want to get a shot. (Benjamin, has been compensated)
T3-4#4	When you have a problem with a bear, ***this shipping them from one place to another, half the time the bear dang near beat[s] the [agency personnel] back***. (Jerry, denied compensation and has refused compensation)
T3-4#5	Those animals, ***if they got in trouble in one place they will get in trouble in another place***. (Dylan, has been compensated)
T3-4#6	We hear all of these stories about problem bears being dumped over here or the problem bear has been taken over there. You know and then ***the problem's just being moved***. (Ryan, denied compensation)

Table 3-5. Interview excerpts that reflect views towards preventive measures

T3-5#1 There is cost share for guard dogs and also for electrifying a corral. Well, ***if you are going to have to go through that I don't think it is worth having the sheep***. (Peter, has been compensated)

T3-5#2 We tried to change our livelihood – our calving and stuff like that to try to keep our animals in pastures where we can really keep an eye on them until we go to summer pasture. ***And [we] spend extra time up there, but sometimes you have to quit too to get other work done***. (Phil, both compensated and denied compensation and will no longer try for compensation)

T3-5#3 Coyote has probably been our main predator problem until we got the sheep dogs, until ***we got those Pyrenees dogs and once we got them, that sure cut it down***. (Sarah, both compensated and denied compensation)

T3-5#4 What ***I found out is by putting the sheep in a barn, a grizzly bear could tear the siding off, go in there and the whole flock is there. They could kill them all***, where if they're out in a big wide area, they might get one or two or three or four but, they ain't going to get them all. (Benjamin, has been compensated. He had been instructed by agency personnel to keep his sheep in the barn as a preventive technique to reduce mountain lion damage.)

T3-5#5 ***And another thing we've been doing is a different style of fencing***. Putting barb wire right against the ground trying to keep coyotes from burrowing underneath the fence and more barb wire up a little higher to kind of help keep stuff from jumping over…We thought it was dog proof, but [a] dog come and kill four [sheep]. (Brian, has been compensated)

T3-5#6 ***I will go out of my way to avoid a conflict***…If there is a grizzly bear standing in the middle of a trail and I have got two clients with me…I will probably go around him and avoid the conflict. ***Hell, it is natural that you are going to avoid a conflict.*** (Cliff, has not tried for compensation.)

T3-5#7 ***You try to have your cattle [in an area] when you think the grizzlies aren't there, like in the early spring***. [The grizzlies] will move through when they come out of hibernation, they'll pass through and move to higher ground or they'll follow the elk herd after the calves and stuff…I won't put cattle up there at a certain time like in April or may because of the [bears]. That just taught me that, well, I need to put the cattle in later if [the bears] are moving through at that time. I've tried to work with [the bears]. But when there's a drought year like the last two years, you got to put your cattle in a place. And if there's no other pasture to bring them to because of drought or whatever, your hands are tied. And you have a right to be on your own private property. ***You shouldn't have to move your cattle because there's a bear there. They need to deal with the bear***. (Rick, both

compensated and denied compensation)

T3-5#8 ***We've tried all kinds of tricks. Some of them work and some of them don't***. And certain years you have more bear problems than others. And that's the luck of the draw. (Jerry, denied compensation and has refused compensation)

T3-5#9 If they have most of these damn [grizzlies] collared or something and if you have the right person with the [receiver] you could do a lot of help [for] the neighbors. ***You could go out and locate [the grizzlies] once in a while and say, "well, you have got a bear up there in your pasture, maybe you ought to kind of watch your cows a little bit or something."*** (George, has been compensated)

T3-5#10 To me preventive is like the beehives and the big electric fence for the grizzly bears. Now that's preventive….The cows are a little more aggressive so I think [that's] the preventive method [to use] with the small amount of wolves around now… But when you hear about packs that are the size of 20 in Yellowstone, I don't know what a cow could do then. (Eric, has been compensated)

T3-5#11 If the wolf people called up and said there was a pack moved in [and] we got our cows right over there, I guess I have a good feeling that the wolves are opportunists, but once again, you got your family, you got things going on here. I'd like to say I'd go out there in the evening and just see what's going on, but you're talking about two hours down time so you become reactive. ***I guess if I go up there and I find some cows that are dead or calves and you want to get even, instead of trying to [be] preventive***. (Eric, has been compensated)

T3-5#12 ***If you knew [that agency personnel] had dumped one out, you'd be a little bit more on the lookout***. (Mark, has not tried for compensation)

T3-5#13 Last year they had sheep over there [in the valley]. The had two or three sheepherders and those big guard dogs [the] wolf pack killed, I don't know how many sheep and killed the guard dogs. ***They put up electric fences around the sheep at night and people were out there watching. Soon as they turned them sheep loose at daylight in the morning, whack, wolves started eating them***. (Russell, both compensated and denied compensation)

T3-5#14 We haul our cows up there [and] I really can't go live with them every day, but ***I suppose if you stayed with them all the time, and you had some way of scaring the bears off, it might work…Not really [economically possible], not at the price you get to hire somebody and pay them enough wages to risk their live out here, fighting a thousand pound bear off.*** And the price you get for your livestock in the fall, no it wouldn't be too economical. (Harry, both compensated and denied compensation)

T3-5#15 We did have a marked bear in here I think a couple of years ago. And ***the game***

warden stopped by and says, "I just want you to know that there's a marked bear back here." And that was nice. You're probably going to be out checking things a little closer. (Walker, has not tried for compensation)

T3-5#16 We take all our dead and I have a dead animal pit and I take everything. Something dies here, we haul it and it gets buried at my place totally out of here. (Russell, both compensated and denied compensation)

T3-5#17 If we have an animal that dies, [we] clean up the carcass and bury it and get rid of it. ***[We] don't leave the carcass out there for smell. All it is, is an attraction and it'll bring [grizzlies]***. (Maxwell, has not tried for compensation)

T3-5#18 ***I don't think you can be with [the livestock] twenty-four hours a day and that's what it would take***. You'd have to be there twenty-four hours a day with them [to limit depredations]. (Debra, denied compensation)

T3-5#19 ***An electric fence is good for a bear, I will say that***. You go into the mountains now and all these outfitters got an electric fence around their campsites….Wolf, I don't know if that would make any difference on them. ***But you couldn't go around and electric fence your whole place. No, that's not even in the reality form***. (Keenan, has not tried for compensation)

T3-5#20 ***The more time you spend out there, the more it costs you to be out there***….If you can cut your losses and be money ahead by hiring some more people, then maybe that's the way to go. It's like everything else in the world – it's money, money, money. ***There is never enough money to do everything that needs to be done***. (Lenny, denied compensation)

Table 3-6. Interview excerpts reflecting concerns not addressed by compensation – losses are a cost of doing business

T3-6#1	I guess ***if you live out West and you live with the predators you've got to expect a few [livestock] to die once in awhile to them***. And if you're losing too many you're not out there managing your own [problems]. ***[But] we're not able to go out and manage our own predator problems***. (Robert, has been compensated)
T3-6#2	***You expect [some losses], it just happens. But when it's just a constant pounding of it where you're getting [hit hard]***. I can think of one particular night that we had nine bears in seven different [bee] yards in one night…There are certain things and occupations that you just figure there's a certain amount of loss. I don't care if you run cows, you're always going to have a sick one that dies. If you run bees, occasionally you're going to have a bear that gets into them. If you raise barley occasionally there's a drought. It's just factored in. ***You accept certain amount [of loss]….But when you're just overwhelmed with bears, then it gets real frustrating***. (Jerry, denied compensation and has refused compensation)
T3-6#3	***Especially in the mountains [losses are] just a way of life***. (Peter, has been compensated)
T3-6#4	***[Losses to predators] are kind of a cost because there are just so many things that can happen***. I mean some of it you just have to swallow the loss and go on. I mean you can't [do anything]. Things happen. (Walker, has not tried for compensation)
T3-6#5	***And you are going to lose some*** but like I ran my private property up there for quite a while and never lost a calf [for] five or six, seven years. And then [I] started to losing calves slowly and with more grizzly bear activity, more grizzly bear sightings. (Ryan, denied compensation)
T3-6#6	I kind of think people that hate them, dislike them. I don't think money is the thing…That's not the issue. ***Our livelihood is more, would be the issue***. (Andrew, both compensated and denied compensation)
T3-6#7	I would really like to know who some of these people are, for example, people of the [environmental groups] and what they would do if their livelihood was threatened or chiseled away from them. I wonder how loud they'd scream…***I wonder how these people would react if their livelihood was threatened***. (Jerry, denied compensation and has refused compensation)

Table 3-7. Interview excerpts reflecting views on the role of compensation in society – benefits of ranching

T3-7#1	Again ***a landowner is helping to support the wildlife for the public***…and just like the phone call I just received, his comment was: " I hear you got lots of white tail deer up there do you need to have me." They think that they are doing me a favor (laugh). It's the other way around, ***the landowner is doing a favor for the public here by supporting and feeding all the wildlife***. And I'm not saying it's right, wrong, or otherwise, I'm just saying just a little recognition goes a long ways. (Maxwell, has not tried for compensation)
T3-7#2	***I think ranchers are kind of stewards of the land***. (Walker, has not tried for compensation)
T3-7#3	***Most people don't give ranchers the credit that's deserved. We are the true ecologists. We are the true environmentalists***. (Dylan, has been compensated)
T3-7#4	***I don't think [the public] realize[s] that in most of this country, most private property supports all of the wildlife***. Here people come and all of a sudden there is all of this government ground and it is supporting all of the wildlife. Well it ain't, it still ain't. My calves that die up there is feeding a grizzly bear. You know I think that dead calf is worth something I mentioned that to you before. I think that dead calf is you know should be dog food, worth dog food price for that grizzly bear. (Ryan, denied compensation)
T3-7#5	The rancher gets blamed for a lot of things and rarely gets credit for anything. Which, ***if it wasn't for the rancher, there wouldn't be the open space there is now. And if it weren't for the rancher, a lot of this country wouldn't have been settled, and schools built, and hospitals brought in***. (Mark, has not tried for compensation)
T3-7#6	These people with all the big dollars are going to come in and buy these ranches up and sub-divide them or whatever they feel like doing. And there won't be any production from those people. And that's ***whether it's beef or potatoes or anything else, it's food that feeds people***, you know. We have food here in the United States, but there are a lot of countries that don't. When we start losing our way of making a product to sell sale, why then there isn't, as people get thicker, there is going to be more houses and sub-divisions and it's going to make it tougher all the time. (Lyle, both compensated and denied compensation)
T3-7#7	Should I be sitting in my warehouse just building hives just to feed bears? That's not the idea of what my job is. ***My job is to feed a nation, not a bear***. (Jerry, denied compensation and has refused compensation)
T3-7#8	Because ***[livestock loss] is feed you are producing***. It is food and it seems like the bear probably benefited from it. (Ryan, denied compensation)

Table 3-8. Interview excerpts reflecting role of compensation in society – spreading the costs

T3-8#1	Well, if they're not going to let the rancher protect his livestock, there's got to be some, some kind of compensation, because basically, ***he's taking the hit for what the general public wants to see running around out there***. (Mark, has not tried for compensation)
T3-8#2	***If somebody back in California or New York City wants to have a wolf in my backyard, they have to share the responsibility***. They get to help pay for it, their tax dollars get to help pay for it. (Derek, has not tried for compensation)
T3-8#3	The people that wanted them here [should pay]. I didn't want [wolves and bears] here! So ***I think the people that wanted them here should have to pay for it***. (Debra, denied compensation)
T3-8#4	I think that this whole idea of [the] government beginning compensation programs is a really good idea. [Compensation] shouldn't be left to private organizations to fundraise for. ***The public has determined that predators are valuable for, you know, purposes of beauty and nature and everything else… You know you're asking a certain group of people to sustain the highest loss for the perpetuation of certain species***. The guy who has a computer business in Helena doesn't have to worry that he's going to lose, you know, five percent of his annual income to a grizzly bear. So yeah, for that reason I would say compensation programs seem like a logical tool for a long period of time. But I think that as those populations gain in population, it's probably something to revisit. (Anne, has not tried for compensation)
T3-8#5	I think ***it's the general public that is behind [wolf reintroduction], so I think the compensation should come through a government program of some kind***. I don't like government programs at all [and] there's the people that say, "I'm not for it." It was the environmental groups that pushed [wolf reintroduction] through, it wasn't the general public, so the environmental groups are the ones that should have to pay for the compensation. But it's a little hard to say, because generally you're saying that everybody wants the wolf here, which maybe everybody doesn't, and so maybe it is just the environmental groups. [An environmental group], it's their membership that maybe needs to pay the compensation. I don't know. ***I don't like government programs, but the rancher can't carry all the losses***. (Mark, has not tired for compensation)

Table 3-9. Interview excerpts reflecting views on role of compensation in society – tolerance

T3-9#1	***If we would of got paid for [the losses it would have], made you feel better***. (Debra, denied compensation.)
T3-9#2	***If you're going to lose something due to a predator and you're going to be compensated for it, it's not going to be as worrisome for you***. (Walker, has not tried for compensation. He does think it would be nice if people could take care of their own problems (Table T3-19))
T3-9#3	Interviewer: Do you think that just the presence of the compensation program increase your tolerance towards those predators? Lenny: Yeah, I think it does, right with the wolf anyways…***Compensation isn't a problem solver***. (Lenny, denied compensation)
T3-9#4	Interviewer: Does the idea of compensation increase your tolerance towards the wolves at all? Walter: If I was a rancher, it might. ***I really have nothing against the wolves, it's the quantity***. You've got to keep the populations down, and as long as they just totally let them go, I can see it just getting worse and worse and worse. (Walter, has not tried for compensation)
T3-9#5	***Compensation is one part, but it should never be considered, 'oh, we solved the problems.'*** People still don't like you. I mean it is like we lost some but we are being paid for some [losses] but I need the money. (Jacob, has been compensated)
T3-9#6	***If any of us find a problem if that could be jumped on right away and try to eliminate that problem, I think to me that's probably as important as the compensation***. (Jay, has been compensated)
T3-9#7	I would probably say that half of the bears, probably more than half the bears we've had trouble with have been killed. And it's my impression that there's lots of black bears in this country, we don't always see them, but there is. And so I haven't been too worried about thinning them out. ***If there were compensation that I could apply for, that would probably deter me from using [lethal control] so readily***. (Ralph, has not tried for compensation)
T3-9#8	There are a lot of bears. If you have predator bears, then just might as well get rid of the problem bear. If you can't trap it and move it somewhere else, then you better get rid of it. I think that's probably my impression of where we are now. Even with the Fish and Game people we deal with, the first thing [is] let's try to trap it. Sometimes they are successful. If they are not, it's just a whim. How many days do you have to go? It might be a little more palatable if you had some compensation coming during that time period…In my own mind, ***if I [had a] bear in the yard and there was a compensation program, my initial reaction would be to take the bear***. (Richard, has not tried for compensation)

T3-9#9 I guess when a predator becomes a problem and they start, like this bear got to where he started killing cattle. I think if they would've had the manpower and I'm not saying that they have the manpower right now, but ***if they did have the manpower and the resources to go ahead and try to track that animal down, hunt him down and eliminate him, and eliminate those problems, I guess I'd be happier with that than I would with the compensation really***. (Jay, has been compensated)

T3-9#10 Interviewer: You have been compensated. Does that make it more tolerable at all having wolves? Patrick: Not really. ***I would rather not have the wolf then I wouldn't have to be paid because there wouldn't be the problems***. (Patrick, has been compensated)

T3-9#11 Interviewer: Does the idea of being compensated for losses help increase the tolerance level for the wolves in the area? Derek: There's too many gray areas, I think. It's obvious if you go out and you've got a definite kill and you should get compensated [for] that kill. But how do you measure weight loss, weight gain/loss? How do you measure pregnancy rates diminishing because of harassment? …There's certain variables in there that you just can't measure. (Derek, has not tried for compensation)

Table 3-10. Interview excerpts that reflect concerns not addressed by compensation – loss of game populations

T3-10#1 ***I think [wolves and grizzlies] are having a detrimental effect [on game].*** It has just started in my estimation that right now we have got a problem there with the moose population, and I think it is directly related to depredation of the calf moose from grizzly bears and wolves. (Cliff, has not tried for compensation)

T3-10#2 ***I think the problem with game is not the wolves. It's the loss of habitat***. I can see absolutely no reason why in the long run, the numbers of game should be reduced by the wolves because they can live in balance with the game and you can get as many elk and deer, and moose as there is habitat to carry. And it may vary from year to year, when the wolves' population happens to be higher and they are starving and so they really impact game and [the game populations] may drop off. But the basic limiting factor is the habitat. (Joel, has not tried for compensation)

T3-10#3 [The wolves] ate a lot of deer. I mean ***they really took our deer population down***. (George, has been compensated)

T3-10#4 ***But wolves, they impact that elk [population]***. The hunting situation has been changed. There is no doubt about it in my view. In our area, our calf crop went from 40 calves per 100 cows to 20. And they feel, as though the big impact is, and [agency personnel] are actually admitting to it, is the grizzlies. (Harvey, both compensated and denied compensation)

T3-10#5 I think the bears and the mountain lions in this area are on the increase. They could probably even up the tags on them. We really don't have trouble with our cattle with them, but ***they do seem to kill a lot of deer and elk***. (Russell, both compensated and denied compensation)

T3-10#6 Primarily for the outfitter [it] is that you [have] a depredation issue on the game. The people I work for, [game depredation has] made about a $100,000 a year decrease in our gross since they put the wolves in. Because we used to kill 25-30 elk a year and take a 115-120 hunters up the river basin…Now last year we had the best year we've had in years. We killed 10 bulls, but the year before that we killed two bulls and three bulls and a couple of cows. ***What we are not seeing is the reproduction. We don't see the calves. The wolves are going to kill the easiest thing to kill and that is the calves.*** (Walter, has not tried for compensation)

T3-10#7 ***I attribute [the loss of game] to all predators***. I think [there is] too many bear[s], too many lion[s], way too many wolves, and way too many coyotes. Wolves, coyotes, and lions are probably the biggest [predators] on them, on the mule deer. But they're horrible on them. Up on [our neighbors], that used to be the finest

mule deer country in the world. There's nothing there anymore, it's not worth your time to go through and look for anything. There's a few, but wherever you see them, you can sure see a string of wolf tracks or lion tracks behind them you know. (Keenan, has not tried for compensation)

Table 3-11. Interview excerpts reflecting concerns not addressed by compensation – safety concerns

T3-11#1 I think ***if they continue with the wolf the way they are, there's going to be more problems***, because they're just taking the wolves' fear of humans away, by not letting [any control measures]. If you can't even shoot to harass one, they'll lose their fear of man, and once that happens, you're out there, maybe not necessarily an adult, but a younger person running around, they're just as vulnerable as somebody's dog on their front porch. (Mark, has not tried for compensation)

T3-11#2 ***I'm just afraid [that] one of these times, a person is going to get hurt,*** a kid or something. I mean, these bears are going right up the creek here and it goes right through town. (Benjamin, has been compensated)

T3-11#3 I guess [people being attacked is] happening a little bit more now, that grizzly bears attack people and there's a lot of them [attacked people] get killed, now. There's people that's sure been hurt real bad around here too. And actually [with] ***grizzly bears, I think [they're] worse for people than for cattle***. But wolves, I think are probably worse for cattle than for people. (Hugh, has not tried for compensation)

T3-11#4 I got [the bear dog] specifically for the grizzly bear problems we were starting to have about eight years ago. And by problems I just mean ***they were coming in to the house [area] and I have two children and it was a concern***. (Lauren, has not tried for compensation)

T3-11#5 ***I don't worry about a wolf coming and attacking my kid***, even though it's possible, there have been stories about that happening, ***but the grizzly bear is a whole different deal***. Yeah, that's a great concern. (Derek, has not tried for compensation)

T3-11#6 I think [grizzly bears are] just going to be another straw that will break the camel's back. And to be real honest with you it makes me nervous. ***I've spent a lifetime in that wilderness and to have to go around and worry about something [that's] going to eat you [doesn't seem right]***. (Walter, has not tried for compensation)

T3-11#7 ***God knows we don't need no grizzly bears. They will eat people***. (Chad, both compensated and denied compensation)

T3-11#8 ***I have never felt that wolves were a threat to humans***, except under just extreme circumstances, ***but grizzly bear is a different animal***. (Duke, has not tried for compensation)

T3-11#9 When I grew up, you were cautious. You knew the bear was there, you were

pretty cautious. ***Today, people are almost lackadaisical; they don't think there is anything out there that can hurt them at all***. You really have to change that [mentality]. People are getting more lackadaisical or let the government take care of them, rather than [taking care of] their own self, ***that's not very good when you are living in area[s] with grizzly bears*** (Richard, has not tried for compensation)

T3-11#10 ***It really is frightening*** to take a packhorse and take your family and go camp in areas you used to be able to. You cannot do that now. And even though you read and hear about how simple this is and how you are supposed to have your bear spray. I don't think we ought to let the grizzly bear control the National Forest. (Harvey, both compensated and denied compensation)

T3-11#11 ***We have lost clients simply because the felt their lives were in jeopardy being in that type of environment and with that many grizzlies around***. You know if I have a client that gets up in the morning and all of a sudden there is a grizzly track in front of his tent even though he didn't see the bear, the bear didn't get into anything, maybe we ran him off with the dogs during the night, it is very trying on that individual and they don't want to mess with it. That is not with all people, but we have actually lost clientele because of the vast number of grizzlies. (Cliff, has not tried for compensation)

T3-11#12 And the way the grizzlies have been this year, I really wouldn't want the kids out on this creek and that's' depriving them of, well, a pretty dang nice childhood." (Jerry, denied compensation and has refused compensation)

T3-11#13 ***I think if we get too many wolves around that there will be safety, human conflict with them***. But the numbers are going to have to get a lot larger then they are now…***But it isn't something I'm going to lose any sleep over*** (laugh). (Howard, has not tried for compensation)

T3-11#14 But ***when some little kid gets in the way of a hungry wolf***, I don't know what he might [do, ***he might] just go ahead and eat it***. (Lyle, both compensated and denied compensation)

T3-11#15 So when you go down in the mornings to check the sheep and stuffy, you automatically grab a gun because you never know with that brush that's tall around the edges of the field and stuff. Who knows what's in there. It's getting where I used to run trap line at night, [and] I don't anymore…Well, when you go out to check on the sheep at night, there could be a mountain lion along the edge of the creek where you walk along. I mean, at night everything sounds, the resulting of a tree or something, you don't know whether it's an animal or what. [When you] come around the corner of the barn, [you] kind of peak around first before you. Your lights only shine so far, your yard lights and stuff, but still you walk around with a flashlight. ***It's a little scary***. (Benjamin, has been compensated)

T3-11#16 I don't really have any concerns about [mountain lions] being too thick. Not right in this area. I can see areas that …they would be a problem, especially where there's a lot of people that are building homes in these areas out of town…And I can see those being a problem especially people with younger kids…. Well, I don't know that it's a big issue, but I think it's an issue that maybe needs to be addressed before it does become a big problem. I mean, if you're out there and you find a dead calf, and you see the tracks of a grizzly bear and the track…looks like a dinner plate out there in the mud, ***it makes you kind of nervous***. It really does. (Jay, has been compensated)

Table 3-12. Interview excerpts reflecting concerns not addressed by compensation – predator management impacts on private property rights

T3-12#1 What we actually have are ***laws that are keeping us from protecting our private property***. That just isn't right. (Howard, has not tried for compensation)

T3-12#2 Well, I would say how does predator mis-management infringes on private property [rights]. I would phrase it that way, because that's what it is. That's what happens, ***the mis-management infringes on our rights***. You have those things come down on your property and you're not allowed to take care of it. (Keenan, has not tried for compensation)

T3-12#3 I don't believe it should be an all out shoot-out, but if I'm standing out there and I see one, two, five, ten wolves jump on one of my cows, or one of my horses, ***I feel I should have every right in the world to protect my personal property***…On the forest, it's not my property. It's a Forest Service lease. I'm leasing it from the United States to graze my cattle on it or whatever. But on my own private property I feel I should be able to protect it just as much as a person coming into my house and stealing my money and taking my dog. I feel that when I go into the forest that I'm a guest there. (Bruce, has not tried for compensation)

T3-12#4 I mean ***my cattle out there just because they are on public land they are still my private property***, and God doesn't protect them. I think what they are afraid of is that people will take advantage of that, but there probably would be a certain amount of that ,but there is already…***People don't like their private property rights stepped on. That's what they are doing with these wolves***. If something is on your place bothering something, you ought to be able to protect it. That's a real touchy [subject] because [there are some] people that don't like that. (Lenny, denied compensation)

T3-12#5 If they're going to keep paying, they need to up the pay some and ***they need to untie our hands a little bit so we can protect our property***… Well, you can't compare children with animals, but when you live with these cattle 24 hours a day, calve them, baby these calves along, get them through, get them healthy if they're sick, the cows or whatever, you create a bond with them just like a dog or anything else. And it's tough to see them die, especially in the cruel way in which they die. And then you have personnel come out there and say, 'well, maybe you need to move the cattle off the forest.' And I looked at the guy and I said this is private property. And he argued with me. He said , no, you need to move your cattle off the forest. And then when I did establish to him…He said, well you need to move them out of here. And I said, 'you're not going to dictate to us what we can do with private property. ***And that's the whole thing too that's getting kind of scary that they think they can keep us or tell us what to do with our private property***. (Rick, both compensated and denied compensation)

T3-12#6 I do believe that private property, landowner rights are real important and ***I think that there should be quite a bit of emphasis on the private property rights***…When the bear was put on the endangered list, the grizzly bear was put on, I certainly didn't have any input into that. It was something that was crammed down my throat and I feel that it's real important for private property owners to have their rights. ***I don't like private property rights taken away***. (Jay, has been compensated)

T3-12#7 And so when they get on private property that is a different deal I mean you own that piece of property and we should have some say of what goes on your property…If I owned a piece of property I would like to be able to say what went on it so ***I think [these] game laws the way they are now do kind of infringe on private property rights***. I bet most everybody would agree with that. (George, has been compensated)

T3-12#8 ***But right now our biggest problem [with depredations] is on private property. I don't know what ever happened to your private property rights***. (Russell, both compensated and denied compensation)

T3-12#9 See we're out there everyday and we've never had any troubles with [predators], but we hear stories that guys that see wolves killing a calf or something and the animal damage control shows up and the birds on it by then. Cause they can't get there right away and then they say that they can't confirm it was a wolf kill. And I think the rancher needs to, or the landowner needs to have the right to take those wolves if they see them. There is a fine line there because some of the guys are going to shoot every one they see. (Thomas, has not tried for compensation)

T3-12#10 The only comment that I really feel that if there is wolf or grizzly bear problems on private property where they are causing a problem that the landowner, I mean it is a problem and he has seen it happen, then he should be able to eliminate that animal and not suffer consequences of endangered species act. (Kurt, has not tried for compensation)

T3-12#11 If [that grizzly bear] is killing my cow ***I should be able to protect my property*** and take whatever measure is necessary. (Patrick, has been compensated)

T3-12#12 I don't feel that way [that predator management infringes on property rights]. But I'm certain that there are others who disagree with me. (Anne, has not tried for compensation)

