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Original Research

The Land Ethic of Ranchers: A Core Value Despite Divergent Views of Government[☆]Aaron M. Lien^{a,b,*}, Colleen Svancara^c, Wendy Vanasco^c, George B. Ruyle^c, Laura López-Hoffman^{a,c}^a Udall Center for Studies in Public Policy, University of Arizona, Tucson, AZ 85719, USA^b Arid Lands Resource Sciences, University of Arizona, Tucson, AZ 85719, USA^c School of Natural Resources and the Environment, University of Arizona, Tucson, AZ 85719, USA

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ABSTRACT

In the western United States, the management and use of public lands for livestock grazing is a frequent source of conflict among environmentalists, federal agencies, and ranchers. Since at least the early 1980s, the rhetoric of the “sagebrush rebellion” has reinforced a public perception that ranchers are both antigovernment and anticonservation. Sustainable management of public lands used for livestock grazing depends on both federal agency personnel, who enforce regulations, and ranchers, who use the land and implement management plans on a day-to-day basis. As a result, the attitudes of ranchers toward conservation can have a significant impact on the overall ecological health of public rangelands. We conducted a study of ranchers in southeastern Arizona and southwestern New Mexico using Q Methodology to understand their views and motivations about ranching, conservation, and the government. Our results show three complex viewpoints, which we term *radical center ranchers* (20% of variance), *innovative conservationists* (19% of variance), and *traditional ranchers* (12% of variance). A commitment to conservation and corresponding lack of anticonservation sentiment is held across these viewpoints. Mistrust of government coexists with conservation values for two groups. This information is useful for finding common ground between ranchers and government officials, conservationists, and extension agents on range management and conservation goals.

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Introduction

Since at least the 1980s, the “sagebrush rebellion” has been a recurrent theme in the politics of western public land management. Adherents to the philosophy of the sagebrush rebellion and related movements generally oppose government environmental regulations and ownership of rangelands and claim to represent the interests of resource users including ranchers. Recent examples include April 2014 in Nevada, when the Bureau of Land Management was enmeshed in an armed standoff with a rancher who refused to pay grazing permit fees to the government, and early 2016, when the Malheur National Wildlife Refuge in Oregon was occupied for 40 days by armed militant “ranchers” disputing government authority over federal lands.

These events, as well as others around the western United States, have resulted in new media and public attention on public land

management and the attitudes of ranchers toward the federal government. Ranchers are commonly portrayed in the media as both antigovernment and anticonservation. However, there is little research available assessing if the views of groups aligned with the Malheur occupiers are consistent with the opinions of typical ranchers in the interior western United States. In this article, we present the results of a quantitative and qualitative study to understand the range of viewpoints held by the ranching community in southeastern Arizona and southwestern New Mexico. The results of our research, although specific to the region of study, show ranchers’ views are complex. The information we develop helps to remedy misunderstandings about the views of the ranching community and is useful for finding common ground between ranchers and government officials, conservationists, and researchers on range management and conservation goals.

Though not directly accountable to the public at large, ranchers in the western United States often