T3-12#13 And ***all I'm advocating is control of the problem bears*****,** not all bears, because I'm fully aware that there are bears that don't bother our hives. And I really think that ***I should have the right to defend my property***. It's at a stage now, I'd have a better chance of shooting a human being than if I was to shoot a grizzly. I would stand of better chance of not going to jail or paying a fine and that's ridiculous if

you're for protecting your own property. It just seems ridiculous. (Jerry, denied compensation and has refused compensation)

T3-12#14 It is damaging my property and if this was a city and that was your dog damaging my stuff you would have to pay full compensation. But because for some reason you call it endangered even though it is not technically, maybe not endangered but at least it probably shouldn't be alive anyway. I have to bare all the economic and social and opportunity costs to take care of something, I am not being made whole. But everybody else gets to sue and all of these other things I can't do. (Jacob, has been compensated)

T3-12#15 Livestock producers should be given the ability to control any wolf they feel, well any wolf, both on private ground and on public ground when they are in and around their livestock, instead of spending millions of dollars to let the federal government do it. Why no allow the livestock producers to do it? Fewer wolves would be killed. Wolves would finally be given the opportunity to be wild, much like the coyote now. You get a standing shot at a coyote once, and then you will never get that stand shot again. Wolves need to be taught that same lesson. ***If we were given the ability to protect our own property and our domestic livestock, there would be literally hundreds of wolves' lives saved over the course of the next 20 or 30 years***. (Dylan, has been compensated)

T3-12#16 I think if you catch [a grizzly bear] killing your livestock and you know it, or if he's bothering you and your family or something, like we go up there riding, you never know when you're going to run into one. ***I think you ought to have the right to defend yourself, or your property without facing a ten-year jail sentence and a hundred thousand dollar fine, or whatever it is.*** But right now, you've got to let him gnaw on you for a while before they'll believe that he attacked you, and that's about the way it is. I just think it's a bunch of crap. (Harry, both compensated and denied compensation)

T3-12#17 ***If they are eating your private property, something that you have invested money into and you bought, and you've owned it; you're god damn right you should be able to shoot a wolf***…And it's a little defeating to have the wolves come in and the grizzly bears come in and just ravage the cattle, degut them. It is sad, I guess that is nature in a way, but they are screwing with private property when they kill cattle. (Lyle, both compensated and denied compensation)

T3-12#18 And it is just certainly helps the private property owner or the guy there in his position with the bear. I mean standing there with your hands tied, that is, that is unthinkable, you know to ask someone to stand there and let five hundred dollars out of their pocket time and time again. You can't ask somebody to do that. There is no way I mean ***I think people have the right to protect their private property, especially if you have the right to have your cattle in that place***. You know there is just no question in my mind. (Ryan, denied compensation)

Table 3-13. Interview excerpts reflecting views on federal government administration and funding of compensation programs

T3-13#1	***The federal government put these animals here*** through the Endangered Species Act, ….even though it's not governmental organizations, it's not taxpayer's dollars that's providing the compensation [currently], the government's footing the bill and should pay [compensation]…The federal government is going to have to continue to fund the management and the compensation funds throughout. I'm not going to let them get away with putting these animals here and then walking away and giving the states management control without proper funding. That's just wrong. (Dylan, has been compensated)
T3-13#2	I think the federal government, … ***were responsible for bringing wolves in***, they should continue to be responsible for them. They can't just bring it in, and then dump it on the state or the local governments and just expect them to swallow it and just take it when they didn't want the to begin with. So they'll regulate it, they'll control it, but it needs to be with federal dollars. That's fair. If somebody back in California or New York City wants to have a wolf in my backyard, they have to share the responsibility. They get to help pay for it, their tax dollars get to help pay for it… The federal government has introduced this new predator, and it's their responsibility to control it, and their responsibility to clean up after it. (Derek, has not tried for compensation)
T3-13#3	[Wolf reintroduction] was a federal law; ***it came out of the federal legal system***. What I really believe is when Congress passes something, really they need to say is, "okay, this is what we think – a compensation program might be run." And [then] fund those programs, rather than just putting it out to the states. (Richard, has not tried for compensation)
T3-13#4	I think it should be the federal government [that funds compensation], ***they brought them.*** I would prefer the state [to administer it]. You got your local guys here. (Russell, both compensated and denied compensation)
T3-13#5	***[Compensation] should come out of the endangered species act***…Instead of being at odds with the private property owner, [saying] hey, if you're going to have an endangered species on your place we'll pay for the habitat … that animal or plant….Any animal that was on [the list], or species that was on that, the federal government has to do their budget, they don't have it just sitting there. They [should] have a big policy that says this is all for compensation. (Eric, has been compensated)
T3-13#6	I think ***[if] the general public is behind [predator restoration]*** I think the compensation should come through, somehow, through a government program, of some kind. (Mark, has not tried for compensation)

T3-13#7 I think that this whole idea of government beginning compensation programs is a really good idea. That shouldn't be left to private organizations to fundraise for. ***The public has determined that predators are valuable***, you know, for purposes of beauty and nature and everything else. (Anne, has not tried for compensation)

Table 3-14. Interview excerpts that reflect views on state level administration and funding

T3-14#1	I think it should be the federal government [that funds compensation], they brought them. ***I would prefer the state [to administer it]*** You got your local guys here. (Russell, both compensated and denied compensation)
T3-14#2	I think state government, as much as people moan, it's more accessible. It's easier to respond to both to individuals in terms of changing things that they need to be changed. ***The state can respond more quickly than the federal government.*** (Anne, has not tried for compensation)
T3-14#3	***I think [a state run program] would be a lot easier***, especially now when I am getting letters following up on this [compensation payment]. I don't really care for that. (Peter, has been compensated)
T3-14#4	[Compensation] should be state run. Because when you start getting in with those little private groups and they start making the decisions, I don't think that those decisions are as well made as they are with a state employee. Those people are doing that to enhance that population. ***The state is doing it to try to keep everybody happy***. They have got too. ***There is too much personal gain with those individual groups***. (Cliff, has not tried for compensation)
T3-14#5	I think a state run organization would have to be a hell of a lot better. ***[With private compensation programs] I think you would get too many personalities into it***, and the Defenders of Wildlife, they don't want you to kill anything. (Walter, has not tried for compensation)
T3-14#6	***You know a lot of [other ranchers] don't even accept the money from the Defenders of Wildlife because they feel if they accept it they are agreeing with [wolf reintroduction]***. …I think if [compensation] were handed out through the tax thing or through a different agency, a lot of people they probably wouldn't be as ticked off about it. (George, has been compensated)
T3-14#7	Although ***when you get to dealing with the Defenders of Wildlife, there again you're dealing with a bunch of people from other states that I don't believe should have any say on what we do in our state at all. None***. Even though it's public lands, it's still in our state. And I don't think they should have a damn thing to say about it. We're the ones that have to put up with it and not them. So I think the compensation should come from the state…It's a local issue, is what it is. It's a local issue. It's a state issue and we just don't need anybody else's input. The more money you take from out of state, the more control out of state wants to have on your state. And that's been the whole problem all along is [the state] took money from the federal government. Now [the] federal government has got their hands in control. (Keenan, has not tried for compensation)

T3-14#8 ***I guess I'd like to see a combination***; I'd like to see the state being able to monitor, and administer a program like that and some of the funds coming from private organizations…Those organizations that push for the reintroduction or the limiting of personal control of those predators. (Ralph, has not tried for compensation)

Table 3-15. Interview excerpts that reflect views on private organizations administering and funding compensation programs

T3-15#1 ***But I think it's the general public that is behind [wolf conservation], so I think the compensation should come through, somehow, through a government program of some kind***. I don't like government programs at all, but it's the [public that wanted the wolves], and maybe there's the people that say, "I'm not for it." It was the environmental groups that pushed this through, it wasn't the general public, but so the environmental groups are the ones that should have to pay for the compensation. But, it's a little hard to say there too, because generally you're saying that everybody wants the wolf here, which maybe everybody doesn't, and so maybe it is just the environmental groups. [Environmental groups] it's their membership that maybe needs to pay the compensation. I don't know, like I say, I don't like government programs, but the rancher can't carry all the losses if it's the general public that wants to put him in the predicament where he has to. (Mark, has not tried for compensation)

T3-15#2 ***I think as long as there's people out there that want these pretty wolves and stuff around they have got deep pockets, they might as well shell the money out***. That would be if the state took it over then it would be tax dollars and I don't know [if I like that]. Of course them animals belong to everybody, maybe everybody should pay, but then I would be paying for it to. (Patrick, has been compensated)

T3-15#3 ***[Compensation's] still a waste of money. At least when it was a private run [program] they were getting donations from people*** who wanted to pay for it, then if it were state run then everybody would have to pay for them whether they wanted to or not. (Howard, has not tried for compensation)

T3-15#4 ***I can see more of a solution coming from a private organization*** like these Defenders of Wildlife or something. Man, when I heard of that thing, I mean it is kind of a wacko idea, ***but it is more of a put your money where your mouth is deal***…Because the more bureaucracy you have the less efficient it is going to be and less things are going to get done, more cost that is going to be. (Ryan, denied compensation)

T3-15#5 ***One part of me says at least [privately run compensation programs] brings opposite sides together, so that's good***… It probably helps the taxpayer, I guess if a foundation wants to do that. Once again it goes back to my idea of swift action and getting the problem animal out of the way. Maybe the agency, right now the way it is [with] the private compensation, they're hoping that buys us time to not have to go find that wolf. We'll wait until he kills ten animals and then we'll get serious. Well, maybe if it was coming out of their budget they'd be a little quicker [to act]. So I think private is fine but I still think the agency people should still show good faith and be right on top of what ever problem there is.

(Eric, has been compensated)

T3-15#6 ***I just hate the government setting something up*** because if one person could probably handle it, they would have to hire fifty. (George, has been compensated)

T3-15#7 I'd say the compensation program should be just the way it is. Like the Defenders of Wildlife, because ***I think once you get it tied up with states, it's going to be just a big headache trying to deal with all that***. I think you need some kind of a third party [to] look at the situation. If you have, say, like [state fish and game] deal with that, then they're also dealing with the bears. It's their bears. I think to be fair you need to have a third party, another group taking care of that. (Brian, has been compensated)

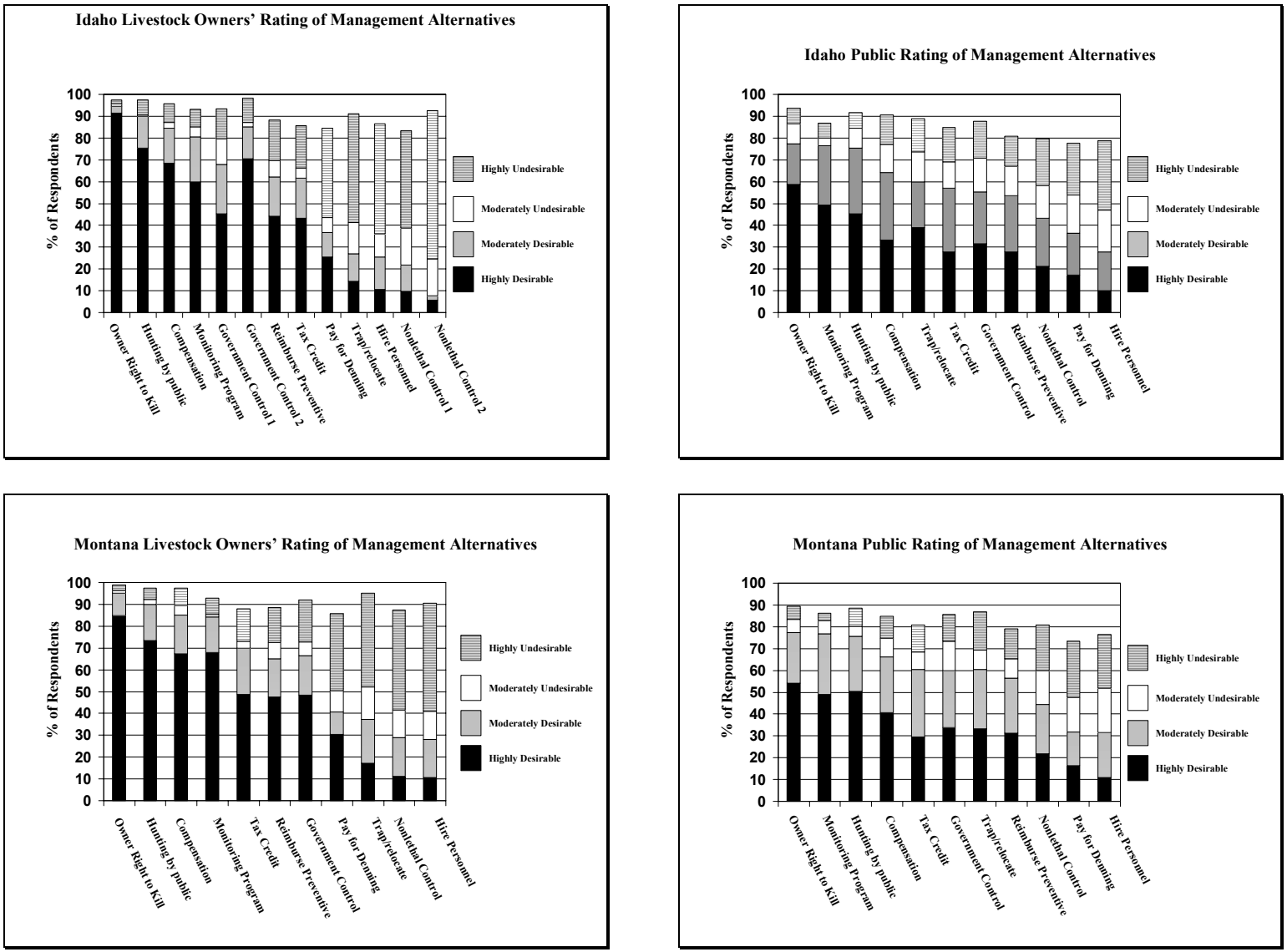
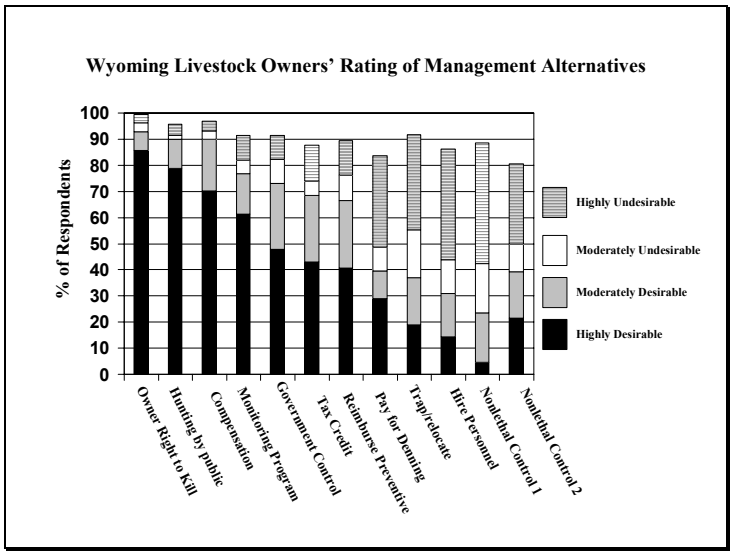


Figure 3-1. Respondents ratings of the desirability of management alternatives.



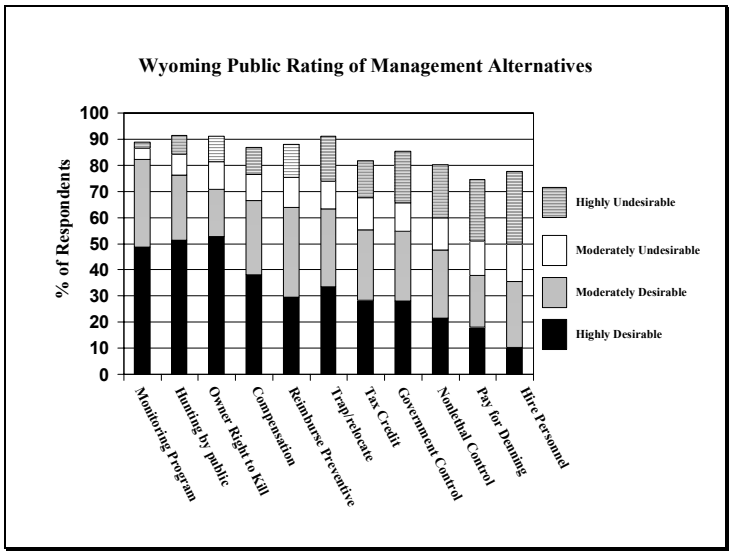


Figure 3-1(continued). Respondents ratings of the desirability of management alternatives.

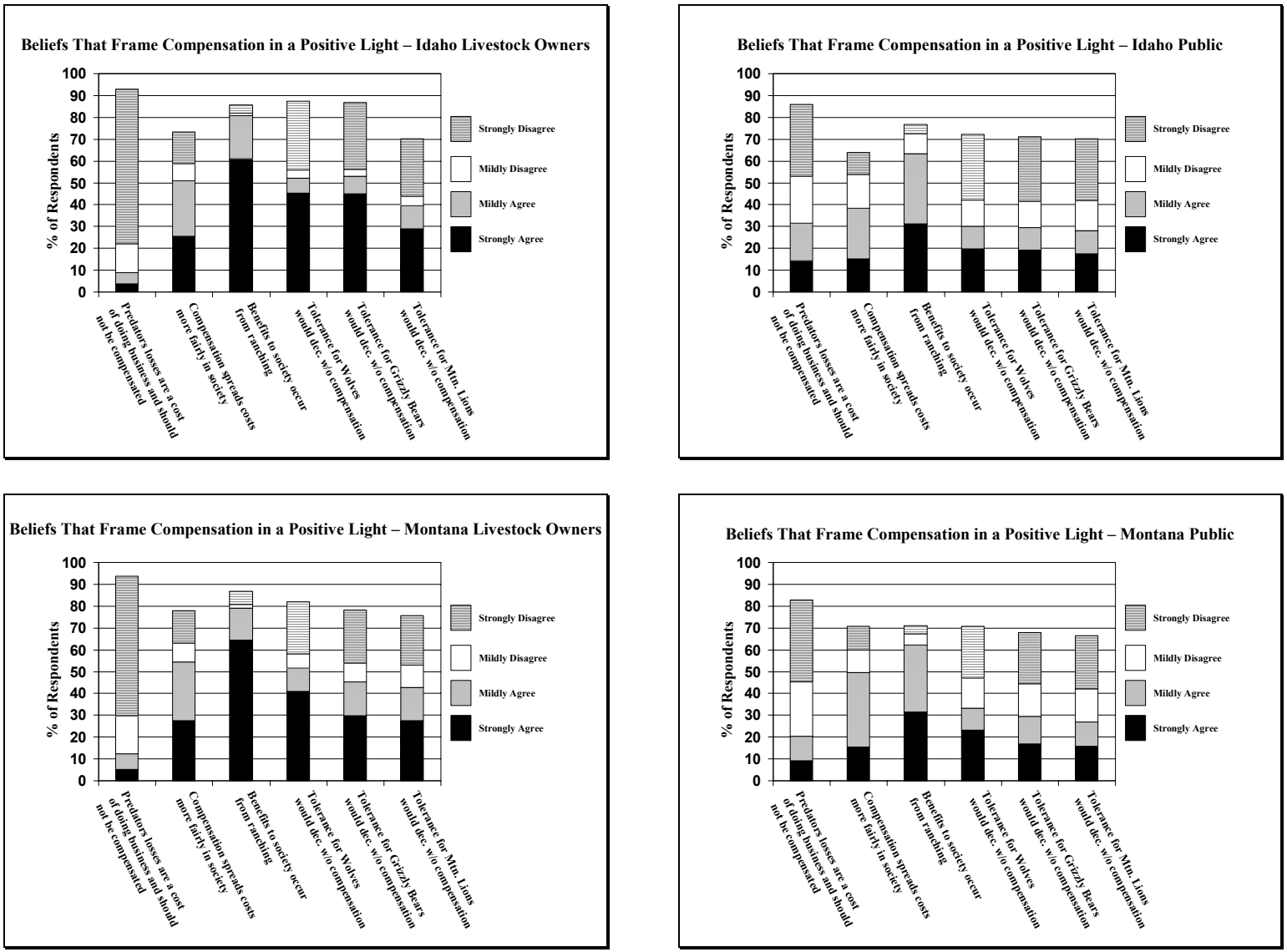
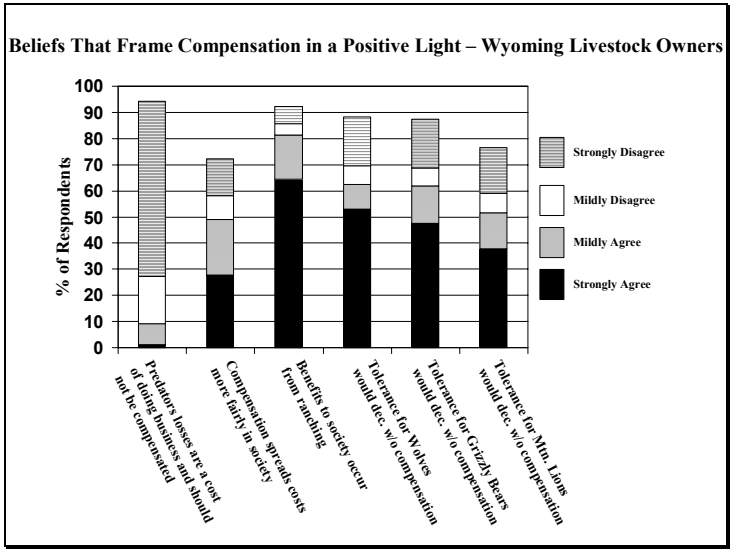


Figure 3-2. Respondents' agreement with beliefs related to the positive social consequences of compensation.



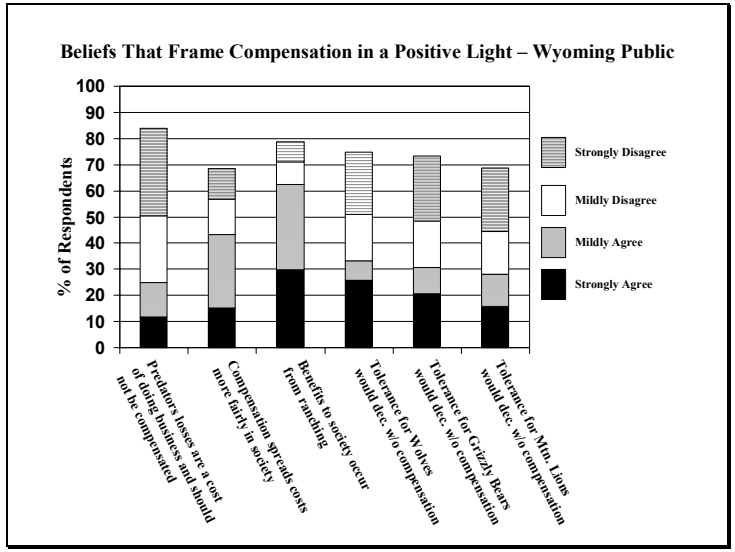


Figure 3-2 (continued). Respondents' agreement with beliefs related to the positive social consequences of compensation.

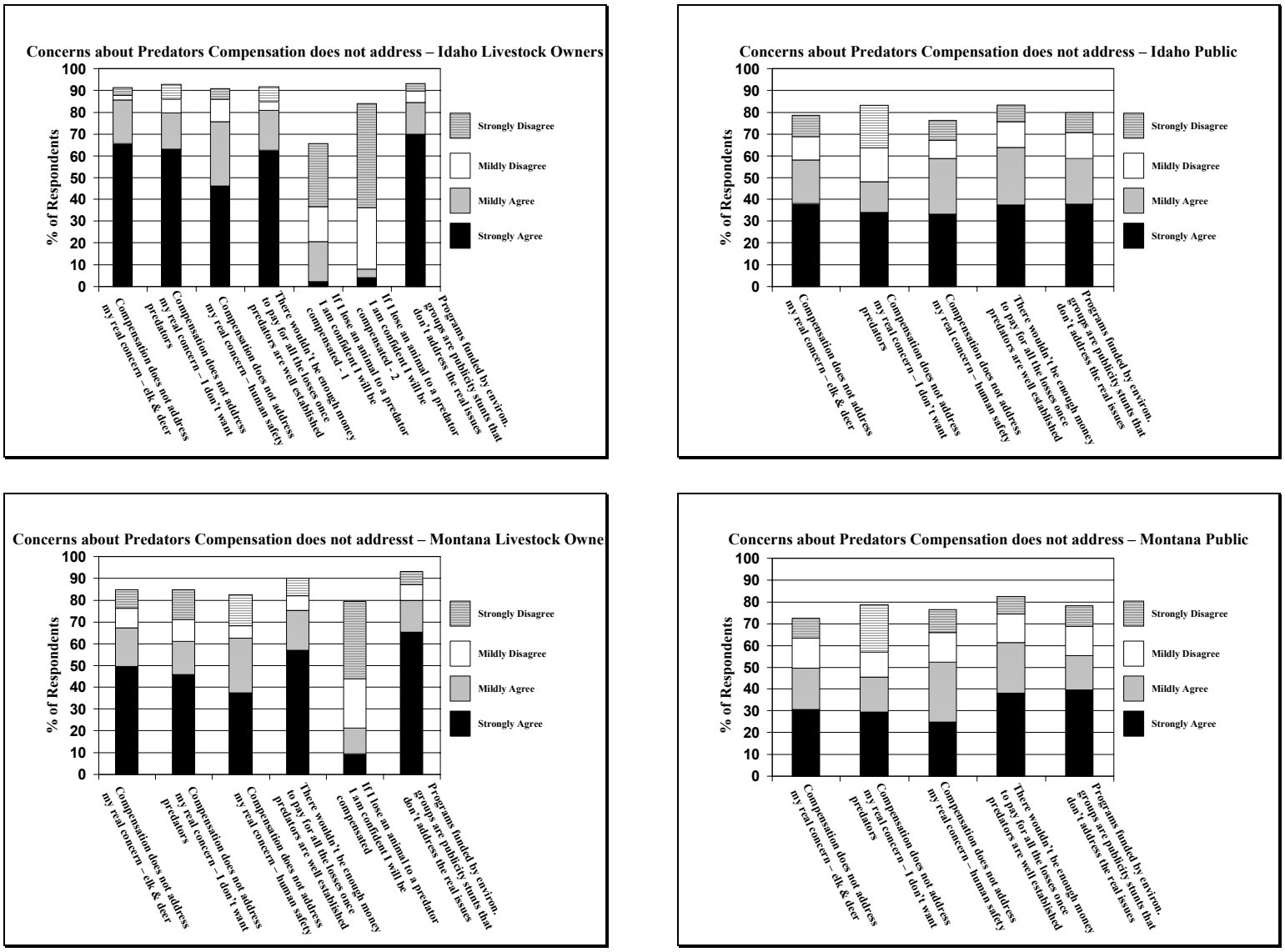


Figure 3-3. Respondents' agreement with concerns not addressed by compensation and beliefs about the feasibility of compensation.

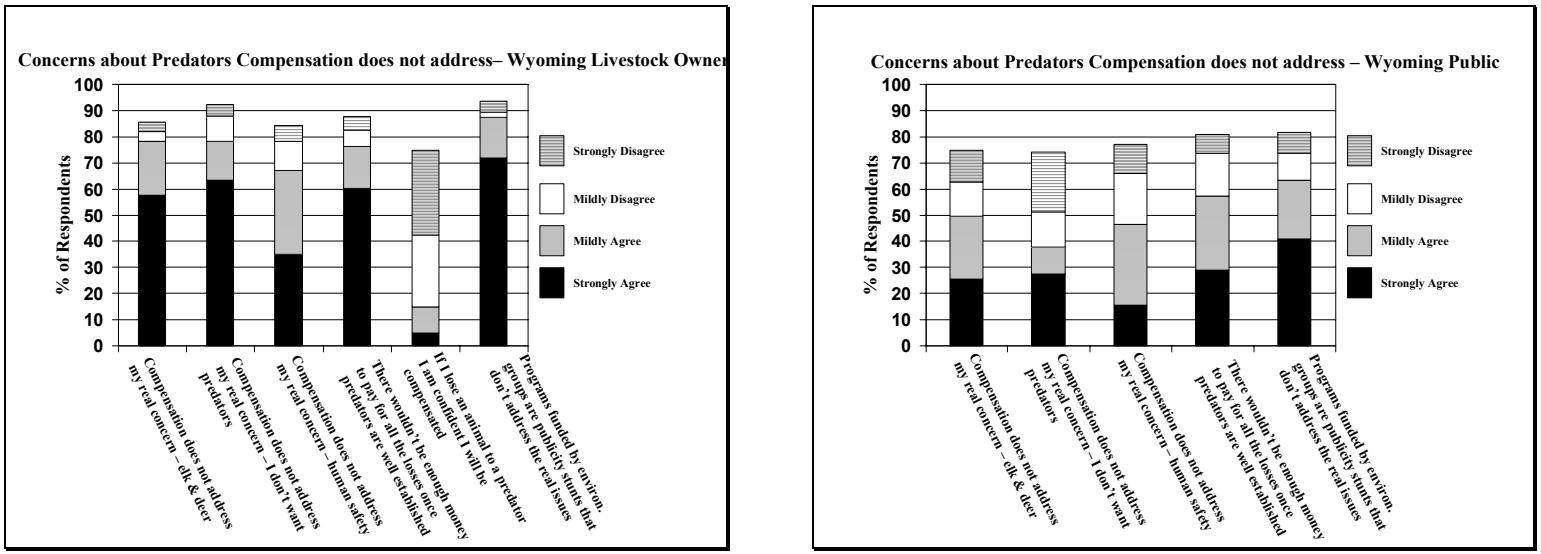


Figure 3-3 (continued). Respondents' agreement with concerns not addressed by compensation and beliefs about the feasibility of compensation

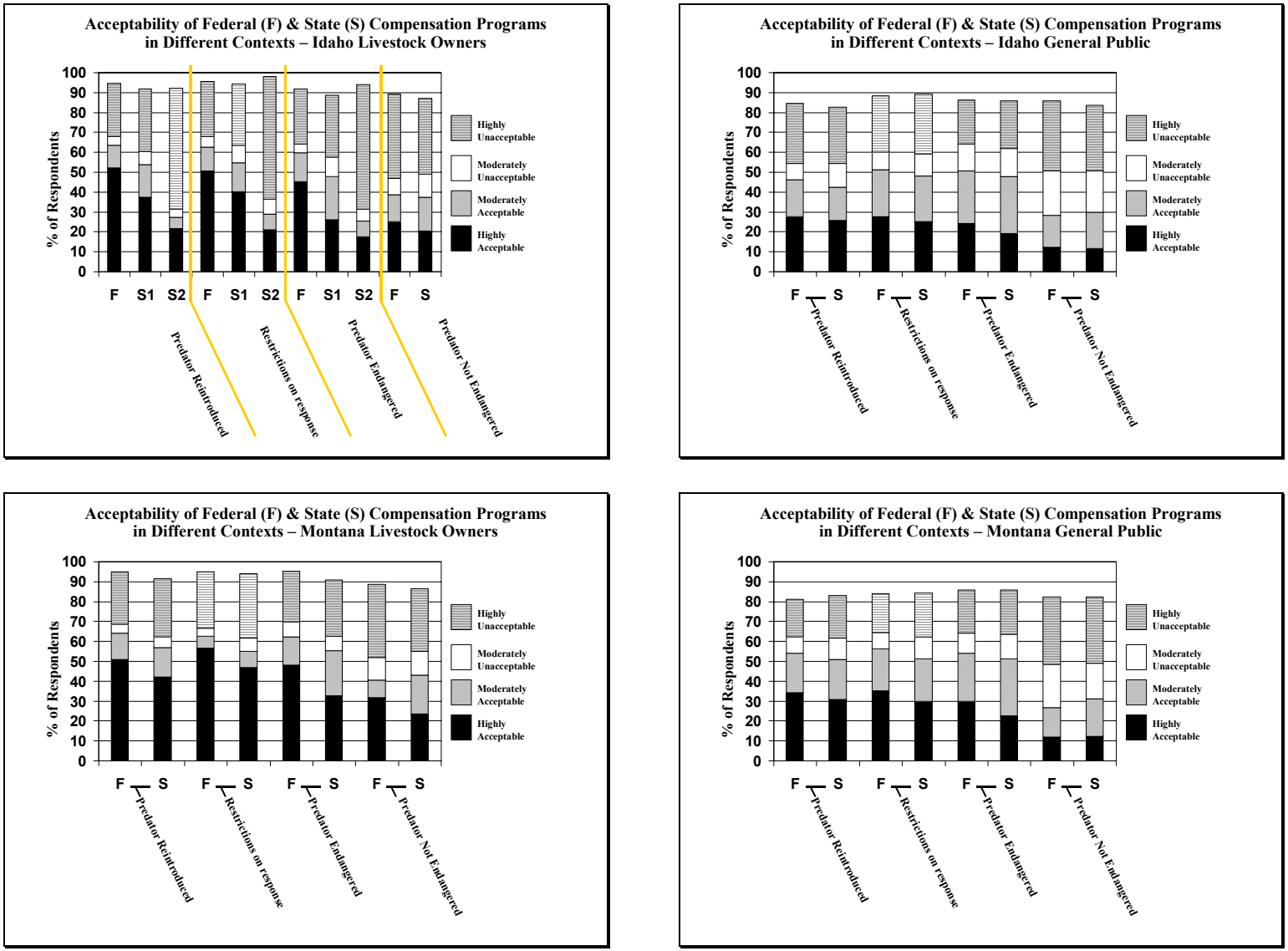
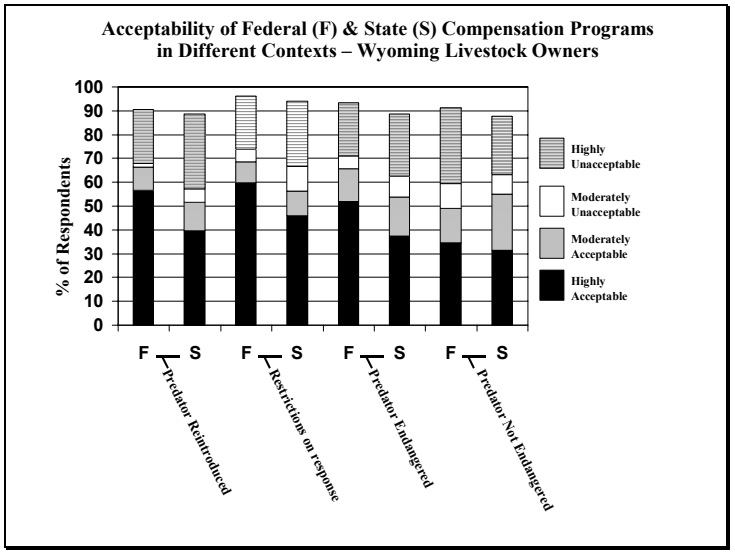


Figure 3-4. Acceptability of a federal or state government predator compensation program in different contexts.



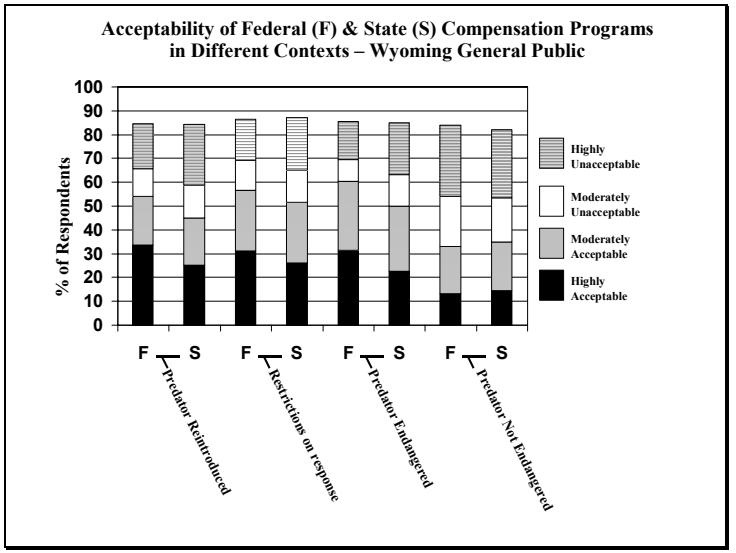
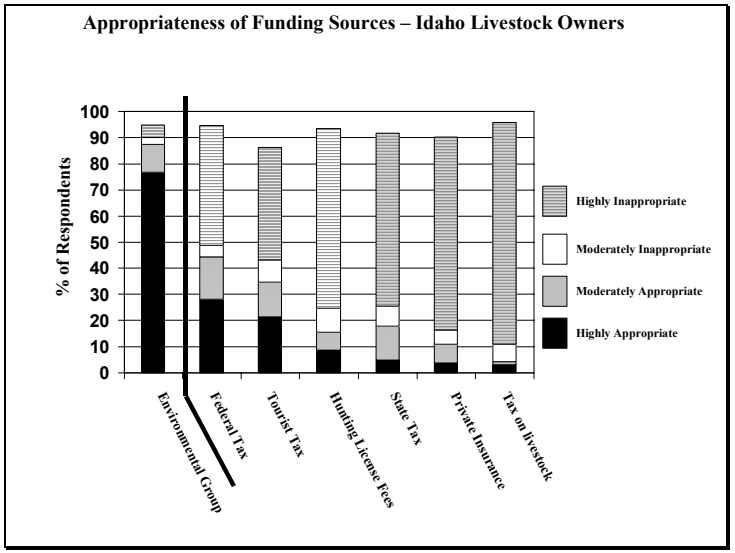
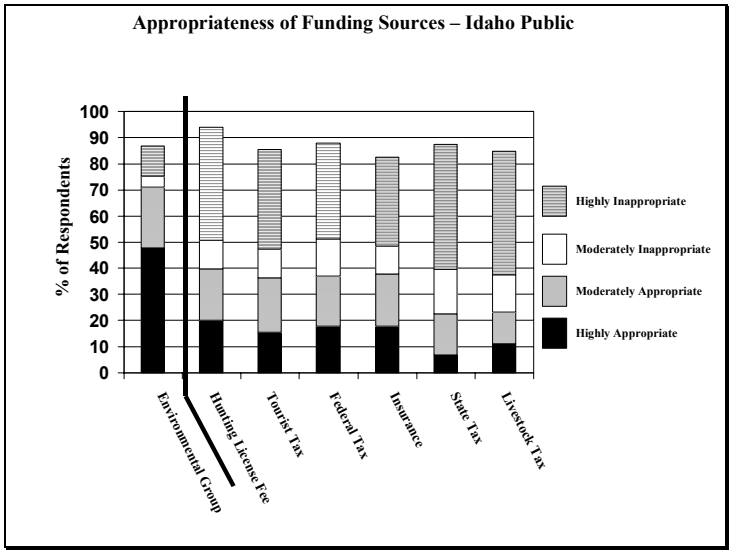
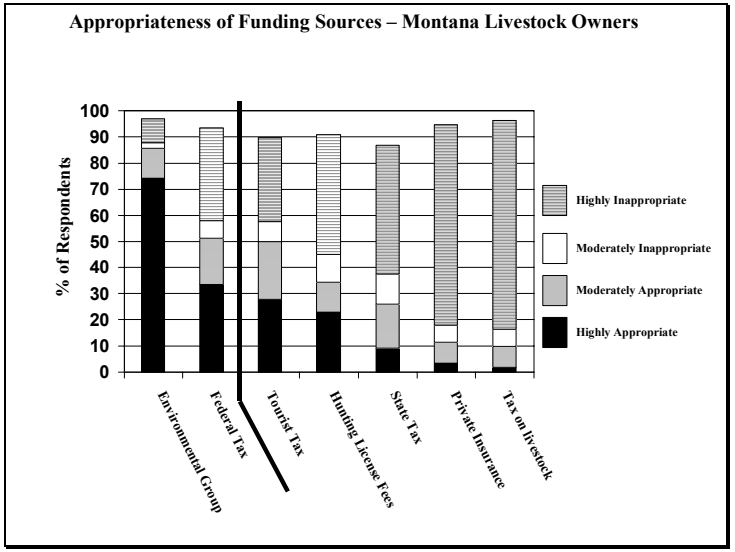


Figure 3-4 (continued). Acceptability of a federal or state government predator compensation program in different contexts.







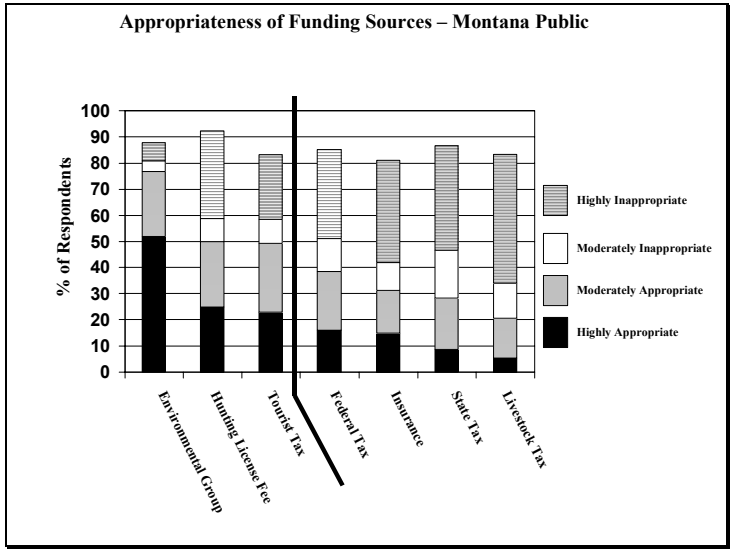
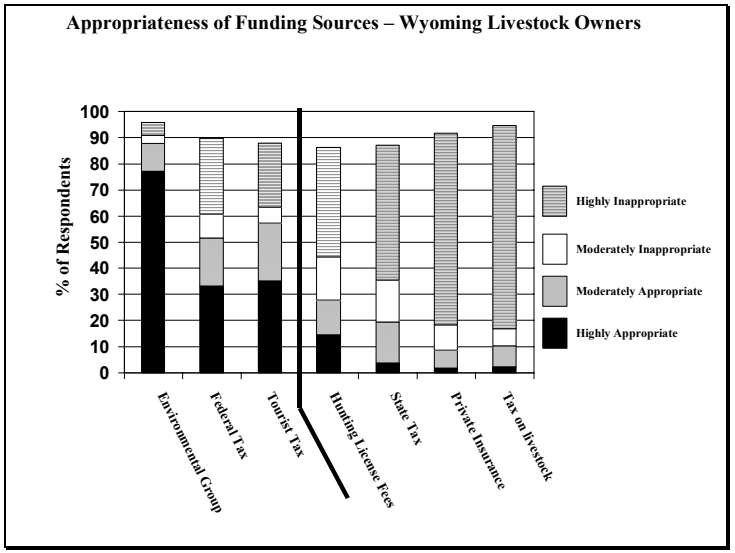


Figure 3-5. Appropriateness of funding predator compensation programs via various sources.



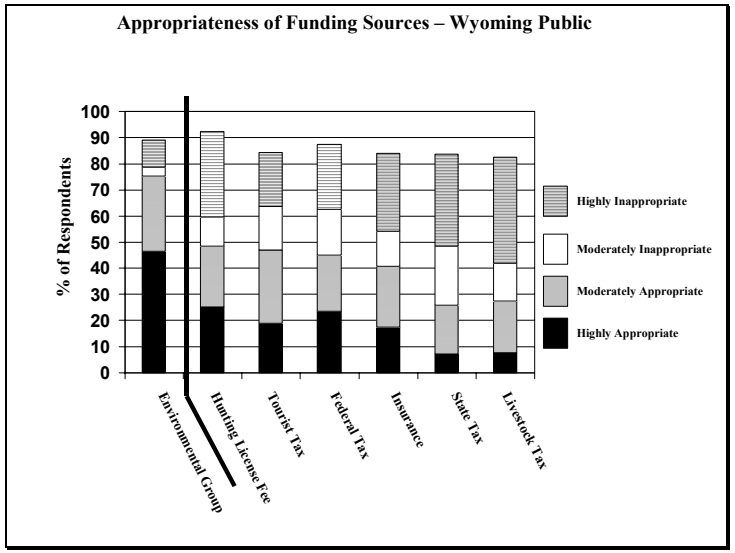


Figure 3-5 (continued). Appropriateness of funding predator compensation programs via various sources.

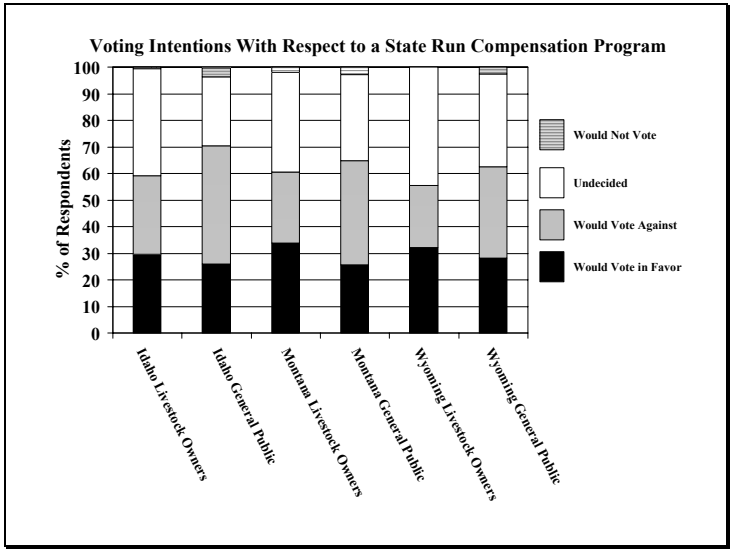


Figure 3-6. Voting intentions if a state-run compensation program to pay for losses/damages caused predators were on the ballot in an upcoming state election.

Chapter 4 Discriminant Analyses: Views about Compensation

In several different ways, the survey examined the extent to which respondents supported the concept of compensation. While the results indicated that compensating individuals for losses to predators was seen as a desirable management alternative by a clear majority of respondents (74.4% of respondents overall), the percentage of respondents "endorsing" compensation decreased markedly when the question was phrased in terms of the acceptability of a state run compensation program, and even more when asked if they would vote for a state run program (Figure 4-1). Several possible explanations exist for this observed trend. One possibility is an order effect in the way the questions were presented in the survey. The "desirability of compensation" question occurred earliest in the survey prior to any other questions related to compensation. The "acceptability of compensation" question occurred later in the survey, after questions related to reasons why a person might support or oppose compensation and questions about funding. The voting question came near the end of the survey. Another possible explanation for the difference in responses stems from differences in the context in which the questions were asked. For example, the latter two questions focused on "state" programs whereas the "desirability" question focused on "government" programs (which could have been interpreted as federal or state programs) and this may have influenced responses (an individual may support federal, but not state programs). Or it is possible that these questions reflect such different judgments that they should not be considered as alternative ways of assessing endorsement but instead as measuring very different ideas. For example, people may be willing to say that a program is desirable, but without knowing the specific details about how the program would be implemented the same individuals may not be willing to indicate how they would vote. An analysis that explores the relationship between the different types of judgments about compensation programs (that is, are they desirable; are they acceptable; would you vote for one) and respondents' underlying beliefs (views about wildlife, beliefs in support or opposition to compensation programs, views about funding mechanism) can help provide insight into this issue. Therefore, this section of the report explores whether it is possible to identify factors that are related to whether compensation programs are endorsed or opposed. Specifically, using the three different measures of "endorsement" (voting, desirability, and acceptability) as dependent variables, analyses were conducted to explore whether it was possible to identify respondent characteristics that are related to the extent to which individuals endorse the concept of a compensation program.

Given the categorical nature of the dependent variables (voting, desirability, and acceptability), these analyses were conducted using discriminant analysis. The term "discriminant" refers to the idea that the analysis seeks to determine if it is possible to discriminate between (that is, classify or predict group membership) individuals who give different types of responses (e.g., those who would vote for a state run compensation program versus those who would vote against) using a set of measurable characteristics (e.g., beliefs about wildlife, age, etc.) that are referred to as discriminating variables. The analysis essentially seeks to identify which characteristics, if any, are different between individuals who respond in different ways (e.g., those who indicated they would vote for a state compensation program versus those who indicated they would vote against it). This in turn provides insight into what factors (e.g., views about wildlife, views about funding mechanisms, etc.) influence how people respond (e.g., intention to vote for or against).

One basis for assessing how well the characteristics discriminate among groups is to evaluate the classification accuracy. That is, using the characteristics identified in the discriminant analysis as being important in identifying how one votes, what percent of the time can one correctly "predict" how a person would respond. In large samples such as the one from this study, the stability of the classification functions (that is, how well the relationships hold up and generalize to another sample) can be evaluated using a cross-validation approach. Using this approach, the relationships between the dependent response (e.g., voting) and the discriminating characteristics are developed using part of the sample and then the classification accuracy is evaluated using the remainder of the sample (Tabachnick and Fidell, 1989). This cross validation approach was used in the following analyses. Approximately 65% of the sample was randomly selected to calculate the discriminating relationships while the remaining 35% of the respondents were used to evaluate the stability of the relationships. The statistical significance of the improvement in ability to classify respondents according to a dependent response (e.g., voting behavior) over what would be expected by chance alone was evaluated using procedures described in Brown and Tinsley (1983).

Discriminating Across Respondents - Voting Responses

Technical Description of Measures Used in Analysis

The first analysis was to determine if it is possible to identify respondent characteristics that were related to voting patterns. The voting question asked respondents whether they would "vote for or against a state run compensation program to pay for losses/damages caused by predators in an upcoming election." Respondents could indicate that they would vote for, vote against, were undecided, or would not vote. Because this analysis explored factors influencing voting, respondents from the livestock owner sample, the general public sample, and all three states were combined into a single data set. State of residence and livestock ownership were included in the analysis as possible characteristics influencing voting. Due to the small number of respondents who indicated that they would not vote at all (2.2%), the analysis of voting patterns included only those who indicated they would vote for, would vote against, or who were undecided.

The discriminating variables (characteristics we thought might potentially influence voting behavior) fell into seven broad classes: (1) views about compensation, (2) beliefs about the role or functions that compensation serves in society, (3) beliefs about the personal impact of predators/compensation, (4) views about appropriateness of sources for funding compensation programs, (5) familiarity with compensation programs, (6) views about predators, and (7) socio-demographic characteristics (Figure 4-2). Where appropriate, factor analysis, a statistical procedure used to evaluate whether a set of questions reflect a single underlying characteristic (factor), was used help define the specific variables used in the analysis due to the superiority of multi-item measures in this type of analysis (Churchill, 1979; Tabachnick and Fidell, 1989). (When there are multiple ways to measure a psychological characteristic, for example satisfaction, a composite variable based on measuring it in a combination of ways is better than any single measure alone.) Reliability of composite measures identified through factor analysis was evaluated using Cronbach's alpha.

Two variables were used as indicators of respondents' views about compensation (the first class of discriminating variables in the analysis). The first was the question about desirability of a management program "that pays individuals for losses/damages caused by

predators" that are not threatened or endangered. The exact wording and formatting of this question and the other questions discussed can be found in the Appendices, which contain copies of the actual surveys. The second variable indicating a respondents' views about compensation explored views about the acceptability of a predator compensation program run by the state government. Factor analysis indicated that four of the questions (acceptability when: the predator is endangered, the predator is not endangered, livestock owner's ability to kill or harass the predator is restricted, and where the predator has been reintroduced) formed a coherent factor that was highly reliable (Cronbach's alpha = 0.84). Therefore these items were combined (added and averaged) into a single "acceptability of state compensation" variable that was used in the discriminant analysis.

Factor analysis was also conducted on the twelve questions that explored commonly cited reasons for support or opposition to compensation programs to determine if there were a coherent set of underlying factors that describe beliefs about the role or functions compensation does or does not play in society. The analysis suggested there were two meaningful and reliable factors. The first was a combination of beliefs focusing on issues that compensation does not address (reduced elk/deer populations, human safety concerns, simply not wanting predators around) in conjunction with beliefs reflecting skepticism about compensation programs (there would never be enough money to pay for all the losses, compensation programs are just publicity stunts) and views about contribution of predators to the local economy (which was inversely related to the other items and therefore "reverse" coded to create the combined measure). Considered collectively this factor evaluates/reflects a respondent's degree of skepticism about compensation and how well it serves society. Cronbach's alpha for this combination of variables was 0.83. The second factor showed a lower but acceptable level of reliability (Cronbach's alpha = 0.65). It was comprised of two questions that explored normative-like beliefs about the appropriateness of compensating livestock owners (whether losses should be viewed as a normal cost of doing business and whether accepting compensation as a solution violated livestock owners' responsibility to their livestock). Originally it was not anticipated that these two items would factor together. When the survey was developed, it was anticipated that the latter question ("accepting compensation violates a responsibility owners have for the protection of their livestock") would factor with the other questions exploring issues not addressed by compensation. However, the analysis showing that it factored with the "predators are a cost of doing business" question suggests that people interpreted this question more in terms of whose responsibility it is to address predation problems rather than in terms of an issue not addressed by compensation (i.e., an ethical responsibility to livestock). Finally, the belief that "compensation programs spread costs related to predator conservation more fairly in society" was grouped in a factor that had an unacceptably low reliability (Cronbach's alpha = 0.14). Given the prevalence of this belief as a justification for compensation, it was included in the analysis as a single item discriminating variable.

Two questions in the survey explored views about the perceived personal impact of predators/compensation on respondents. One question asked respondents if they felt predators would have a negative effect on them financially. This question was asked for grizzly bears, mountain lions, and wolves separately. However, given the high correlation in responses (r =0.97 to 0.98), only the responses pertaining to the wolves was included in the analysis to avoid multi-collinearity problems in the discriminant analysis. The survey also included a question asking whether tolerance for predators would decrease in the absence of a compensation

program. This question also was asked for grizzly bears, mountain lions, and wolves. Because responses across species were again highly correlated (r=0.88 to 0.93), only one of these variables (wolves) was included in the analysis as a potential discriminating characteristic to avoid problems with multicollinearity.

Factor analysis of the questions related to the appropriateness of different funding sources for compensation programs suggested respondents conceived of three categories of funding sources. The first reflected funding originating from the livestock owners themselves: tax per head of livestock, stockgrower's associations, private insurance, and shared insurance (Cronbach's alpha = 0.91). The second reflected public funding through general federal or state taxes (Cronbach's alpha = 0.74) while the final reflected funding via voluntary donations by (Cronbach's alpha=0.66).

Respondent's familiarity with predator compensation programs was assessed by a single question asking respondents to self-rate their familiarity with compensation prior to receiving the survey. The question presented several options that distinguished among people who had submitted claims or had other experience with compensation programs (7% of respondents), those who knew someone who had experience with compensation or had heard of compensation programs (74%), and those who had not heard about compensation (20%). Given the small percentage of those with direct experience, for the discriminant analysis, familiarity was coded as a dichotomous variable distinguishing those who had not heard about compensation (20%) from those who had either heard about or had direct experience with compensation (80%). We considered this a meaningful variable because it distinguished those who were learning about predator compensation programs and forming opinions for the first time during the course of responding to the survey from those who had prior knowledge and opinions.

In human dimensions of wildlife research, views about wildlife are generally assessed from the perspective of attitude theory. Recent research on predators (Bright and Manfredo, 1996) suggests that symbolic beliefs about predators (that is, beliefs about the role or place of predators in contemporary society) are the most important factors shaping attitudes toward wildlife. As a consequence, questions exploring views about predators in the survey focused on symbolic beliefs. Factor analysis suggested that four questions jointly reflected a coherent symbolic belief factor ("I would like to see populations increase in my area", "these animals are an important part of the ecosystems they occupy", "people who live in my state have a responsibility to learn to co-exist with these animals", and "these animals attract tourists to my state"). Although the survey asked the respondents to answer these questions for three different predators separately (grizzly bear, mountain lion, and wolf), the responses were highly correlated ($r > 0.90$). Therefore to avoid problems with multicollinearity symbolic beliefs for only one species (wolves, Cronbach's alpha=0.86) was included as a discriminating variable.

The final set of variables included in the analysis were the socio-demographic characteristics. Gender, age, and number of years respondent had lived in the state they currently reside in were included as measured in the survey. State of residence (Idaho, Montana, Wyoming) was included in the analysis also. Given the possible importance of rural versus urban backgrounds in influencing views on compensation, this characteristic was assessed in two ways. The first examined where the respondent currently resided and the second where respondents grew up. For the analysis, both were coded as dichotomous variables in which respondents from communities of 10,000 or less (rural context) were contrasted with respondents from communities with populations larger than 10,000 (urban context). The final socio-

demographic characteristic was an attempt to distinguish individuals who currently or have in the past owned livestock (and/or bees) from those who have not. The entire set of respondents to the livestock owner survey was obtained from a database used by the Montana Agricultural Statistics Service based on livestock ownership. The public survey included a question about whether the respondents had ever engaged in ranching/beekeeping. This is not a perfect match since people who have not engaged in these activities might still own livestock. However, if the relationship between livestock ownership and intentions to vote for compensation is strong, it would likely become apparent through the analysis based on a variable defined in this manner. Therefore, a dichotomous variable was included to reflect ranching/nonranching backgrounds despite these limitations to try and incorporate this characteristic in the model.

Technical Discussion of Results

Analysis of the cross-validation classification table reveals that 57% of the respondents were correctly classified according to their voting intentions using the two discriminant functions (Table 4-1). This was similar to the percentage of respondents correctly classified in the portion of the sample used to develop the discriminant functions (60%) indicating a high degree of consistency/stability in the classification scheme. By chance alone one would have expected 34% of respondents to be correctly classified. The improvement over chance was statistically significant ($z=8.7$, $p<0.001$). From 64-65% of those voting for or against were correctly classified while only 43% of those undecided were correctly classified. In other words, the analysis was more successful at identifying distinguishing characteristics of those who had made up their mind how to vote while those who had not decided how to vote were more difficult to characterize. The percentage of "undecided voters" misclassified as "voting for compensation" was twice as great as those misclassified as "voting against". A much larger percentage of voters for or against compensation who were misclassified were classified as undecided rather than as voting the wrong way.

The discriminant analysis yielded two significant discriminant functions (Table 4-1). Examination of the group centroids (the mean score for a "voting group" based on the discriminant functions developed in the analysis) indicates that the first discriminant function maximally separates (i.e., discriminates most clearly between) respondents who indicated they would vote for compensation versus those who indicated they would vote against it.

The characteristics that are most important in distinguishing between groups in a given function are evaluated by looking at the correlations (also called function loadings) between the discriminating variables and the discriminant scores. A high correlation indicates that the discriminating variable makes an important contribution to distinguishing groups while a low correlation indicates the characteristic plays little role (Tabachnick and Fidell, 1989). Absolute values of function loadings can range from 1.0 (perfect correlation) to 0 (no relationship). Though there is not a definitive rule for how high a loading must be in order to be considered meaningful, loadings of 0.40 or higher are often considered meaningful. In this study there was often a notable gap between loadings of 0.40 or higher and the next highest loading. As a result, only discriminating variables with loadings of 0.40 or greater are interpreted in explaining the results of this analysis.

The discriminant characteristic showing the strongest relationship was respondents' perceptions of the acceptability of having a state run compensation program (Table 4-1). As would be expected, respondents who would vote for a program tended to find a state run

program acceptable ($\bar{x}$ = 0.83[3]) while those who would vote against tended to indicate a state run program was unacceptable ($\bar{x}$ = -0.74). Although there was a marked drop in importance as indicated by the function loadings, four other discriminating characteristics also helped to differentiate among respondents according to voting intentions (Table 4-1). The respondents' views about: the desirability of paying individuals for losses due to predators, whether or not compensation spreads costs of predator conservation more fairly within society, the appropriateness funding compensation programs using a general tax base, and normative beliefs about the concept of compensating livestock owners (whether losses should be viewed as a normal cost of doing business and whether accepting compensation as a solution violates livestock owners' responsibility to their livestock) also helped to differentiate among respondents according to voting intentions.

In order to more fully understand the meaning of these findings, it is also instructive to consider those variables that the analysis indicated did not play an important role in differentiating respondents who would vote for from those who would vote against a state run compensation program. These included all the demographic variables, familiarity with compensation programs, symbolic beliefs about predators (beliefs about the role or place of predators in contemporary society), and beliefs about how predation/compensation would affect the respondent personally. Considering the nature of the variables that were in the first discriminant function along with those that were not suggests that respondents who indicated they would vote for versus those against were most strongly differentiated on the basis of their views about the concept of compensation (including its acceptability and desirability) and the role it plays in society (including the benefits that accrue to society and whether the broader public, through taxes, should be responsible for supporting) rather than on the basis of socio-demographic characteristics, views about predators in general, or how predator/compensation impacts them personally. Also of interest, despite the attention that issues not addressed by compensation (safety, impact on elk/deer, lack of money) receive in the press and public discussion, this analysis suggests these issues did not differentiate among respondents grouped according to how they would vote.

The group centroids for the second discriminant function indicated that it served primarily to separate those who were undecided from those who had made up their mind one way or the other (Table 4-1). Examination of the loadings indicates that two characteristics were important in discriminating those who were undecided: gender (females were more likely to be undecided) and familiarity with programs (those indicating they had never heard of compensation before were more likely to be undecided). However, the canonical correlation (which measures the degree of relationship) indicates a much weaker relationship between the discriminant function and the voting groups (0.295). In conjunction with the cross validation classification results (undecided respondents were misclassified more frequently than were either of the other two groups), this is another indication that it was more difficult to identify characteristics that define undecided respondents.

[3] Original scale 2= Highly Acceptable, 1=Moderately Acceptable, 0=Neutral, -1 = Moderately Unacceptable, -2=Highly Unacceptable.

Discriminating Across Respondents - Perceived Desirability of Compensation

Technical Description of Measures

The second discriminant analysis was to determine if it was possible to identify characteristics that differentiated respondents according to desirability of "paying individuals for loss/damages caused by predators" (that is desirability of a compensation program as a management alternative). This question was prefaced by a statement directing people to respond to the question in the context of a "government policy for managing grizzly bear, mountain lion, and wolf populations that are not threatened or endangered." The level of government (federal versus state) was not identified since the primary purpose of the question was to evaluate respondents' views about the desirability of compensation as a management alternative. And while the instructions directed respondents to think of in terms of all three predator species mentioned above, it did not ask respondents to respond to each of these three predators individually. The survey gave respondents the opportunity to indicate the extent to which they found such a program desirable or undesirable (that is, respondents could indicate it was highly or moderately desirable/undesirable). However, for this analysis we only sought to discriminate among individuals who found it desirable, neutral, and undesirable (we collapsed highly/moderately desirable and highly/moderately undesirable into just two groups – desirable or undesirable). The discriminating variables employed in the analysis were exactly the same as those used in the preceding analysis with one exception. Because it is not clear whether desirability follows from acceptability judgments, whether the reverse is true, or whether they are distinct and unrelated judgments, neither the state nor federal acceptability variables were included as possible discriminating variables (Figure 4-3).

Technical Discussion of Results

The cross validation table reveals that 66% of the respondents were correctly classified based on this discriminant analysis (Table 4-2). While this initially appears to be an improvement over the preceding analysis, it must be remembered that the vast majority of individuals (74%) indicated that compensation programs would be desirable and this affects the percentage of correct classifications one would expect by chance alone. Overall, by chance alone one would expect to correctly classify respondents 59% of the time (compared to only 34% correct by chance in the preceding analysis). Thus the improvement in classification overall was modest, but still statistically significant ($z=2.42$, $p=0.016$). Overall, 70% of those finding a compensation program desirable were correctly classified, 58% of those finding it undesirable were correctly classified, and 43% of those indicating they were neutral were correctly classified. The percentage correctly classified in the portion of the sample used to develop the discriminant function was 70% again suggesting a high degree of stability or generalizability.

The discriminant analysis yielded two significant discriminating functions. The first had a canonical correlation of 0.62 (Table 4-2). This function most clearly separated respondents indicating that compensation was desirable from the other two groups (neutral and undesirable). Two discriminating variables showed loadings greater than 0.40 on this function. The first was the factor exploring normative beliefs about the appropriateness of compensating livestock owners (whether losses should be viewed as a normal cost of doing business and whether accepting compensation as a solution violated livestock owners' responsibility to their livestock, function loading=-0.78). Respondents agreeing that compensation was not appropriate for these

reasons also tended to be neutral or to indicate that it was not a desirable program while those disagreeing with these beliefs tended to see compensation as desirable. The function loadings indicated a marked drop in the importance of the second most important discriminating variable, though the function loading of 0.49 indicated that it did contribute meaningfully to the differentiation of the groups. This discriminating variable was the belief that compensation spreads costs of predator conservation more fairly in society. Those finding compensation to be a desirable program were more likely to agree with this view.

The second discriminant function primarily served to differentiate neutral respondents from the other two groups of respondents. However, the canonical correlation was much lower (0.217) indicating a weaker relationship. Four variables, had loadings greater than 0.40 (Table 4-2). Two were socio-demographic characteristics related rural/urban residence and two were socio-demographic variable related to the possibility of experiencing a loss (livestock ownership and perception that one might be impacted negatively financially). The pattern of results indicates that respondents with urban and/or nonranching background and who did not have an economic link were more likely to be neutral.

Collectively, the analysis of the discriminant functions suggests that views about desirability are linked most strongly to beliefs related to who in society bears the responsibility for predation (is predation the livestock owner's responsibility; does it more spread costs of compensation within society); views which help distinguish those finding it desirable from the other two groups. To a lesser extent it is influenced by the urban versus rural background; views distinguishing those who are neutral from the other two groups. Variables not contributing to the differentiation among groups in a substantial way included familiarity with compensation programs, other demographic variables (age, gender, state, years of residence in state), beliefs about issues not addressed by compensation, views about appropriateness of various means of funding compensation, and views about the role of predators in society.

Discriminating Across Respondents - Acceptability of a State Run Compensation Program

Technical Description of Measures

In the survey, acceptability of a state run compensation program was evaluated across of a variety of different contexts including whether or not the species was endangered, whether it was reintroduced, and whether there were restrictions on livestock owners' ability to harass or kill predators. For the discriminant analysis these contexts are looked at individually rather than collectively. For this report we chose to look at acceptability of a state run compensation program when the predator is endangered versus not endangered because analysis of descriptive data suggests these two showed some of the greatest divergence in how people responded to acceptability of state compensation, because the questions are most directly parallel (endangered versus not endangered), and because delisting is such a contemporary issue in all three states. As was the case in the preceding discriminant analyses, a specific species of predator was not identified in the question. The survey gave respondents the opportunity to indicate the extent to which they found such a program acceptable or unacceptable (that is, they could indicate they considered it highly or moderately acceptable/unacceptable). However, for this analysis we only sought to discriminate among individuals who found it acceptable, neutral, and unacceptable (we collapsed highly/moderately acceptable and highly/moderately unacceptable into just two groups – acceptable or unacceptable). The discriminating variables evaluated in the analysis were the same as those used in the preceding analysis on desirability (Figure 4-4).

Technical Discussion of Results – Acceptability of Compensation When Predator is Endangered

The cross validation table shows that 54% of the respondents were correctly classified based on the discriminant analysis (Table 4-3). The percentage correctly classified in the portion of the sample used to develop the discriminant functions was 56%, suggesting a high degree of stability in the classification scheme. By chance alone one would expect to be able to correctly classify 41% of the respondents. The improvement in classification was statistically significant ($z=4.676$, $p < 0.001$).

The analysis yielded two discriminant functions. The first maximally separated (most clearly distinguished between) those who found a state run program acceptable from those who found it unacceptable, though the relationship was somewhat weaker than in the first discriminant function in the preceding analyses as indicated by the canonical correlation (0.46). Four discriminating variables had function loadings greater than 0.40. Relative to the preceding analyses, differences in the absolute magnitude of the loadings not as widespread, suggesting the discriminating variables were more equal in importance in helping to differentiate the respondents. The variable with the highest loading was symbolic beliefs about wolves in contemporary society (remember, due to the high correlation among symbolic beliefs across predators, only symbolic beliefs about wolves were included in the analysis to avoid statistical confounding of results). Symbolic beliefs, again, refer to beliefs about the importance and role of animals in contemporary society. Individuals who tended to see greater value and role for wolves in society were more likely to find a state run program acceptable when the predator was endangered. In other words individuals with a more positive view toward wolves also were more willing to have the state play a role in compensating for loss/damage resulting from endangered predators. The second highest function loading was for the variable that explored the appropriateness of using general tax dollars for funding such programs. Those who felt general tax funding was appropriate also were more likely to find a state run program acceptable, suggesting that respondents linked program administration to the source of funding. As with the preceding analyses, a belief that compensation spreads costs of predator conservation more fairly in society also helped to discriminate those who found a compensation program acceptable from those who did not. And for the first time, beliefs about issues not addressed by compensation (safety, elk/deer populations, skepticism of about there being enough money, etc.) helped discriminate among respondents. The more likely a person was to agree that these issues were a concern, the less likely they were to find a state run program acceptable.

As with the preceding analyses, the second discriminant function showed a much weaker relationship than the first (canonical correlation = 0.25). It served primarily to differentiate the "neutral" respondents from those who had formed an opinion. Familiarity with the compensation programs was the most important discriminating variable. As with voting (but not desirability), those who had not heard of compensation before were more likely to be neutral. Although far less important, views about the appropriateness of voluntary donations as a funding source also had a loading greater than 0.40. This may suggest that those who believe voluntary funding is the appropriate source of funding are less likely to be neutral and more likely to have an opinion about whether or not the state plays a role compared to individuals who believe funding from other sources, especially a general tax.

Technical Discussion of Results – Acceptability of Compensation when Predator is Not Endangered

The cross validation analysis indicates a stable, relationship, 53% correctly classified in the cross validation sample versus 52% in the portion of the sample used to develop the discriminant functions (Table 4-4). The improvement in classification over chance (39% expected by chance alone), was again statistically significant ($z=5.508$, $p < 0.001$). As with the preceding analyses, it was most difficult to identify distinguishing characteristics of those who were neutral.

The first discriminant function primarily served to discriminate those who found a state run program unacceptable from the other two groups, although it reflected a weaker relationship than the first discriminant functions in the preceding analyses (canonical correlation = 0.39 versus 0.46 to 0.62). Three discriminating variables had function loadings greater than 0.40 and as with the preceding analysis, the loadings were not widely dispersed, suggesting a greater similarity in importance relative to the voting and desirability analyses. As with the preceding analysis, appropriateness of funding through general taxes and the belief that compensation spreads costs of predator conservation more fairly within society were important discriminating variables. However, unlike the preceding discriminant analysis, normative beliefs about the appropriateness of compensation played an important role in discriminating individuals who did not find a state run program acceptable from the other two groups. Those more likely to believe that predator losses were not a cost of doing business/did not violate a responsibility of livestock owners were more likely to find a state program acceptable. In contrast, symbolic beliefs about the importance of wolves in contemporary society and a focus on concerns not addressed by compensation, which were important discriminating variables in the preceding analysis of perceived acceptability when the predator was listed as endangered, did not play a major role in this analysis for a predator that was not endangered.

As with the preceding analyses, the second discriminant function was fairly weak (canonical correlation = 0.29). It served primarily to distinguish those who were neutral from the other two groups. Two discriminating variables had function loadings greater than 0.40. The first was beliefs about the appropriateness of owners paying for compensation. Those who tended not to agree it was appropriate for owners to pay were more likely to be neutral about the acceptability of a state run program. Familiarity with compensation also had an influence, with people who were not familiar with compensation being more likely to be neutral in their views.

Collectively, the two discriminant analyses of the acceptability of a state run program suggest that ideas about the appropriateness of using general taxes and a belief that compensation spreads costs of predator conservation more fairly across society play an important role in differentiating respondents' support for a state run program whether a predator is endangered or not. However when the predator in question is endangered, differences in views about the importance of predators and skepticism about/focus on concerns not addressed by compensation play an important role in separating those who support a state run compensation program versus those who do not. In contrast when the species is not endangered, these two characteristics are replaced by differences in normative beliefs about the appropriateness of compensation (is it a normal cost of doing business, does it violate ranchers responsibility to livestock).

Nontechnical Discussion of Discriminant Analyses Results

As stated above, a discriminant analysis seeks in part to determine if it is possible to identify characteristics that distinguish (discriminate) among individuals classified according some dependent characteristic (for example, is it possible to identify a set of characteristics which differentiate those who indicated they would vote for a state run compensation program versus those who would vote against it or were undecided). One indicator of the meaningfulness of the discriminating characteristics identified is the percentage of cases correctly classified in a cross validation sample (i.e., evaluating the accuracy of the classification procedure on a new group of individuals, a group different from the one used to develop the classification functions). In this study classification success ranged from 53-66%. Clearly, we were not able to perfectly discriminate among individuals who showed different voting intentions. This is due to a variety of factors including the degree of precision with which it is possible to measure the type of psychological characteristics which most influenced people, variation in individuals with respect to relationships among characteristics, and complexity of human decision making and judgment which includes the influence of other factors not incorporated in the study. However, despite these limitations the characteristics identified do allow us to predict group membership more accurately than would be expected by chance alone (34-59% depending on the dependent variable in question). Further, it was usually possible to do a better job discriminating between those holding differing viewpoints than those who were neutral or undecided. For example, with respect to voting for a state run compensation program, by chance alone one would expect to be able to correctly classify only 34% of respondents. Based on the characteristics identified through the classification procedure, it was possible to correctly classify 57% of respondents. Further, 65% of those who would vote for and 64% of those who would vote against were correctly classified. Therefore, although the ability to predict voting patterns is by no means perfect, the analyses do provide important insights into those factors that differentiate among (and influence) people's judgments about predator compensation programs. In other words, the classification results suggest the discriminant analyses do offer insights into the nature of the public debate about predator compensation programs.

Returning to Figure 4-1, the discriminant analyses do help provide an understanding about the relationships among these different ways of asking about the extent to which an individual endorses compensation. Despite the apparent dissimilarity in responses as displayed in Figure 4-1, discriminant analysis suggest there is a relationship between voting intentions and a person's perceptions about the acceptability and desirability of compensation programs. These latter variables were the most important factors differentiating those who would vote in favor versus those who would vote against a state run program.

In all analyses, the strongest discriminant function was the first and it maximally separated those groups with opposite opinions (that is for example, most clearly distinguished between those who would vote for from those who would vote against). Beliefs about whether "compensation programs spread costs related to predator compensation more fairly within society" was the only discriminating characteristic to appear in all four of the discriminant analyses. Two other variables - (1) normative beliefs about the concept of compensating livestock owners (whether losses should be viewed as a normal cost of doing business and whether accepting compensation as a solution violates livestock owners' responsibility to their livestock) and (2) beliefs about the appropriateness of using a general tax base as the source of funding both played an important role in three of the four discriminant analyses. The first was

important in discriminating voting, desirability, and "acceptability when predator is not endangered" responses to compensation programs while the second discriminating characteristic was important in the voting, "acceptability when predator is endangered," and "acceptability when predator is not endangered." Symbolic beliefs about the role and importance of predators in society (specifically wolves) had an important influence only in the discriminant analysis exploring acceptability of a state run compensation program when the predator is endangered. This was also the case for beliefs about issues not addressed by compensation (safety, elk/deer populations, skepticism of about there being enough money, etc.).

Collectively this pattern of results is worth careful consideration when seeking to understand public sentiment regarding predator compensation programs. First, the public's views about compensation programs seem to be driven by differences in opinion about the concept of compensation as a societal means of addressing a social concern (is compensation a role government should play or a cost that should be borne by individuals, does it indeed distribute the costs of predator conservation more fairly) rather than by differences in views about predators (are predators important in contemporary society). However, this appears to change somewhat when the predator is clearly identified as endangered. (Remember the desirability question was asked in the context of nonendangered predators, the acceptability questions made the distinction – endangered in one analysis and not endangered in the next, while the voting question did not make a distinction). When the predator is clearly identified as endangered, differences in views about the importance of predators in contemporary society did play an important role in discriminating among respondents with different views about acceptability of a state run compensation program.

With the current survey data set, it is not possible to definitively determine why this shift occurred (that is why differences in views about predators became a salient discriminating variable once a species was identified as endangered). However several factors probably play a role in explaining this shift. For example, identifying the predator as endangered may trigger a greater concern for and focus on the predator itself among those individuals who value predators as a part of contemporary society. At the same time, focusing on an endangered predator may trigger an opposite reaction among people who do not value the role predators play in contemporary society causing them to increasingly question whether the species is worth society going to such trouble in the first place. This latter suggestion is supported by the fact that the discriminating variable comprised of beliefs focusing on issues that compensation does not address/skepticism about compensation also was salient in discriminating among individuals with regard to the acceptability of compensation when predators are endangered. Whatever explains the shift, it is important to note that the nature of the public debate does shift depending on whether or not the species is endangered; an issue worth noting in light of the ongoing question of predator delisting in the three states. At the same time it is also important to remember that even though there is a shift in the salience of these types of beliefs depending on the status of the predator, beliefs related to whether or not compensation spreads costs of predator conservation more fairly in society and beliefs about the appropriateness of funding compensation through a general tax base play an important role in people's judgments about compensation programs regardless of species status.

All of the discriminant analyses also yielded a second discriminant function which served primarily to further distinguish the neutral or undecided respondents from respondents who had formulated an opinion. In general the relationships were much weaker for these functions as

indicated by the percent of variance explained, canonical correlations, and ability to correctly classify "neutral" respondents. Collectively, all of this information indicates that it is much more difficult to identify characteristics of those individuals who are neutral/undecided, a finding that would be expected. However, the results are worth considering. Familiarity with compensation programs was one of the two most important discriminating variables in all but the discriminant analysis on desirability of compensation. Instead, neutrality with respect to judgments about desirability were more closely related having a rural/urban background and whether one would be affected directly by predation. The results suggest that people can more readily form an opinion about the desirability of an action than they can decide about its acceptability or whether they would vote for it. However, individuals lacking a rural background and not perceiving themselves likely to be negatively financially affected were more likely to be neutral in terms of desirability. Only one other socio-demographic variable, gender, appeared in any of the discriminant analyses. With respect to voting, women were more likely to be undecided. Finally, on the "acceptability of compensation" analyses, views about the appropriateness of funding via different sources (owners nonendangered and voluntary for endangered species) played a role.

Somewhat surprisingly measures related to the personal importance of predation/compensation did not play a major role in discriminating among individuals with respect to views about the acceptability or their voting intentions and played only a very minor role with respect to desirability of compensation. The one analysis where these variables did make an appearance was the analysis of desirability and they served to discriminate neutral individuals from those with an opinion. Similarly, socio-demographic variables only appear in two of the discriminant analyses and in both cases as part of the weaker discriminant functions separating neutral respondents from others. In conjunction with the findings discussed above, this suggests that the differences in the public's views about predator compensation programs are driven more by differences in opinion about compensation as a legitimate means of addressing a social concern (is it a role government should play or a cost that should be borne by individuals, does it indeed distribute the costs of predator conservation more fairly) than by background variables reflected in socio-demographic characteristics, while differences in views about the importance and role of predators in contemporary society come into play when the predator is endangered.

Table 4-1. Discriminant analysis – voting for a state run compensation program.

	Function 1	Function 2
Eigenvalue	0.629	0.095
Percent of Variance Explained	0.868	0.132
Canonical Correlation	0.621	0.295
Group Centroids		
would vote in favor	0.878	-0.288
would vote against	-1.034	-0.149
would not vote	0.204	0.423
	Function 1	Function 2
Characteristics with loadings ≥ 0.40	Loadings	Loadings
Acceptability of a state run program	0.748	
Desirability of government compensation program	0.568	
Compensation spreads costs of predator conservation more fairly	0.455	
Appropriateness of funding through a general Federal/State tax	0.433	
Normative beliefs about the concept of compensation	-0.398	
Gender		-0.401
Familiarity with compensation programs		-0.397
Characteristics with loadings ≤ 0.40		
Tolerance for wolves would decrease w/o compensation programs		
Livestock ownership		
Appropriateness of funding through voluntary donations		
Symbolic beliefs about wolves		
Rural/urban residence – where respondent currently lives		
Rural/urban residence – where respondent grew up		
State dummy variable (M)		
Focus on issues compensation does not address		
State dummy variable (W)		
Increased wolf populations would negatively affect me financially.		
Appropriateness of funding through via livestock owners		
How many years have you lived in the state		
Age		

Cross validation classification results table (numbers = %)

Actual Group	Predicted Group Membership		
	Would vote in favor	Would vote against	Undecided
Would vote in favor	64.9	11.7	23.4
Would vote against	8.7	64.3	27.0
Undecided	38.3	19.2	42.5

Percentage of correct classifications overall = 56.5%
Percentage of correct classifications expected by chance alone = 33.8%
Statistical significance test of improvement in classification: $z=8.704$, $p<0.001$

Table 4-2. Discriminant analysis – desirability of a compensation program.

	Function 1	Function 2
Eigenvalue	0.576	0.049
Percent of Variance Explained	0.921	0.079
Canonical Correlation	0.605	0.217
Group Centroids		
Desirable	0.437	-0.020
Neutral	-0.952	0.672
Undesirable	-1.444	-0.248

Characteristics with loadings ≥ 0.40	Function 1 Loadings	Function 2 Loadings
Normative beliefs about the concept of compensation	-0.776	
Compensation spreads costs of predator conservation more fairly	0.486	
Rural/urban residence – where respondent currently lives		.571
Livestock ownership		-.503
Rural/urban residence – where respondent grew up		.468
Increased wolf populations would negatively affect me financially.		.428

Characteristics with loadings ≤ 0.40

Tolerance for wolves would decrease w/o compensation programs
Appropriateness of funding through a general Federal/State tax
Appropriateness of funding through via livestock owners
Appropriateness of funding through voluntary donations
Symbolic beliefs about wolves
Age
Gender
How many years have you lived in the state
Focus on issues compensation does not address
State dummy variable (W)
Familiarity with compensation programs
State dummy variable (M)

Cross validation classification results table (numbers = %)

Actual Group	Predicted Group Membership		
	Desirable	Neutral	Undesirable
Desirable	70.1	17.1	12.7
Neutral	34.3	42.9	22.9
Undesirable	14.0	28.0	58.0

Percentage of correct classifications overall = 65.6%
Percentage of correct classifications expected by chance alone = 59.1%
Statistical significance test of improvement in classification: z=2.42, p=0.016

Table 4-3. Discriminant analysis – acceptability of compensation when predator is endangered.

	Function 1	Function 2
Eigenvalue	0.269	0.067
Percent of Variance Explained	0.801	0.199
Canonical Correlation	0.460	0.250
Group Centroids		
acceptable	0.498	0.067
neutral	-0.176	-0.665
unacceptable	-0.614	0.140
	Function 1	Function 2
Characteristics with loadings ≥ 0.40	Loadings	Loadings
Symbolic beliefs about wolves	0.601	
Appropriateness of funding through a general Federal/State tax	0.543	
Focus on issues compensation does not address	-0.500	
Compensation spreads costs of predator conservation more fairly	0.485	
Familiarity with compensation programs		0.728
Appropriateness of funding through via voluntary donations		0.431
Characteristics with loadings ≤ 0.40		
Appropriateness of funding through via livestock owners		
Age		
How many years have you lived in the state		
Tolerance for wolves would decrease w/o compensation programs		
Normative beliefs about the concept of compensation		
State dummy variable (?)		
Livestock ownership		
Increased wolf populations would negatively affect me financially.		
Rural/urban residence – where respondent currently lives		
Gender		
Rural/urban residence – where respondent grew up		
State dummy variable (?)		

Cross validation classification results table (numbers = %)

Actual Group	Predicted Group Membership		
	acceptable	neutral	unacceptable
acceptable	60.1	15.0	24.9
neutral	35.0	30.0	35.0
unacceptable	25.4	22.0	52.4

Percentage of correct classifications overall = 53.7%
Percentage of correct classifications expected by chance alone = 41.2%
Statistical significance test of improvement in classification: $z=4.676$, $p<0.001$

Table 4-4. Discriminant analysis – acceptability of compensation when predator is not endangered.

	Function 1	Function 2
Eigenvalue	0.178	0.038
Percent of Variance Explained	.826	.174
Canonical Correlation	0.389	0.190
Group Centroids		
acceptable	0.464	0.129
neutral	0.214	-0.452
unacceptable	-0.433	0.039
	Function 1	Function 2
Characteristics with loadings ≥ 0.40	Loadings	Loadings
Appropriateness of funding through a general Federal/State tax	0.670	
Compensation spreads costs of predator conservation more fairly	0.591	
Normative beliefs about the concept of compensation	-0.522	
Appropriateness of funding through via livestock owners		-0.658
Familiarity with compensation programs		0.491
Characteristics with loadings ≤ 0.40		
Tolerance for wolves would decrease w/o compensation programs		
State dummy variable (W)		
Age		
Rural/urban residence – where respondent grew up		
Appropriateness of funding through voluntary donations		
Gender		
Increased wolf populations would negatively affect me financially		
Symbolic beliefs about wolves		
Livestock ownership		
Focus on issues compensation does not address		
Rural/urban residence – where respondent currently lives		
State dummy variable (M)		
How many years have you lived in the state		

Cross validation classification results table (numbers = %)

Actual Group	Predicted Group Membership		
	acceptable	neutral	unacceptable
Acceptable	50.7	26.8	22.5
Neutral	30.6	36.7	32.7
Unacceptable	16.0	23.1	60.9

Percentage of correct classifications overall = 53.4

Percentage of correct classifications expected by chance alone = 38.9%

Statistical significance test of improvement in classification: $z=5.508$, $p<0.001$

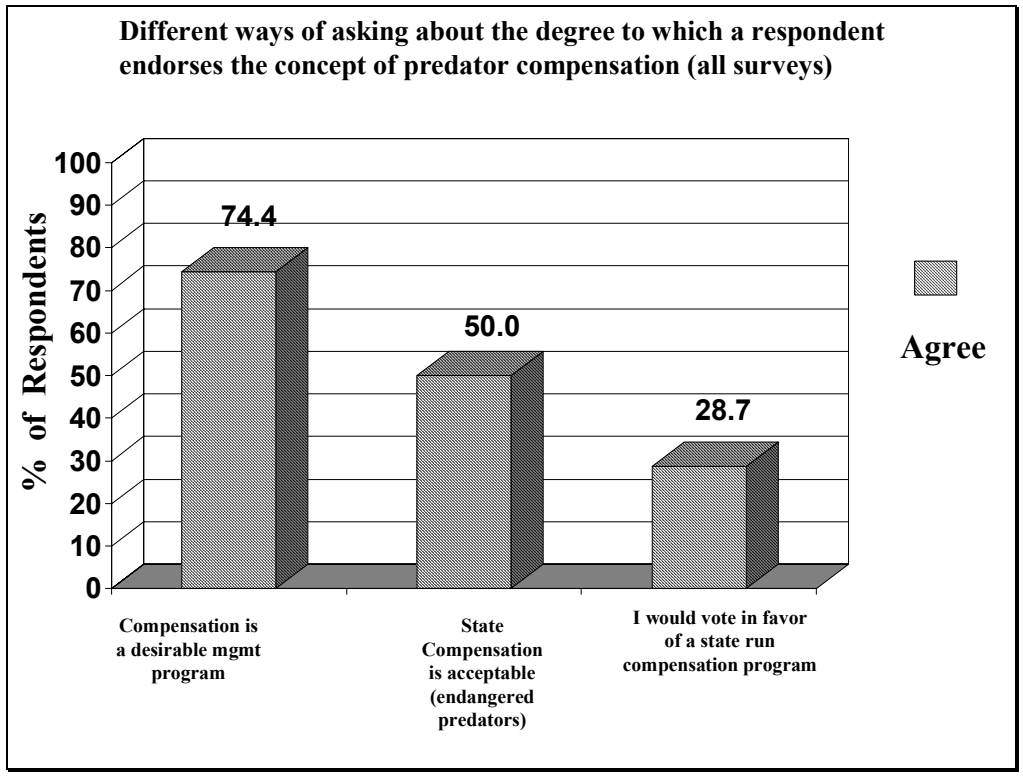


Figure 4-1. Reponses to different ways of asking the extent to which a respondent endorses predator compensation programs.

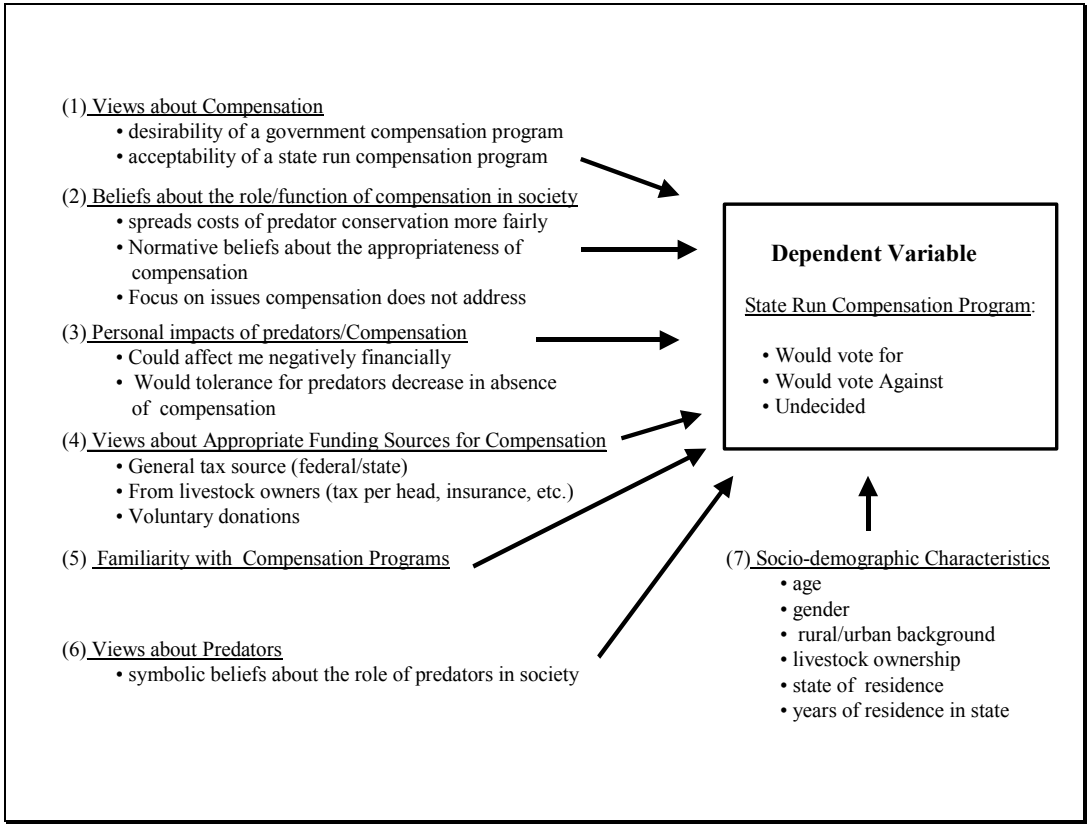


Figure 4-2. Model describing variables in the discriminant analysis for voting intentions with respect to a state run compensation program for predators.

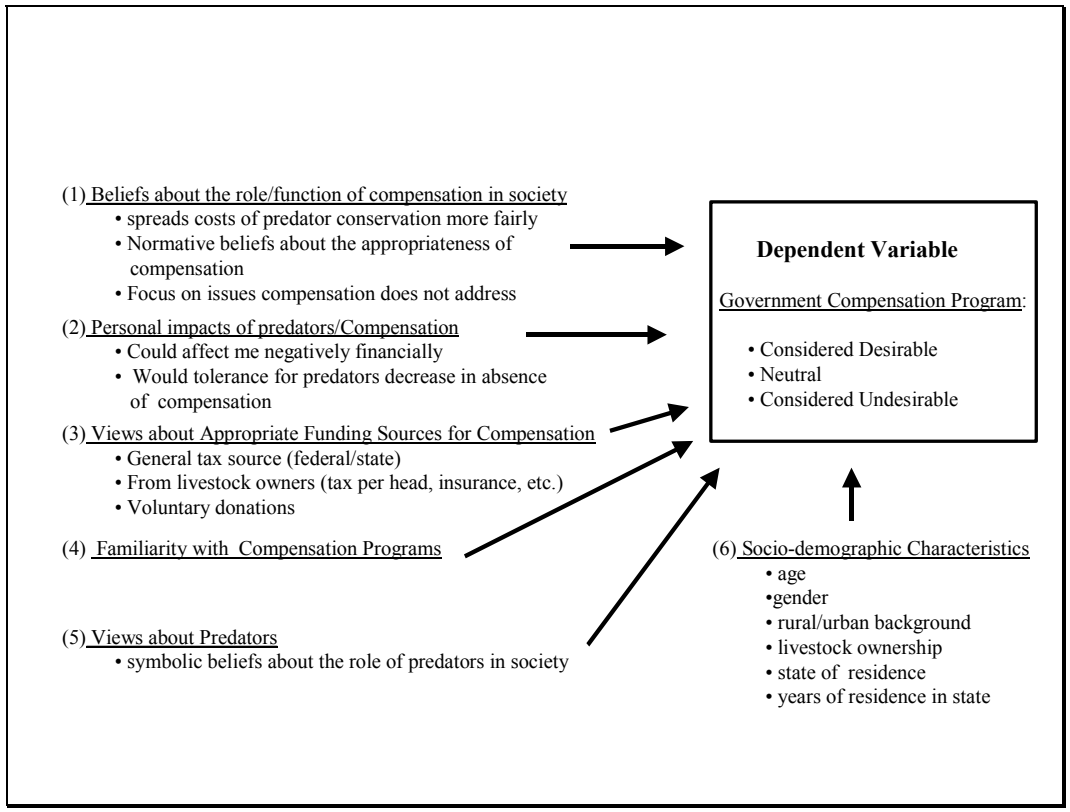


Figure 4-3. Model describing variables in the discriminant analysis for desirability of government compensation programs as a management alternative for nonendangered predators.

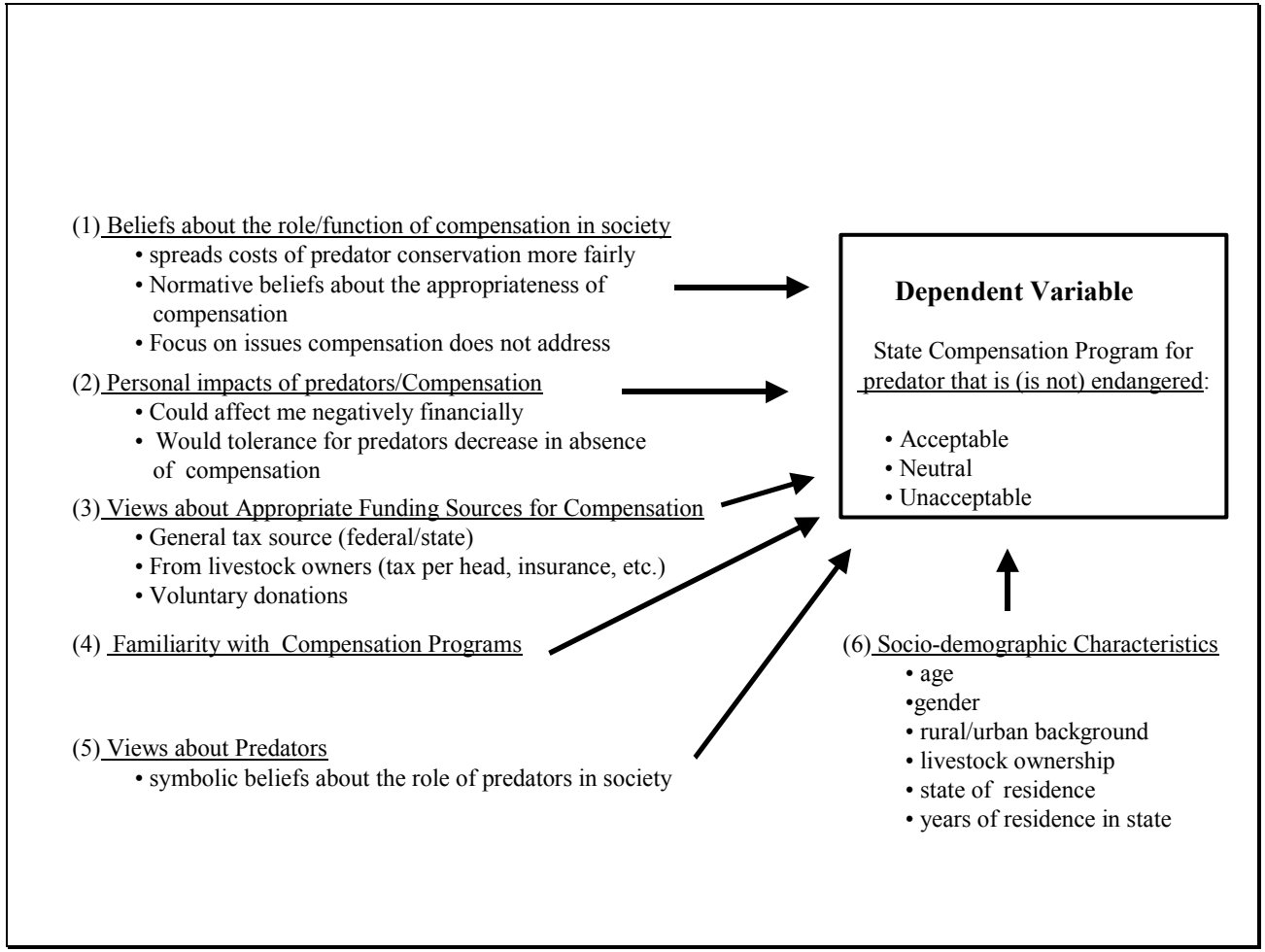


Figure 4-4. Model describing variables in the discriminant analysis for acceptability of a state run compensation program for predators.

Chapter 5 Livestock Owners' Views On Design & Implementation of Compensation Programs

The surveys and interviews also explored questions related to the design and implementation of compensation programs. Questions dealt with a variety of issues including: opinions about what types of losses should be compensated, views about the nature of processes a compensation program should use, and opinions on trust-related issues. The livestock owner survey included more than 26 questions related to these types of issues. The general public survey included six questions all related to the question of what types of losses should be compensated. A complete summary of survey responses by state is included in the Appendix. This section of the report explores responses to a subset of these questions (including all questions asked of both the livestock owner and general public sample). In addition, discussions about the interview data are included to lend breadth and depth to these topics.

What Types of Losses Should be Compensated

Within the livestock owners sample, a majority of respondents (>55%) supported compensation in all situations considered except for unconfirmed losses (Figure 5-1). Compensating for veterinary bills for injuries caused by predators received the most widespread support (89% of the sample agreed that a compensation program should cover these costs). In the case of unconfirmed losses the percentage of respondents disagreeing that compensation was inappropriate (38%) was slightly higher the percentage believing that compensation was appropriate (36%).

At first look there appears to be a possible contradiction in the responses to two of the questions about situations meriting compensation. Fifty-eight percent of the respondents in the livestock owner sample agreed with the statement that a compensation program should cover verified losses only. But 60% indicated they believed that "when a rancher has a verified loss to a predator, he/she also should be compensated for livestock losses that occur at the same time but for which the cause of loss is unknown." However, this may indicate, not a contradiction, but a difference in perspective about what counts as a legitimate standard for confirmation. In other words, livestock owners may recognize and support the need for verification, but believe that documented losses in the same time and place should serve as a sufficient standard.

The general public sample was asked about compensating for veterinary bills, property damage, voluntarily adopted preventive measures, pets, and for losses to unknown causes when verified losses occurred at the same time (Figure 5-1). In all cases the difference in responses across the two samples (livestock owner and general public) was statistically significant ($p < 0.001$). Analysis of the standardized residuals indicates that in all cases the general pattern was for the livestock owner sample to be more likely than expected to strongly agree and less likely to disagree that compensation would be appropriate in a given circumstance. For some situations, livestock owners were also more likely to moderately agree and less likely than expected to be neutral. While this pattern might be expected, it is interesting that it held for pets, a loss not linked to livelihood and one more closely linked to a type of loss that the general public might potentially experience. However, despite the statistically significant differences in proportion of responses, the majority of respondents in the general public sample did support compensating for veterinary bills (66%), property damage (59%), voluntarily adopted preventive measures (53%), and pets (52%). However, the general public sample did differ markedly from

the livestock owner sample with regard to the issue of compensating for losses that occurred at the same time as verified losses. On this issue, a majority of the general public (52%) disagreed that this would be an appropriate situation for compensation while only 30% agreed. This compares to 60% agreeing (23% disagreeing) among the livestock owner sample.

The survey also explored beliefs related to compensation rates (Figure 5-1). Among the livestock owner sample, the vast majority (88%) agreed that Fall market rate was the appropriate rate for compensating losses. In contrast, a slight majority (52%) agreed that, if included in a compensation program, unconfirmed losses should be compensated at a lower rate. The third funding rate question was asked in both the livestock owner and general public surveys and dealt with whether the compensation rate should be the same on public versus private land. The majority of the livestock owner sample (86%) agreed (70% strongly) that compensation rates should be equal whether it occurred on public versus private. A slight majority (51%) of the general public sample agreed, but only 30% strongly. The difference between samples was statistically significant (χ^2 =230.579, p <0.001).

Interview Results

The interviews support the survey results pertaining to what type of losses should be compensated and since the survey results succinctly represent the variety of viewpoints about what types of losses should be compensated, no further discussion is required. However, the interviews show the complexities involved in beliefs or concerns over funding rates and what considerations should be included in determining payments (Table 5-1). Like the livestock owner survey results, many of the interviewees support Fall market value for losses (T5-1#2). Although there was support for the Fall market value for losses, there also was discussion about other considerations that should incorporated into determining the payment other than just the Fall market value (T5-1#7, T5-1#16). Several interviewees discussed how the Fall market value does not incorporate future or potential future income that could have resulted from that livestock living, such as breeding a valuable bull calf, future calf crops, etc. and that these factors should be factored in (T5-1#5, T5-1#6, T5-1#8, T5-1#11, T5-1#12). Closely related to that discussion was the discourse brought up by several interviewees about the desire for blood lines, genetics, and registration of valuable livestock to also be factored into determining payment (T5-1#3, T5-1#4, T5-1#10). Paying only Fall market value may not incorporate these costs and losses and many of the livestock owners recognize that good genetics and having livestock registered can greatly increase the value and as one interviewee stated, “If you can prove that animal is registered and is worth good dollars because of his genetics, absolutely, you should be compensated for the max on it” (T5-1#4).

Many livestock owners also recognize that there are additional costs beyond just to having to deal with losses themselves, such as the time it takes to deal with the loss and impacts of the predator on the other livestock, such as possible weight loss and decreased reproduction (T5-1#9). However, although these are recognized as costs, many of the livestock owners do not think these costs should necessarily be covered by compensation because there really is no way to put a value on it (T5-1#9, T5-1#14, T5-1#15). Nonetheless, for some livestock owners, being paid for other costs, such as damage to fences and feed containers would be more helpful than being compensated for the lost livestock (T5-1#13). Essentially, emerging from the interviews is the strong sentiment that it is hard to put a value on the livestock loss and there are numerous considerations that could be factored in payment determination (T5-1#3, T5-1#4, T5-1#9, T5-

1#10, T5-1#17).

Also emerging from the interviews was more discourse over compensation on both public and private lands (Table 5-2). As with the livestock owner survey results, there was much support by the interviewees for handling losses on public lands the same way as on private lands (T5-2#1, T5-2#2, T5-2#3, T5-2#4, T5-2#5, T5-2#6, T5-2#7, T5-2#8, T5-2#10, T5-2#11, T5-2#12). However, some interviewees believe that if the losses do not occur on designated allotments, than the losses should be handled differently and perhaps not be compensated (T5-2#1). In addition, a few individuals did mention that there should not be compensation on public land allotments since that's where the "grizzly" or the other predators are supposed to be (T5-2#9). Overwhelmingly though, many of the interviewees desire compensation for losses on public land since it is still a loss, whether it occurs on private land or public land (T5-2#5, T5-2#6, T5-2#11, T5-2#12). The sentiment that livestock owners pay to be on the land, through allotments, was also discussed as a reason to compensate for losses occurring on public lands (T5-2#8, T5-2#10, T5-2#11). Moreover, some interviewees discussed the desire for treating public and private land losses equally because problem animals can move between public and private land and cause losses (T5-2#12) and some species have been reintroduced into the area after being gone for decades (T5-2#3).

Views about the Nature of Processes Used in a Compensation Program

Because the survey questions analyzed in this section dealt with very specific details in the design of a compensation program, they were asked only of the livestock owner sample and not of the general public. The majority of respondents in the livestock sample (67%) agreed with the statement that "a local elected or appointed board (similar to a conservation district board) should run the compensation program" and only 13% disagreed (Figure 5-2). Interestingly, when asked in the earlier section of the survey about "how desirable a compensation program run by … a local stockgrowers association" would be, only 31% of the livestock owner sample indicated this would be desirable while 50% indicated this would be undesirable. One possible explanation for the difference in responses comes from the context in which the questions were asked. The "desirability" question was asked immediately following questions about funding while the "local elected board" question was asked in the context of questions about implementation (e.g., what should be compensated, opinions about verification, etc.). Thus the difference in responses may be an indication that there is a desire for local involvement in the specifics of design and implementation of issues such as verification, but not for the more general aspects of administration and funding. This suggestion is consistent with the analysis of interview data from Tables 3-13, 3-14, and 3-15. When interviewees spoke favorably of predator compensation program administration at a more local (state) level, they tended to emphasize issues related to efficiency of administration as the rationale. In contrast discussions in support of federal administration tended to emphasize responsibility for funding as a rationale.

Responses to the three remaining questions in Figure 5-2 lend some support to this possible interpretation also. For example, 90% of respondents in the livestock owner survey agreed that an appeals process for disputes over compensation payments was needed. Additionally, a majority (62%) believed that the verification process for compensation was too strict, while only 9% disagreed with this sentiment. Similarly, only 17% of respondents expressed confidence that they would be compensated if they experienced a loss to a predator

covered by an existing compensation program while a majority (60%) were not confident they would be compensated. All of these beliefs might have contributed to the greater support for involvement of a local board in a compensation program in this section of the survey compared to the more limited support for a local stockgrowers association shown in the section following funding questions.

Interview Results

Concerns over verification and the possibilities of livestock owners taking advantage of the program were some of the most discussed issues in the interviews (Table 5-3, Table 5-4). As with the livestock owner survey, many of the interviewees believe that the verification process for compensation is too strict (T5-3#1, T5-3#9, T5-3#20, T5-3#21, T5-3#22), and that "you've almost got to photograph the wolf or bear killing to ever be reimbursed for it" (T5-3#1). A large part of the frustration with the verification process is that oftentimes livestock owners and verifying agents cannot find the carcasses or evidence in time to be able to confirm that a predator killed the livestock (T5-3#2, T5-3#6, T5-3#8, T5-3#9, T5-3#10, T5-3#11, T5-3#13, T5-3#16, T5-3#17, T5-3#18, T5-3#19, T5-3#22).

Part of this problem of not finding carcasses was attributed to the predators being able to consume the entire carcass in a short amount of time and to the fact that other predators and scavengers will help to consume the carcass before it is found or can be verified as a confirmed kill. Interviewees discussed it in phrases such as, "you got to find them pretty fast, because there isn't much left. If wolves get them, there isn't hardly anything left, or bears, either one" (T5-3#6); "if you come onto a kill that was two days old, there's not enough proof left on dry conditions like we have around here where you can pinpoint anything" (T5-3#9); and, "And just the coyotes and the ravens, and the eagles and whatever will pretty much do away with [the carcass] and fairly fast. I mean, like in a day they'll be gone, so to verify a wolf kill or a bear kill is just about ridiculous" (T5-3#11). Many of the livestock owners also recognized the need for a quick response by verifying agents in order for there to be enough evidence to confirm the losses, especially if the criteria for confirmation is going to be strict (T5-3#5, T5-3#13, T5-3#15, T5-3#23). In addition, some interviewees commented on the need for *qualified* verifying agents that have expertise in verifying these types of losses (T5-3#14). However, several of the livestock owners also realize that both for them and the verifying agent, finding the carcasses and getting them verified is a very time consuming process (T5-3#3, T5-3#8). One individual suggested that there should be blanket compensation for individuals living in areas with predators because, "trying to pinpoint individual attacks is so difficult, so time consuming, so controversial" (T5-3#3).

Overall, most livestock owners see why there is a verification process, but many think it is too stringent. Some also believe that it takes too long for verifying agents to come out and that a delay in getting there allows for evidence to be lost. Moreover, some livestock owners recognize that some of owners may get tunnel vision and think all their losses are predator related (T5-3#4). The issue of verification is quite complex and multifaceted. Although many livestock owners see the verification criteria as too strict, many also have concerns over a compensation program being taken advantage of, if confirmation is not part of the process (T5-4#4, T5-4#5, T5-4#10, T5-4#12, T5-4#13). There are also concerns by some that a certain amount of abuse will occur even if confirmation is part of the process if payments are too high (T5-4#7). However, if abuse does occur, then that individual should be punished (T5-4#3).

There is a portion of the livestock owners who do not think that people will take advantage of a compensation program and that people will not want to "scam" them (T5-4#1, T5-4#8, T5-4#9, T5-4#11). These individuals talked about how the livestock owners will "self-police" themselves and not allow others to take advantage of the program (T5-4#2) and that livestock owners' biggest gain is to keep their livestock alive and that compensation does not pay enough to take advantage of it (T5-4#9, T5-4#11). Another discussion focused on if there was more flexibility in payment determination that people were more likely not to take advantage of a compensation program (T5-4#8).

Opinions on Trust-related Issues

Closely related to verification and other processes related to implementation is the question of trust. Three questions in the survey explored respondents' views regarding relationships and trust. Again because these questions dealt more with specifics of implementation, they were asked only in the livestock owner survey. Overall, 90% of respondents indicated that there was a lack of trust from livestock owners toward wildlife mangers (Figure 5-3). It is important to note that this question asked respondents to give their perception about livestock producers as a whole rather than to respond about whether they as individuals trusted wildlife managers. In other words they were expressing their view about livestock owners as a group rather than their personal view. However, a second question was framed in terms of respondents' perspectives as individuals. It asked whether the respondents themselves would be more willing to work with agency personnel (for example informing agency personnel about grizzly bears seen) if there were assurances that doing so would not hurt their livelihood. Eighty-one percent of respondents agreed with this sentiment. These two results indicate the importance of focusing on relationship building as part of the predator compensation and management process. At the same time, it is worth noting that respondents were also aware of the need for verification and the possibility that some people might take advantage of a compensation process without verification. As shown in Figure 5-3, 69% of respondents in the livestock owner survey expressed concern that some people would take advantage of a compensation program for unconfirmed losses. Thus, while relationship and trust issues may be of concern to livestock owners, they do recognize the need for a verification process. Combined with the answers to the preceding section, these results raise the possibility that one way to address trust and relationship concerns is to consider including in the design of a compensation program a local board that has input into the development and implementation of verification processes.

Views of Individuals Who Have Sought Compensation

The sampling approach for the livestock owner survey did not specifically target individuals who had previously sought compensation due both to concerns that releasing that information might violate applicants' privacy and to the nature of the research goals which emphasized what the population of livestock owners as a whole thought about the concept of compensation. However, 38 individuals who responded to the livestock survey (7% of the sample) indicated that they had previously sought compensation for predator losses. Of those who had sought compensation, 58% had submitted a compensation claim to the Defenders of Wildlife program, 21% to the state of Idaho, 21% to the state of Wyoming, and 3% to the Great Bear Foundation. The total adds up to slight more than 100% due to the fact that some

individuals had submitted claims to more than one program. Responses of this group to their most recent compensation experience and a comparison of their responses to those of other livestock producers are presented below. This information is presented based on the request of the workshop participants to whom the initial analysis of results were presented. However, due to the small number of respondents who had sought compensation in the overall sample and the fact that the sampling plan did not specifically target this population, these results should be interpreted with extreme caution.

Respondents who had submitted a compensation claim were asked to evaluate their most recent compensation experience. The programs associated with the most recent experience were: Defenders of Wildlife program (50%), state of Wyoming (21%), state of Idaho (16%). Thirteen percent of the respondents did not report which program they had applied to. Six evaluation questions are summarized in the discussion below: overall satisfaction with the compensation experience, satisfaction with the verification process, whether experience increased tolerance for the predator involved, whether the experience left the respondent with a positive view of the agency/organization running the program, whether the experience increased respondent's support for compensation, and whether the compensation process was more hassle than it was worth (Figure 5-4). Overall satisfaction varied by program: a majority (75%) of Wyoming applicants were satisfied, a larger proportion of Defenders of Wildlife program applications agreed rather than disagreed that they were satisfied with their overall experience (47% versus 26%), while none of the Idaho respondents indicated they were satisfied with the experience (though 20% were neutral). A majority of respondents (60-88%) in all programs were satisfied with the verification process. However, less than 25% indicated that tolerance for the predator had increased as a result of the experience. Sixty-three percent of the applicants to the state of Wyoming program indicated that the experience had left them with a positive view of the agency and that the experience had increased their support for compensation. In contrast, less than a quarter of applicants in the Defenders of Wildlife program expressed those views and none of the participants in the state of Idaho expressed those views. A majority the Wyoming participants (63%) indicated that their most recent compensation experience increased their support for compensation while less than 25% of Defenders of Wildlife participants agreed (the largest proportion, 44%, were neutral), and none of the Idaho respondents agreed their support for compensation had increased. However, 50% of the applicants to the Defenders of Wildlife Program disagreed with the statement that the compensation process was more hassle than it was worth while only 38% of Wyoming applicants and none of the Idaho applicants disagreed. However, as stated above, due to the small number of respondents who had sought compensation in the overall sample and the fact that the sampling plan did not specifically target this population, these results should be interpreted with extreme caution.

In a final set of analyses, responses of those who had sought compensation were contrasted with those livestock owners who had not on the following issues: voting intentions with respect to a state run compensation program, whether tolerance for predators would decrease in the absence of compensation, agreement with concerns about issues not addressed by compensation/skepticism about compensation programs, and symbolic beliefs about wolves (beliefs about the role or place of predators in modern society – for example, wolves "are an important part of the ecosystems they occupy," "people who live in my state have a responsibility to learn to co-exist with these animals"). The differences between the two groups were not statistically significant ($p=0.221$ to 0.991).

Table 5-1. Interview excerpts reflecting concerns over compensation payment determination

T5-1#1	Do you pay that guy for that calf as old as he was? Do you pay him for the weight of that calf in the fall? ***Do you pay him three years down the road that he was going to keep that calf for a replacement heifer***? (Cliff, has not tried for compensation)
T5-1#2	Oh, ***I think they have to look at the potential of what that animal's going to bring***. If he's worth $100 the day it was killed or if it was going to be worth $500 or $600 the first of October. That's our goal is to make $600, not $100. (Phil, both compensated and denied compensation and will no longer try for compensation)
T5-1#3	[Compensation] normally pays for the livestock killed. But it's hard to [determine the payment] because some people say, well, their cow was way up on top of the list and they should be getting $3000 for it when it's only worth $500 or $1,000 or whatever. I mean ***it's hard to really put a value on an animal. You've got to look at the bloodlines and all that stuff***. (Benjamin, has been compensated)
T5-1#4	I don't think anybody takes advantage of it because their compensation thing doesn't pay you near what it's worth. Like my stud horse out there, if a bear come[s] and killed it or a lion killed that horse, or a wolf or grizzly or something; if they killed that horse, they'd probably pay me a $1,000 for the horse max. He's a registered stud horse and probably worth $6,000 or $7,000…They should have to compensate you. ***And they should have to compensate you for a good value, for the real value of it, not a fictitious value. If it's a register[ed] black angus cow, and some of those registered black angus cows are probably worth $7,000 or $8,000 depending on their genetics. It's nothing to pay that for them***. A grade cow is, a cross cow is worth less. But some of those registered ones are pretty spendy things and you should be compensated for that. If you can prove that animal is registered and is worth good dollars because of his genetics, ***absolutely, you should be compensated for the max on it***. (Keenan, has not tried for compensation)
T5-1#5	***But if I had a registered cow that had this possibility of having a $10,000 bull calf and it was killed at birth, I am not going to be too happy with that $200 [when] I knew in a year from now it's going to get $20,000 or $10,000***. How do you differentiate the difference between just sale cattle prices and registered cattle prices and the difference in the quality of cattle that are being killed? (Robert, has been compensated)
T5-1#6	Like if you have a bull killed and you paid $7,000 for that bull, I don't think they're going to pay you the value of that bull. They're going to say that bull's worth $0.50 a pound on the market if you're going to sell it today. But ***they don't***

understand that this bull is, they sell semen off that bull, the calves out of that bull are going to be worth a lot more money. A lot of them don't understand it. (Rick, both compensated and denied compensation)

T5-1#7 If [the calf] was killed in the spring and it only weighed 100 pounds I can't see where they should compensate for…the fall price. I mean, it would be pretty hard to justify that, I think***. If it was fairly close [to fall], I guess maybe they [should pay fall price]***…Maybe they need some kind of system where if you proved you found two kills, maybe they ought to pay you for three or something. (Jay, has been compensated)

T5-1#8 I guess too, another thing I am sure you've been told too, but a lot of the times you feel like you probably got some real good blood lines or good genetics in your herd…And like on those lambs, they probably weren't the best, [but] they were good bum lambs. But ***once you lose that genetics, then you have got 6, 7, to 10 years down the drain. Until you start over again; that's especially true in cattle. And if you just get compensated for the value of it, I think if they're still going to do that, they should go back and figure out what that thing is [worth] in its lifetime***. What that critter's worth. (Peter, has been compensated)

T5-1#9 And maybe have some kind of a formula, if a person has good records on the missing cattle when they come in, in the fall, there should be some formula for being paid for some missing cattle…***I think they should be paid for confirmed kills, and then maybe a percentage of missing cattle, but that's about as far as I go with it; you've got to keep it simple***…It's obvious if you go out and you've got a definite kill; but how do you measure weight loss? How do you measure pregnancy rates diminishing because of harassment? There's no way to. (Derek, has not tried for compensation)

T5-1#10 Another thing about [compensation] is we look on our horses differently than just calves that you send off to the market. I know a lot of horses have been killed by the wolves around here. ***And I don't see how anybody is ever going to compensate you for horses that you have raised and that you love. And that you have worried about the bloodlines and tried to match the stallions and the mares, and you follow them from the day they were born. And then they turn around and say, 'we will pay you the Alpo price for your damn horse, it's just ridiculous.*** (Joel, has not tried for compensation)

T5-1#11 I get paid $1,000 for a cow but that doesn't pay for if she's in the herd for eight years and you raise a $2500 bull out of her, ***it doesn't pay you for what the cow could've produced for you***. (Rick, both compensated and denied compensation)

T5-1#12 You lose that cow cause most ranchers, and we are included, anything that doesn't have a calf at branding time, they are shipped, because it doesn't pay to run a cow without a calf on grass. So you lose that cow which is an expense. ***I***

mean you'll get $500, $600 for that good cow and the only reason she went to town is because something killed her calf. They cost you a lot of money to raise and you don't keep the worst ones, you keep your best ones. And putting a value on those cows is pretty hard to do. I mean, ***how many calves will she raise, had that [predator] not killed her calf, and so there is an expense to that***. (George, has been compensated)

T5-1#13 They're going to pay for the sheep, but they're not going to pay for other damage. ***I'd rather they paid for the other damage, the fencing, the feeders, the dog food***. We [would have] made more money having them pay for that than we ever will on one sheep. (Andrew, both compensated and denied compensation)

T5-1#14 Well, ***there are additional costs. I don't know how you would put a figure on them and how you could include them***. But yeah, I do think that there's definitely a lot more cost involved when you start having problems. Just the time that you spend checking on them and the gas to drive between here and where my cattle are in the summer…Certainly [being compensated for these costs] would help. I don't know what it would be, but yeah, it definitely would help. (Jay, has been compensated)

T5-1#15 ***A direct value or compensation should be sufficient***. Anything that's added over and above, we have to accept the responsibility of where we decide to ranch, where we are. It's our decision if we want to be up against the mountain front for the fact that we have a higher rainfall, a better grass, and those types of things. But we have to accept also that we have the conflict with the wildlife, we have to accept something too…So ***I don't think there should be anything added to trying to push for more for the fact well, it cost me extra labor***. (Maxwell, has not tried for compensation)

T5-1#16 Well, I think they would have to classify what was killed. If it was a calf, maybe give you ***market value of what that calf was worth then***. You know there's always a market value on anything. (Walker, has not tried for compensation)

T5-1#17 I would like to get compensated for the cost for the whole hive and bees. If you could come up with a figure for the hive, what a going hive would be worth….The bee themselves, you can buy a package set for $30 in the spring…You are relying on making a safe 50 pounds of honey in this area off that hive. ***The bear destroys that 50 pounds of honey. Say it's worth 70 cents a pound, that's $35 worth of honey in the hive. The boxes themselves – they normally will sell bees, 2 boxes of bees for $50-$70. Would you be compensated for the honey?*** (Richard, has not tried for compensation)

Table 5-2. Interview excerpts reflecting concerns about compensation on private and public lands

T5-2#1	***If I had a lease on public land next to my own land and the same problem is happening on my public land [allotment] as it is on my private land, I think is should be handled the same***. If it's Forest Service land and no allotments or anything, then I say it could be handled differently than it could be for individuals. (Andrew, both compensated and denied compensation)
T5-2#2	I think ***[compensation] should be anywhere***, I don't think it should matter [if it's on public or private land]. (Maxwell, has not tried for compensation)
T5-2#3	Well, ***if that animal was killed on public lands I think you should be compensated for it***, especially when we are dealing with, what do we call it, experimental species, the wolf. There should be some accountability for the people that made the decision to reintroduce that animal to an area that was rid of the wolf for, oh, probably seventy years. (Cliff, has not tried for compensation)
T5-2#4	***If you've got a lease to run your livestock on that public land, I don't think there should be that much difference***. And that's part of the problem, nowadays, a lot of people think it's the Department of Recreation and Tourism, instead of being, the Forest Service, instead of being the Department of Agriculture; that land was set aside for grazing, and that's what it is, the Department of Agriculture. And it's not just for tourism and recreation, but there's people that think you've got to get the cows off of all that. (Mark, has not tried for compensation)
T5-2#5	I think whether these cattle are on your private property or clear over the hill in [the allotment]. ***The calf is not worth more, any more, on the ranch than he is out there on public land***. (Duke, has not tried for compensation)
T5-2#6	To me what I would look at is the whole operation. ***It doesn't matter if it's on public or private land, what matters is the 250 head or 500 head, or whatever it is the income base for the rancher. So whether the loss occurs on public or private land, it's still a loss***. If you're going to get into the whole debate about public land use, well that's, I don't want to go there. I mean, you know, I don't think that's part of this. It's whether or not you lose the animal no matter where it is. (Anne, has not tried for compensation)
T5-2#7	I think they should all be treated the same. ***Those people they're paying for them animals to be on that public land, so they should still be protected or paid for losses or whatever***. (Patrick, has been compensated)
T5-2#8	If you're renting land, you're renting for the pasture value of it. I mean it's rented, it isn't like they are giving it to you. So, if your car is parked on public

lands, if I run into it with my pickup I should have to pay for it. If it's parked on private lands, it's the same way I've got to pay for it. And that's the same with livestock, no matter where they're at. If you're paying rent on that property, if they're giving it to you, then well, breaks of the game, isn't it? ***But if your paying rent on it, then you should be compensated for it***. (Keenan, has not tried for compensation)

T5-2#9 I don't know I mean we don't get compensated for anything on Forest Service that gets killed on the Forest Service but basically that is public land and that is where the grizzly bears ought to be as far as I am concerned and as far as the people that we work for or I work for are concerned. Sure you have a use permit on that thing but I think they are kind of right, ***I don't believe that you should be compensated for anything that you put on those Forest Service*** you know, I think that is right. You don't think that when you are standing there looking at one of your dead ones out there, but that is where the wildlife should be you know that is why [the government] own that piece of property. So I think that is okay, no, none of my neighbors would say that too. And so when they get on private property that is a different deal I mean you own that piece of property and we should have some say of what goes on your property. (George, has been compensated)

T5-2#10 Well ***I guess if it is on public land that's a different deal than private land***…Everybody owns the public land. ***But I still think that the people have got, they have got the grazing rights and what not still got a right to be compensated if it is on federal or state land***. And even with us if we have got state land and something happened I think we should still be compensated because we have got the lease, we are paying for it. (Peter, has been compensated)

T5-2#11 Well, ***as far as I'm concerned, cattle on public land, mean it hurts me just as bad if it happens here on private***. But I see what you're saying, I suppose a lot of people think that if it's on public land I should take my losses. [But] it would be pretty hard for me to feel that way when it's my cattle. ***But I would rather take my losses than get kicked out of public land***. If they're going to say, hey you either take it or leave, well, yeah, I guess I'll take it. That Forest Service permit I have helps me quite a bit, it's pasture I need and we really take care of it. We have it, we appreciate it and we try to take care of it. We don't want to lose it. (Chris, both compensated and denied compensation)

T5-2#12 ***It's dollars one way or another [if losses occur on public or private lands]***. I mean, ***people can say well that animal was on federal land when he killed and he has a right because that is federal and everything else. Well, that is fine, but when he comes on private land and then goes back***. No, it's kind of a joke because it's their range, a wolf can cover 20 miles in nothing flat. You know that's fine he's there, but he's still a problem animal and he will come on private

ground. If it's a problem animal and you are trying to get everybody on the same level, you know, as far as , no it's a problem animal it doesn't matter where it is kill it. And I know a lot of people won't like that, but from the point of view of trying to make a living off of it. Because that problem animal is going to come onto the private ground and maybe you won't have a chance to get it there. Well okay, so you've got this thing that's just constantly, a burr that's constantly in your side and all this other stuff. Well, no it doesn't help anything. It's basically being protected, it's okay. It's like your living across from a thief. He can run over and steal something from you, but if he runs back into his house, you can't touch him. Or if he mugs you on the street, as along as he's back here you can't touch him. Well, bologna, it's still a problem and it needs to be taken care of it. (Kevin, denied compensation)

Table 5-3. Interview excerpts reflecting concerns regarding the verification process

T5-3#1 There are losses, but normally people out looking at their calves a lot, you pick that sick calf out. You see him standing there by himself, and you bring him in usually and start doctoring him. And there are some like that yes, without a doubt there are. That other animals come in and start eating on them. But when you see a big healthy calf that's probably bigger or in the large end of your herd, you know he didn't just fall over. Especially when stuffs been on them so soon after death, you know, he's hardly cold and he's half eaten. I just don't think they, I don't think they look at it enough. I don't thing they care. They had the funding for reimbursement***, you've almost got to photograph the wolf or the bear killing to ever be reimbursed for it. What's the point of turning it in***?…We had a cow out here about, it's been about five years ago. Now this is way out on the flats here, we're quite a ways away from those foothills, but there was a grizzly and a black bear both eating on that cow. Younger cow, now I don't know what she died of, or I don't know, maybe that old grizzly did the killing of it and th black bear came down quick and started eating on it. I don't think the black bear killed it, as far as the grizzly killing it, yeah. It was a heifer, replacement heifer is what it was, it didn't have a calf on it. ***But I believe something killed it there, but how do you prove that? Bear eating on it? That doesn't prove anything there is a black and a grizzly eating on it. But there's no way of showing how. It's so far eaten that you can't show how it was killed so you just leave it go at that***. (Keenan, has not tried compensation)

T5-3#2 Well, we have had a couple of horses eaten by the wolves and we couldn't prove, one was so far gone there wasn't anything left to prove how he died but there was wolves seen in this, within a quarter of a mile at the same time this horse was consumed. And the other one was half eaten with wolf tracks right in the dirt, right on top of him and if they skinned him and what was there left they couldn't find teeth marks so they couldn't say. I don't know if a wolf necessarily has to tear a horse up with its teeth to kill him. Why I think they can circle them or frighten them or run them out of gas and start eating them as they die. And ***some of the evidence is not always there, not how it appears and I know we have had animals lost and had people look at and still didn't get compensated for it. So it is a maze***. (Robert, has been compensated)

T5-3#3 But I think that maybe there would be a better way to compensate people for having to live with the wolves, and the grizzly bears, than paying them for the specific [animal] that had been killed. ***Because trying to pinpoint individual attacks is so difficult, so time consuming, so controversial, that I think that a good deal of the money that was set aside for the compensation would be spent in administering the program***. So, you know, I would be more ***in favor of some blanket compensation to people who were in areas, that were impacted by these predators***. (Joel, has not tried for compensation)

T5-3#4 When the wolves first showed up I had one that come out. And an animal had caused the problem but probably died basically from an infection. But whether it was a lion or a bear; it had chewed up a little bit. But what had killed it was the infection. And of course, when the wolves first showed up that's automatically [what I looked for]. I looked by everything else and saw that. And [the verifying agent] came up and we went over it. ***And I felt, well, it's pretty evident, but you have just tunnel vision for the first one. And then after that we'd go through it***. (Kevin, denied compensation)

T5-3#5 ***[The verifying agents] don't come running*** and number two, we used to never call anyhow. ***But I have tried it and I've gotten no satisfaction from them. It's a joke***. It seems like if a wolf or a bear kills a single yearling, they get more response than we do and I can tell you quite often the damage is more than what the yearling is. (Jerry, denied compensation and has refused compensation)

T5-3#6 But that don't always mean the bear killed it, because they could have died by something else. But they confirmed it as a kill; they can tell by the bite marks on the hide and stuff. ***But you got to find them pretty fast, because there isn't much left. If wolves get them, there isn't hardly anything left, or bears, either*** one. (Harry, both compensated and denied compensation)

T5-3#7 Well ***it's hard to tell sometimes [if you've had a kill] unless you're actually right on the spot waiting***. Our last coyote kill was pretty obvious, we had a cow come into the feed ground that had blood all over her face. I mean, she was literally trying to fight these coyotes off. We just followed her tracks were she came from and sure enough there were coyote tracks all around and she had calved. The minute she calved the coyote just got her. The calf couldn't defend itself; he was too young. (Walker, has not tried for compensation)

T5-3#8 Well, let me put it this way, out on these mountains there are so many nooks and crannies and steep hillsides. When we ride we don't cover all of it. ***We cover the most accessible way through, through different open areas, through creek bottoms where we can get through….We never see anything but a bone rack or a bone here and there. And for [an agency personnel] to come up there and go out there with us, it would take so damn much time, because you can't drive to it***. You ride a horse and a lot of times you spend all day long getting from one point to the other. (Lyle, both compensated and denied compensation)

T5-3#9 ***You have to have such proof before they will pay for stock***. Well, a lot of times we might not see those cattle for a week, maybe more than that. ***But if you come onto a kill that was two days old, there's not enough proof left on dry conditions like we have around here where you can pinpoint anything***. (Andrew, both compensated and denied compensation)

T5-3#10 But one thing that is frustrating to me is when I know that ***I go in there with so***

many numbers and there is absolutely no way that you are going to find all these carcasses that these predators kill. You can't do it. It's too big of a country. (Chris, both compensated and denied compensation)

T5-3#11 ***The compensation is probably the dumbest thing I've ever heard of because of the verification***. Most people don't realize the type of land that we run cattle in…It's different than if you have a herd of dairy goats and you're getting them in everyday. There's a lot of times that I will, ***most of the time in the summertime if I lose a calf, if I find any sign of them it's rare***. I mean sometimes you just happen to be there the day one dies or whatever, but usually you might find a skull or a leg bone or whatever. ***And just the coyotes and the ravens, and the eagles and whatever will pretty much do away with [the carcass] and fairly fast. I mean, like in a day they'll be gone, so to verify a wolf kill or a bear kill is just about ridiculous***. It looks good on paper I guess, but in practicality it just isn't going to work. (Howard, has not tried for compensation)

T5-3#12 You can't just say well, I came out of the mountains five head short, gosh, I want to be paid for them. I don't think that that's going to work. ***If you're going to have to prove them, you're going to have to be there more often to find them***…You might find a spot on the ground, and in the mountains, that's pretty hard to find…If you're going to be paid for them, you're going to have to [be out there] if you're going to prove it. (Jay, has been compensated)

T5-3#13 I think compensation is a good deal, but I have heard the comment many times a guy has a calf killed. ***Well he gets a hold of the [verifying agency], well they are busy, 'we will get up there tomorrow though.' By the time they get there they can't make a real determination whether that calf has been killed by a wolf, grizzly bear, coyote, or died of poison***. So the [verifying agent] goes, 'well, you know, it looks like a bear did it, but I am just not a hundred percent sure.' The only thing left may be a leg. (Cliff, has not tried for compensation)

T5-3#14 I have heard of instances where all of a sudden you haven't been in this one little canyon for a week, ten days and you ride down there and hell, you have got dead cows laying all over. ***You know you have got a bear in there killing them, you have got to have some real expert personnel make the decision what killed those animals***…But I think [verifying agencies] are taking a lot of guys that maybe that this is their summer project to make the determination whether they had a bear in there killing those cows or they had a wolf in there. And they don't have the expertise. ***You have got to have somebody that really knows what is going on to make those calls***. (Cliff, has not tried for compensation)

T5-3#15 ***They're going to have to have probably a quicker response…if they're going to have such tough criteria to say that an animal was or wasn't killed***. So they're going to have [to be quicker]. Somebody's going to have to be there quicker [to verify], or else they're going to have to be a little more lenient and not have quite

such stringent [criteria]. (Mark, has not tried for compensation)

T5-3#16 The problem with the compensation now is ***a pack of wolves would, let's say they kill a yearling steer or a calf. They eat him up to nothing and the only thing you find out is when you round-up in the fall, you're short so many animals***. You don't know what happened to them, so how do you prove it? That's what they are not paying and it has really hurt some of the ranchers. (Walter, has not tried for compensation)

T5-3#17 Well, the strength is [that it's] fast, it paid you quick. And the downside of it, the downside of it is ***they have to prove that the wolf killed that calf and the ones you can't find you don't get paid for and then it costs us out of our pocket***. (Russell, both compensated and denied compensation)

T5-3#18 ***You can't find [the kills], they eat 'em. Of course, a wolf, they'll eat 'em right up, won't leave nothing but the legs or something***. (Chad, both compensated and denied compensation)

T5-3#19 ***You got to find it to prove it first***…I think they need maybe more people available to confirm things, because they just got one guy down here…and he can't be everyplace at once. And you know, ***overnight a critter can be [eaten], everything, because of all these things that eat on it***. (Harry, both compensated and denied compensation)

T5-3#20 Yeah, ***[the verification] was pretty strict, and was pretty hard to meet all the standards***…all the qualifications to show that the calf was actually killed by a wolf. It seemed to me that ***sometimes the evidence was pretty compelling and that should have been enough***. (Ralph, has not tried for compensation)

T5-3#21 Everyone that we have had, those guys look at they couldn't determine [what killed it]. And I think you will find that that is why ***I don't ever even think about calling them or even think about being there early enough to figure them out***. Because they are going to come out and it is going to be tough for them to call it. ***Their requirements are stringent***. (Ryan, denied compensation)

T5-3#22 Of course ***when a cow critter gets killed, you have to be right there on it because they'll come back in that night and finish it off. And then the evidence is all gone***. And I just feel that [the verifying agents] didn't feel that they had enough evidence and of course, the bear tracks are there all over. (Debra, denied compensation)

T5-3#23 I mean ***you find the calf today, you get back home here and you get up there and cover it up so that it is still there cause you call the [verifying agents] and they can't be here until tomorrow or the next day***. And if you don't cover it up whatever killed it is going to come eat the rest of it the next night. If you do

cover it up sometimes they come and dig it out from under there and eat it the next night and by the time the [verifying agent] gets here it is gone. (George, has been compensated)

Table 5-4. Interview excerpts reflecting concerns about people taking advantage of compensation

T5-4#1	I think they need to say, okay if this is a three year old cow, she's had two calves or one calf and her life expectancy is average eight to ten years, they need to hit an average in there. ***We're not wanting to scam them and get rich off this one kill***. There's a lot more invested in that cow, there's a lot of sweat , there's a lot of worry, there's a lot of time spend checking them if they calve all right. ***There's a lot more goes into them than just that dollar figure***. (Rick, both compensated and denied compensation)
T5-4#2	***The ranchers will police themselves to a certain extent***, which is true. If you got a guy on your own allotment that's turning out too many cows, for example, we aren't going to let him do that because he's stealing our grass. If I turn out the right amount of numbers, then he'd better turn out the right amount of numbers. That's happened. Guys will, pretty soon they will figure out and say, "We know what you're turning out. We counted them in. You didn't know we was counting them in, but we counted them in. We're not going to put up with that. We are going to go to the Forest Service. If we go to the Forest Service, they will jerk your permit like that. That's actually happened so if a started abusing the compensation program doing the same thing, we'd say no you don't. Don't be doing that or you will ruin the whole program for us. I think there is a certain amount of that would probably happen. ***The honest people don't want to put up with somebody that isn't***. (Lenny, denied compensation)
T5-4#3	If after an investigation they felt that money was being inadequately given to, fraudulently given, maybe, then ***I think that producer or that individual should be punished in federal court***. (Dylan, has been compensated)
T5-4#4	I'm pretty sure they're just going to want to see the confirmed kill. You know ***you hate to see people take advantage of the system if you don't know for sure***. There's too much of [that] that goes on anyway. There's just a certain percentage of it you're just going to have to absorb anyway. (Walker, has not tried for compensation)
T5-4#5	I know it would have to be as to an on-site inspection either by a game warden or Fish and Game to come up with a reasonable value. I think that would have to be evaluated on a basis of each instance as to, I mean, there is a lot of difference between one sheep or even say, even one cow. I mean, if it's a registered cow and they can prove that it's registered. ***I think they have to take a reasonable value for that animal and I know that some individuals will say, she has a greater worth than that for the fact that she has a reproduction for say the next four or five years. That could well be, and even though that would be in my favor, I don't think that's fair. I think it would probably be abused***. Again you'd have to evaluate each situation rather than saying one cow is worth $500

and one sheep is worth $200 or whatever. I don't think you can do that. (Maxwell, has not tried for compensation)

T5-4#6 Well, I'm in the cow business to try to make some money, so I guess I do get money from compensation. If I was to take care of the problem myself, I don't get paid for it, other than then I know it may not happen from that bear again, it might happen from another one, or whatever, whatever the predator is, but I think they could probably work it both ways, if you turn something in and got compensated, now some people might take advantage of that too and just use it for a free license to kill bears…where I would say it would be a problem , is probably the people that didn't really have cows, or something, or maybe buy two cows or something and go out and shoot a bunchy of bears, yeah, they could wipe them out, which maybe wouldn't be a bad idea! ***But people could figure out how to take advantage of anything***, to have a little fun, that's human nature. (Harry, both compensated and denied compensation)

T5-4#7 Well, I guess it's the best we have right now so we're going to have to live with it. But I say that there is probably improvements that could be made but I'm not sure just how and you know that ***there's going to be people taking advantage if they get too [much]***. (Patrick, has been compensated)

T5-4#8 Yeah, [allowing ***flexibility in payment determination] that would help me a lot. I don't think a person could take advantage of a situation***. (Andrew, both compensated and denied compensation)

T5-4#9 You know I don't know exactly how things are done now, except that I understand there's a loss and then you get somebody out as soon as you possibly can. And they come and they look and they make a determination of whether they think it was a predator loss or not. And then you either are or are not allowed the compensation. And, you know, I guess, what you're really asking or maybe this is what your asking is who, who gets the benefit of the doubt in that situation. In the administration of it, is it the rancher or is it the public? And speaking as a rancher, I think that the benefit of the doubt should be with the rancher as much as possible. Because one, it's their loss, but two, there's just some political capital in [it] in smoothing the way for predators to co-exist with livestock. So, if it's $300.00 and you can make somebody happy, that seems, I guess, ***I think most people are not going to be, are not going to lie about this intentionally. And, their biggest gain is to be able to keep their livestock alive. You know, it isn't to go and milk compensation programs***. (Anne, has not tried for compensation)

T5-4#10 ***You know you can't go compensating for things that can't be proved because people are going to take advantage of it***. That's the hard thing, and so I don't feel that you can do that. No one's going to do that for you…I'm sure some ranchers would take advantage of it. They would if they could…***I think most of***

the ranchers will be pretty good about it. (Chris, both compensated and denied compensation)

T5-4#11 ***I don't think anybody takes advantage of it because their compensation thing doesn't pay you near what it's worth*** you know. Like my stud horse out here, if a bear come and killed it or a lion killed that horse or a wolf or grizzly or something. If they killed that horse, they'd probably pay me a $1,000 for the horse max. He's a registered stud horse and probably worth $6,000 or $7,000. (Keenan, has not tried for compensation)

T5-4#12 It goes back to these unconfirmed kills. What happens to that, I guess. People would really have to keep records or the burden of proof should rest on no the owner, but the agency. Like say, once again, ***you're going to have people cheat the system***, but if we say we turned out 500 calves and 490 come back then 10 calves are missing and if they want to go up there and find them and say, yeah, this one died of pneumonia fine. (Eric, has been compensated)

T5-4#13 Well, if they're not going to let the rancher protect his livestock, there's got to be some, some kind of compensation, because basically, he's taking the hit for what the general public wants to se running around out there. And, but I don't know for sure, because ***there are people that would take advantage of a program like that, too. If, so as far as relaxing some of the verification of it, that wouldn't work either because then it could be taken advantage of, in the other direction***. Yeah, it's just, it's a tough one, there. (Mark, has not tried for compensation)

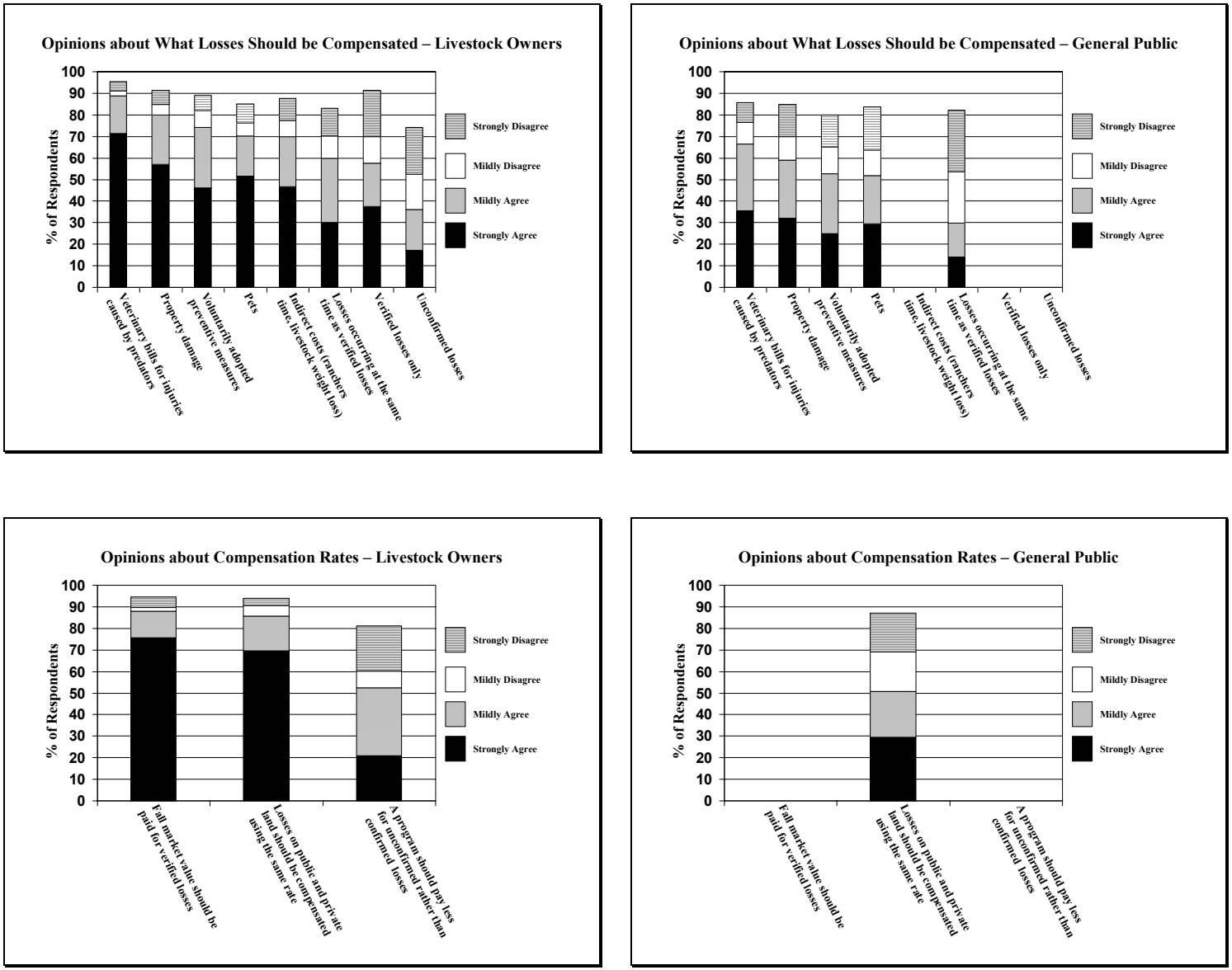


Figure 5-1. Respondents' opinions regarding what types of losses should be compensated for.

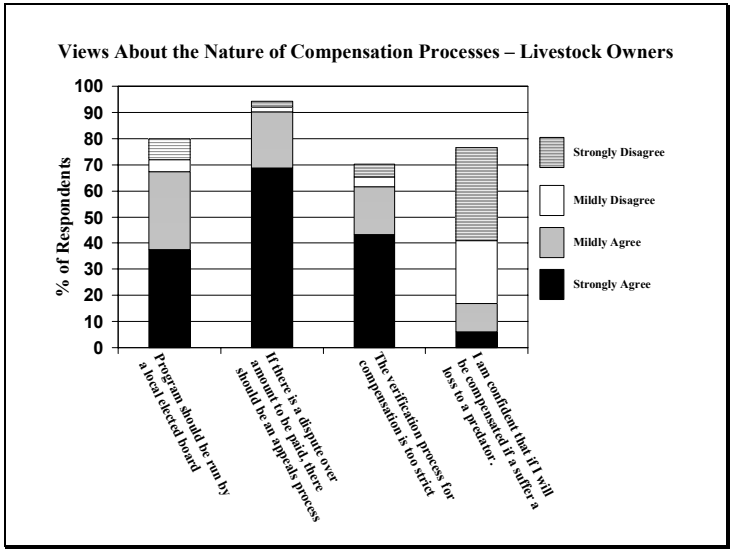


Figure 5-2. Views about the nature of compensation processes (livestock owner sample only).

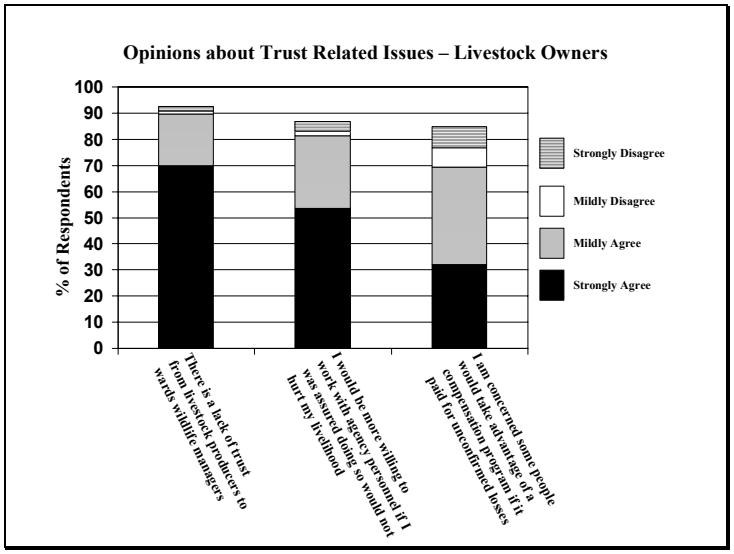
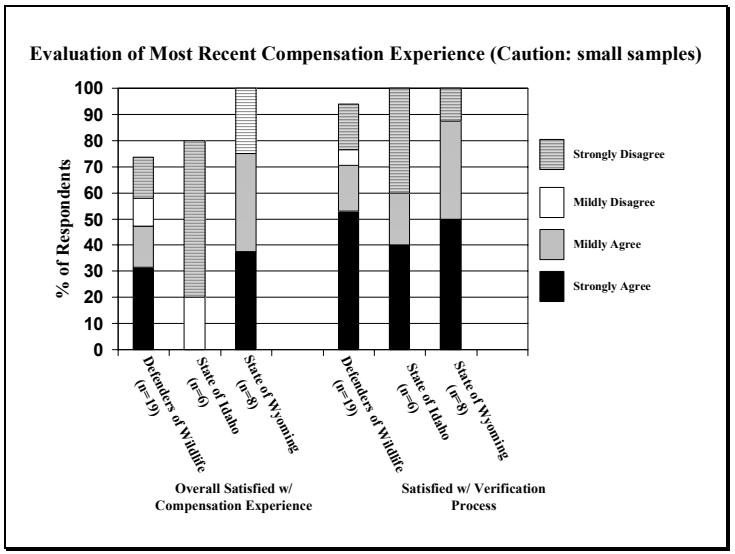
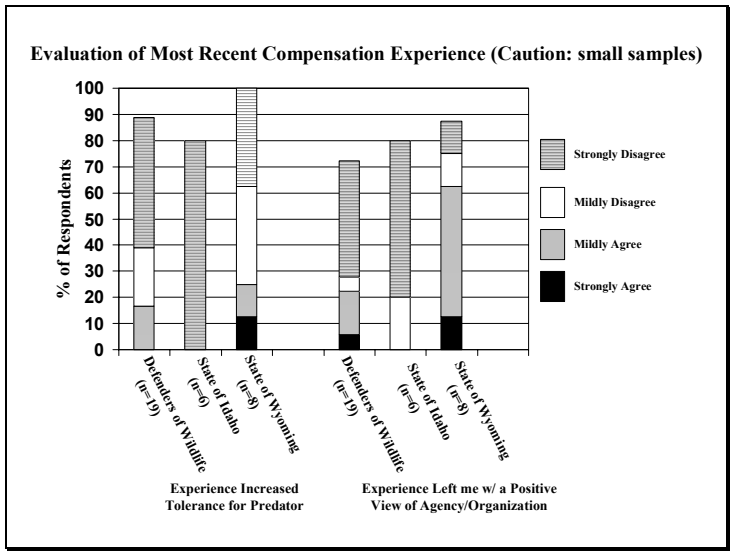


Figure 5-3. Opinions about trust related issues (livestock owner sample only).





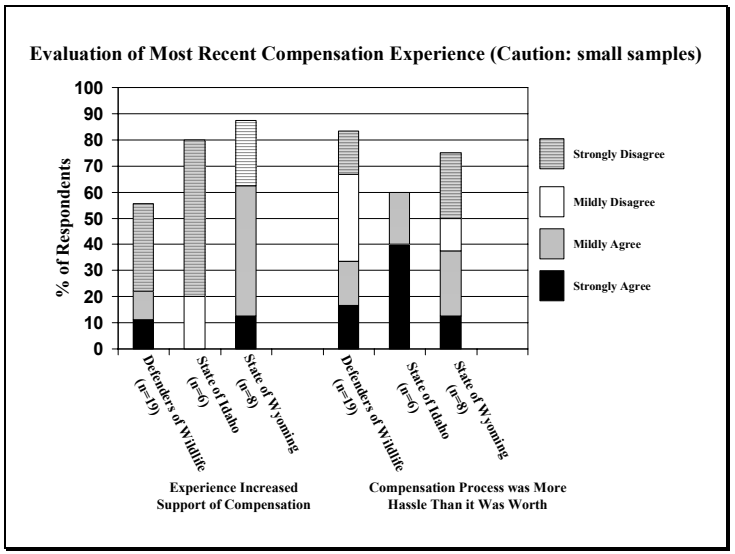


Figure 5-4. Evaluation of most recent compensation experiences of those who had sought compensation.

Chapter 6 Response Rates and Over/Under Sampled Segments of the Population

Gender

The sample for the livestock owner survey was drawn from a database of livestock owners in the three states by the Montana Agricultural Statistics Service while the sampling frame for the general public survey came from a commercial service that maintains a database generated primarily from phone lists. While we considered these to be the best available sources, one unanticipated side effect was a gender "imbalance" in the survey respondents. In the livestock owner survey, 18% of the respondents were female and 82% were male while in the general public survey 22% of the respondents were female and 78% were male. The most recent census data for these states suggests a population that is evenly split between males and females. As a consequence, it is important to evaluate whether gender is a factor influencing responses. The discriminant analyses presented earlier included gender as a possible discriminating variable. Results indicated gender was a contributing factor in only one analysis (voting). It was part of the weaker, second discriminating function that helped to separate neutral respondents from other respondents. Overall then the discriminant analyses suggest that gender was not an important factor. However, the possible influence of gender is also examined in further detail in this chapter.

For this analysis nine questions from the survey were selected to evaluate the role of gender in responses. The questions on "voting intentions for a state run compensation program," "desirability of paying livestock owners for losses to predators," "acceptability of a state compensation program when predator is endangered," and "acceptability of compensation when predator is not endangered" were selected for analysis due to the direct link to the concept of compensation. The "belief that compensation spreads costs of predator conservation more fairly within society," "belief that predator losses are a cost of doing business and should not be compensated," "appropriateness of funding compensation via a state tax," and "appropriateness of funding via a federal tax" questions were analyzed due to their importance in the discriminant analyses. Finally, "giving livestock owners the right to kill predators that attack livestock" question was analyzed due to the widespread belief that women are less likely to endorse lethal measures. Chi-square analyses were used to evaluate whether there was a significant difference in response across males and females. Analyses were conducted separately for the livestock owner sample and the general public sample.

For the livestock owner sample, only two of the nine questions yielded statistically significant differences between males and females. The first was "giving livestock owners the right to kill predators that attack livestock ($\chi^2 = 10.887$, $p=0.028$). Analysis of the standardized residuals indicates that the difference was primarily attributable to the fact that women were more likely than expected to find this moderately desirable. However, from a policy decision-making perspective, the difference between genders does not appear to carry meaningful implications. Overall, 91% of the women and 95% of the men indicated that this was a desirable management alternative (Figure 6-1). There was also a statistically significant difference on the "appropriateness of funding compensation through federal taxes" question ($\chi^2 = 9.912$, $p=0.042$). Analysis of the standardized residuals indicates women were less likely to find this moderately inappropriate. But again, looking at the overall pattern of responses (Figure 6-1) suggests that this statistical difference seems to carry little practical policy significance. Both men and

women were nearly equally divided over the appropriateness of this source of funding. Overall then, these analyses suggest that the under representation of women respondents within the livestock owner survey likely does not appreciably impact the results from a policy decision making standpoint.

In the general public survey, statistically significant gender differences were found for seven of the nine variables selected: "giving livestock owners the right to kill predators that attack livestock" ($\chi^2 = 17.099$, p=0.002), "belief that compensation spreads costs of predator conservation more fairly within society" ($\chi^2 = 10.284$, p=0.036); "appropriateness of funding compensation via a state tax" ($\chi^2 = 12.389$, p=0.015); "appropriateness of funding via a federal tax" ($\chi^2 = 17.785$, p=0.001); "acceptability of a state compensation program when predator is endangered" ($\chi^2 = 19.134$, p=0.001); "acceptability of a state compensation program when predator is not endangered" ($\chi^2 = 15.892$, p=0.008); and "voting intentions for a state run compensation program" ($\chi^2 = 20.606$, p<0.001). The general pattern was for women to be more likely to be neutral than expected. For the acceptability of a state program, women were also less likely than expected to find a program highly unacceptable. In the voting question women were also less likely than expected to vote against. Finally in the "giving livestock owners the right to kill," women were less likely to indicate this alternative was highly desirable. However, looking at the results from a policy decision making perspective it is not clear that the statistically significant differences would lead to different policy considerations. For example, with respect to giving livestock owners the right to kill predators, a clear majority of women respondents (64%) found the alternative desirable (compared to 79% of the men) (Figure 6-2). A somewhat more notable gender difference occurred with respect to the appropriateness of funding through a state tax. A clear majority of men (63%) found this inappropriate whereas only a plurality of women (48% inappropriate versus 33% appropriate) found it inappropriate (Figure 6-2). Similarly on voting, the results across gender with respect to "vote against" versus "neutral" seemed to be reversed. Forty-four percent of the women were neutral and 30% indicated they would vote against whereas 27% of the men were neutral and 42% indicated that they would vote against (Figure 6-2). And indeed, this was the only question in the discriminant analysis for which gender played a discriminating role.

Overall, these analyses suggest that in the general public sample, the under representation of women may lead to a slight under-estimate in the portion of the population expressing a neutral view and at times a slight over-estimate the portion of the population expressing a negative view towards compensation program related issues. This should be taken into consideration when evaluating the results in the descriptive chapters. At the same time the analyses suggest that the voting question was the only compensation related question for which the gender difference might notably influence the results from a policy perspective. Interestingly, in some ways, this was also the most ambiguous question in that it did not propose the specific details of the compensation program to be voted on. Also the facts that gender differences were not notable in the livestock owner survey and that in the discriminant analyses gender only had an important influence in one analysis suggests that other factors (such as the nature of the beliefs a person holds) out weigh gender itself as a discriminating factor.

Age

A second demographic characteristic, age, also differed between the general population and the samples. Census statistics indicate that the age distribution for the region is 52% 18-44

years old; 31% 45-64 years old ; and 17% 65 and older. In contrast the livestock owner sample was 13% 18-44 years old; 64% 45-64 years old; and 24% 65 and older. The general public survey was 24% 18-44 years old; 45% 45-64 years old; and 31% 65 and older. Relative to the general population then, both samples reflect an over-representation of higher age groups. Age was included in the discriminant analyses and was not found to be an important factor. However, as with gender, a series of additional analyses was conducted to assess the possible influence of age on responses. The same nine questions used in the gender-based analyses above were used in this analysis.

For the livestock owner sample, only the question regarding "acceptability of a state compensation program when predator is not endangered" showed a statistically significant difference ($\chi^2 = 19.144$, $p=0.014$). Analysis of the standardized residuals indicated that the youngest age category was more likely to be neutral than expected. Figure 6-3 indicates that a larger percentage of the oldest age group responded that such a program was unacceptable while for the younger two age groups the reverse was true. However, across all age groups, no single response contained reflected a majority of respondents. And overall the analyses of the nine questions suggests that the age discrepancy would not appreciably affect the results with respect to the livestock owner sample.

For the general public sample, five of the nine questions yielded statistically significant differences across the age categories. These question included: "giving livestock owners the right to kill predators that attack livestock" ($\chi^2 = 28.222$, $p<0.001$), "desirability of paying livestock owners for losses to predators" ($\chi^2 = 28.471$, $p<0.001$); "appropriateness of funding compensation via a state tax" ($\chi^2 = 22.253$, $p=0.004$); "appropriateness of funding via a federal tax" ($\chi^2 = 31.370$, $p<0.001$); and "acceptability of a state compensation program when predator is endangered" ($\chi^2 = 36.361$, $p=0.001$). Figure 6-4 suggests that for the first three questions, the statistically significant difference by age has no practical significance in terms of policy implications. For the fourth question (funding through a federal tax), a slight plurality of the youngest age group found this appropriate while a slight plurality of the other two age groups find it inappropriate. But all age classes demonstrate a wide divergence in perspectives and it appears from a policy making standpoint that the differences in age distribution are not likely to be a major cause for consideration. In the final question, acceptability of a state compensation program when the predator is endangered, the oldest age category is evenly divided over acceptability while the youngest two age categories both show a majority in favor (59% and 53% appropriate versus 28 and 37% inappropriate). Overall, despite the number of statistically significant differences the results of this analysis are consistent with the discriminant analysis in suggesting that age is not an important factor in creating differences in response in a policy making context.

Nonrespondents

A final limitation of the study and issue of concern is the question of nonrespondents. By state, response rates for the livestock owner survey were: 52% (Idaho), 51% (Montana), and 50% (Wyoming). Response rates were somewhat lower for the general public survey: 42% (Idaho), 49% (Montana), and 42% (Wyoming). Evaluating the adequacy and implications of response rates are difficult issues. Voter turn out in the 2002 election for the three states was: 44% (Idaho), 50% (Montana), and 49% (Wyoming) (News Journal Wire Services, 2002). Thus the response rates to this survey on policy related issues were similar to voting rates. At the

same time, when using follow up techniques (multiple follow up mailings) as was done in this study, the hope is to achieve a higher response. Ultimately, there are two concerns with response rates in social surveys. The first is whether there are sufficient observations for the statistical analyses to be valid. In a sample this large, this is not a concern. The second concern is whether nonrespondents have different perspectives than respondents, in which case a response bias occurs in the results.

To explore the possibility of a response bias, a sample of nonrespondents was contacted. Because of restrictions on access to the contact information from the Montana Agricultural Statistics Service database (based on their policy to protect the privacy of individuals within the database), the nonresponse analysis was conducted only for the general public. A sample of 50 nonrespondents was contacted for each state. Because study participation was voluntary and nonrespondents had declined to participate through two follow up mailings requesting their response, the follow-up survey was kept brief typically taking approximately three minutes to complete. The questions asked included familiarity with compensation programs and whether one would vote for a state run compensation in an upcoming election, views about the importance of two issues not addressed by compensation (impact of predators on elk/deer populations and simply not wanting predators in the area), and views about whether people have a responsibility to learn to coexist with the three predators emphasized in the study (grizzly bears, mountain lions, and wolves). These latter issues were asked based on the belief that these issues would play a more substantial role in discriminating among individuals with respect to the views about compensation that analyses ultimately indicated. As results of the discriminant analyses indicate, other variables played a more substantive role than these and in retrospect would have been better choices for the nonresponse analysis.

With respect to familiarity with compensation programs, the difference between respondents and nonrespondents was not statistically significant ($p = 0.545$). There was however, a statistically significant difference between the two groups with respect to voting intentions ($\chi^2 = 30.893$, $p<0.001$). Analysis of the standardized residuals indicates that nonrespondents were less likely to indicate that they would vote against and more likely to indicate that they would not vote than would be expected if there were no difference between the two groups (Figure 6-5). Despite being less likely to vote against, nonrespondents were also less likely to strongly agree and more likely to be neutral with respect to two issues not addressed by compensation (impact of predators on elk/deer ($p < 0.001$), not wanting predators in the area ($p = 0.001$)). With respect to views about the importance of co-existing predators, nonrespondents were more likely to be neutral and less likely to strongly disagree with respect to grizzly bears ($p < 0.001$) and mountain lions ($p = 0.005$) but there was no difference with respect to wolves.

Overall, one consistent difference between respondents and nonrespondents is the tendency for nonrespondents to be more likely to be undecided or neutral. A second, trend was for nonrespondents to be less likely to "be against" a wildlife related position (less likely to vote against compensation, less likely to agree that reduced elk deer populations were a concern or that they did not want predators in the area, less likely to disagree that learning to co-exist with wildlife). However, it is not clear whether these trends represent is a true difference between respondents or is perhaps an artifact of the phone survey (perhaps there is a social desirability bias in that people are less comfortable expressing a negative view in person and are therefore more likely to express a neutral view, or perhaps in a brief phone interview people have less time to think through the issues and therefore more likely to be neutral).

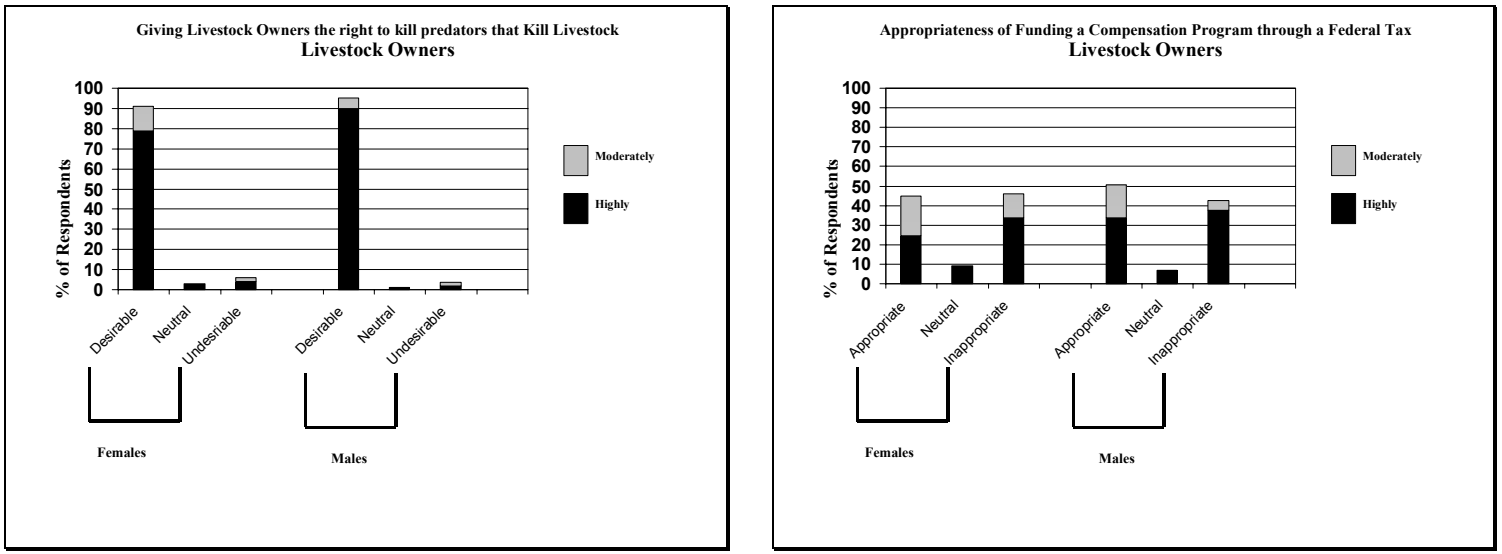


Figure 6-1. Gender differences in responses - livestock owner sample.

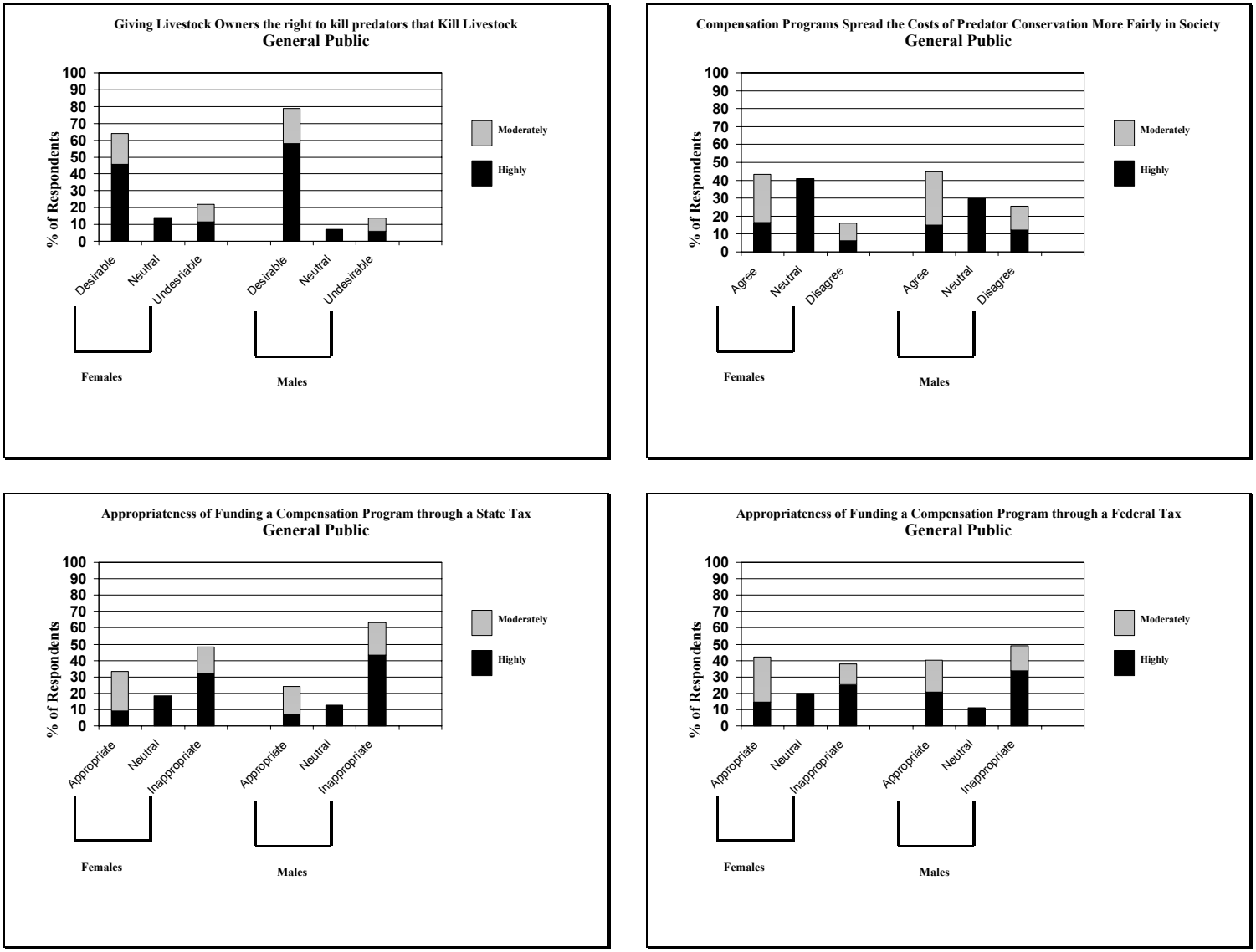
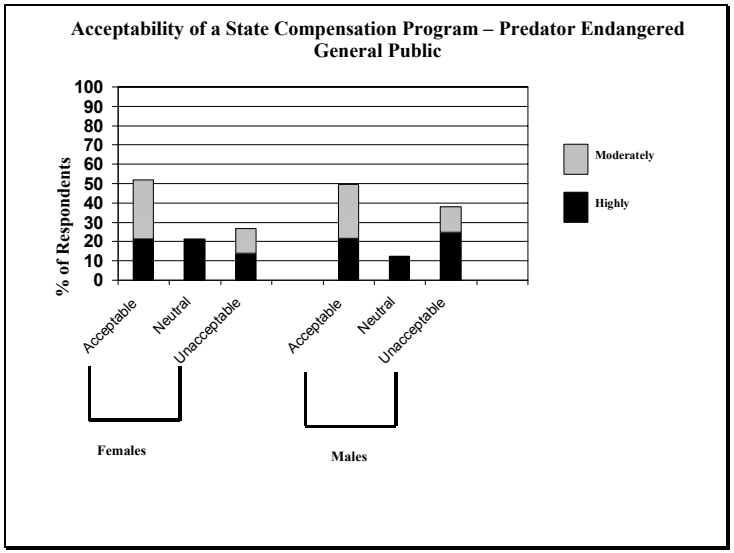
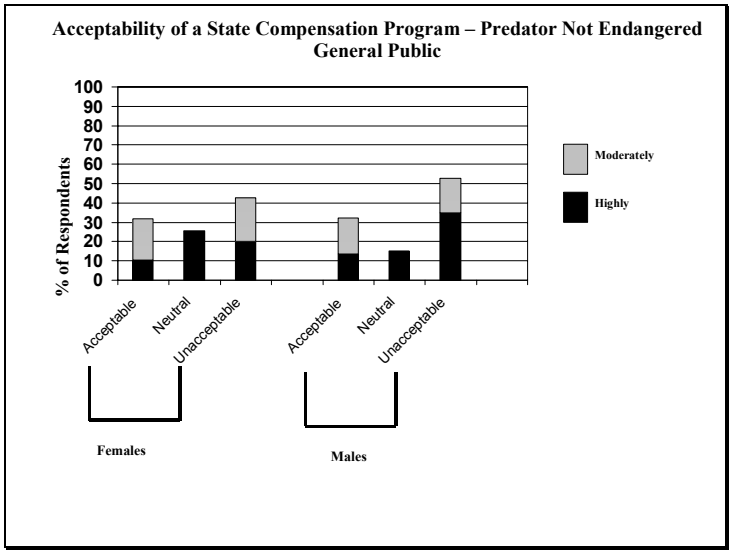


Figure 6-2. Gender differences in responses - general public sample.





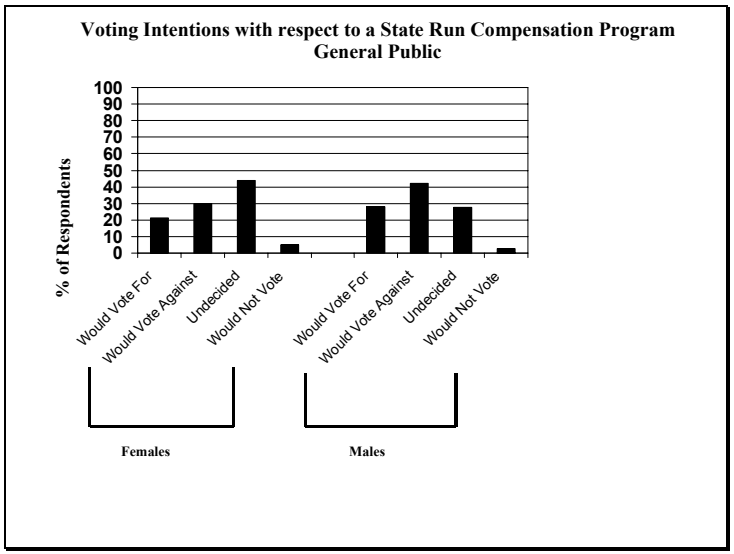


Figure 6-2 (continued). Gender differences in responses - general public sample.

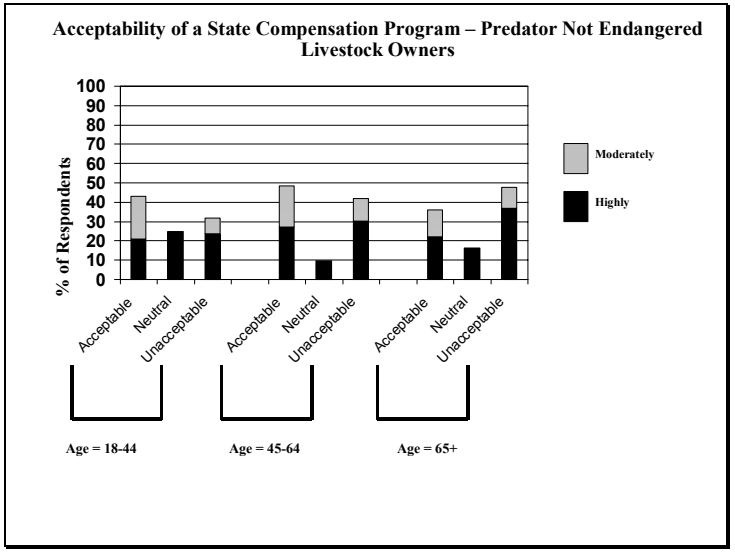
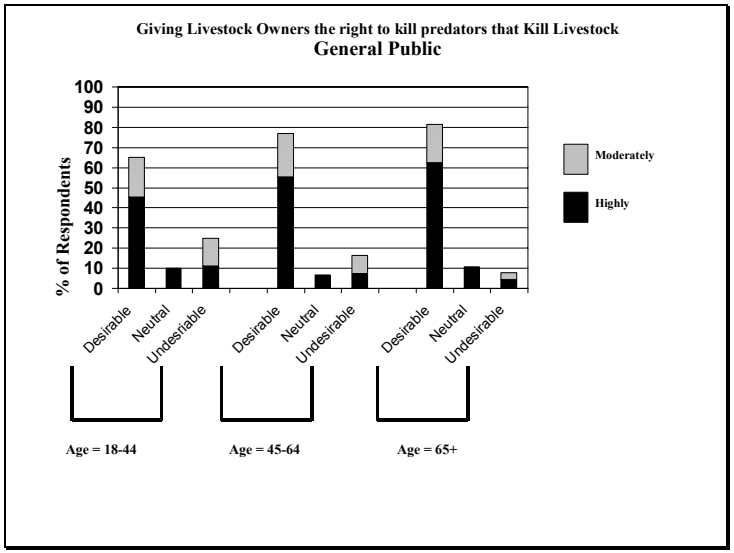
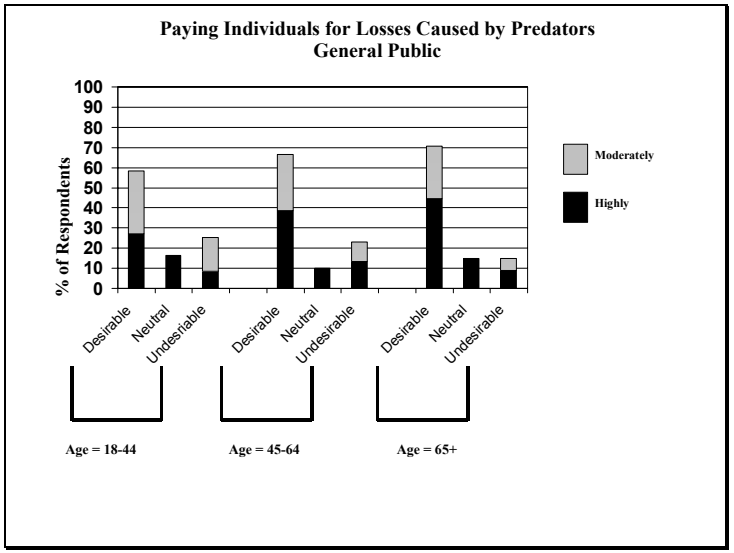
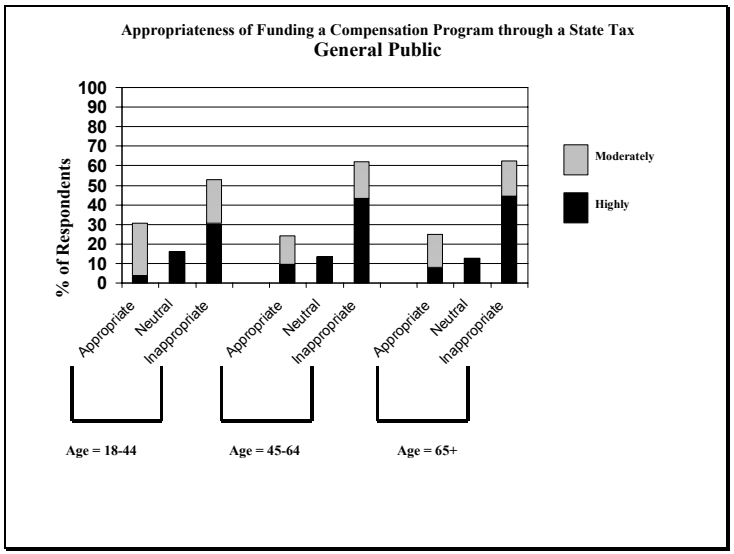


Figure 6-3. Age differences in responses - livestock owner sample.







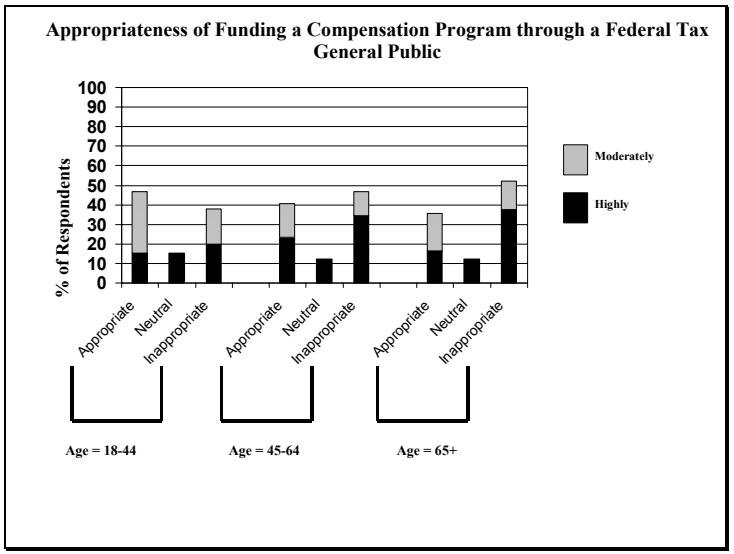


Figure 6-4. Age differences in responses - general public sample.

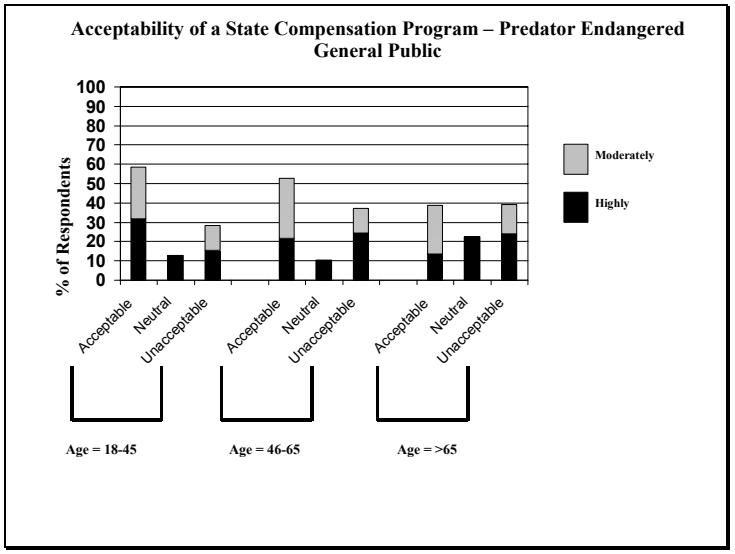
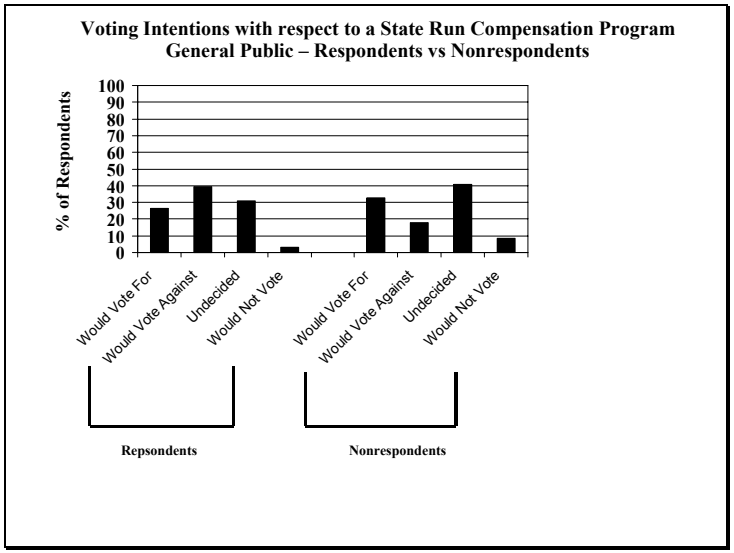
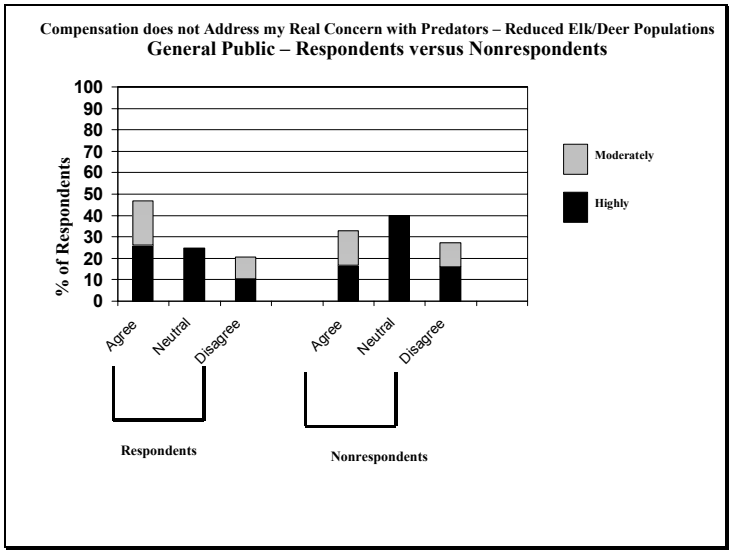
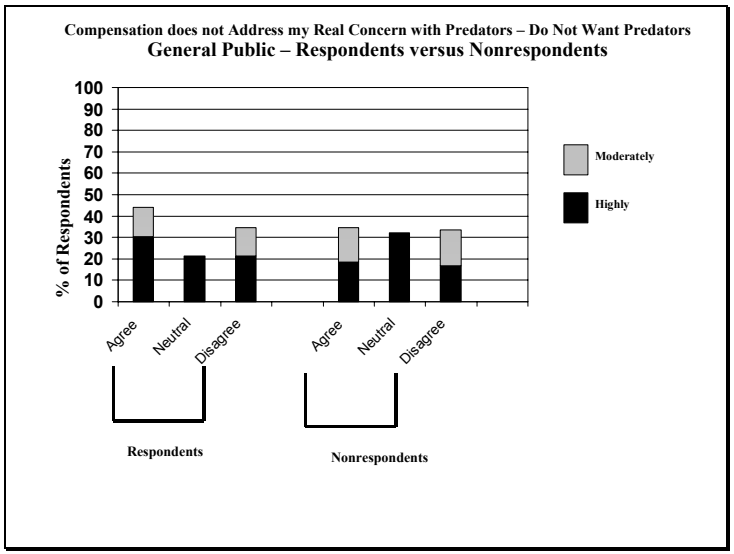


Figure 6-4 (continued). Age differences in responses - general public sample.







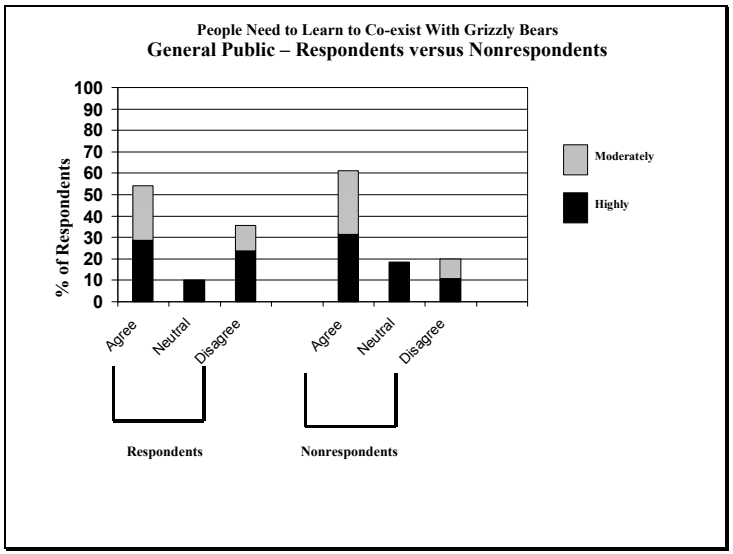


Figure 6-5. Comparison of respondents and nonrespondents - general public sample.

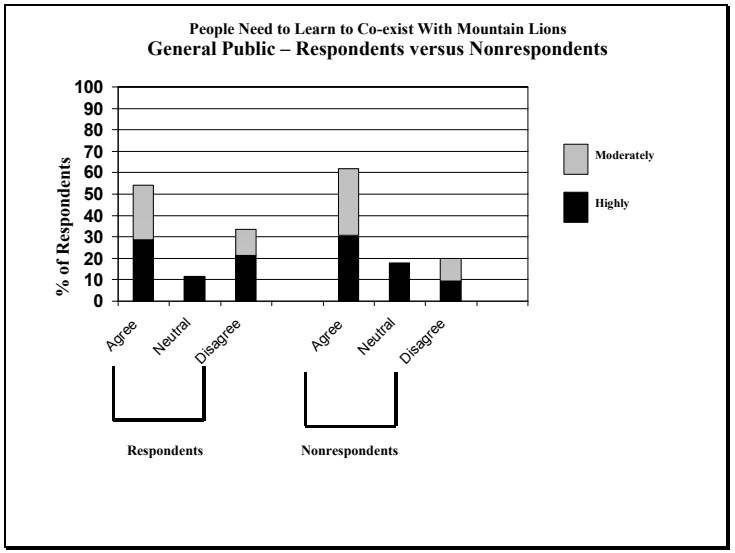


Figure 6-5 (continued). Comparison of respondents and nonrespondents - general public sample.

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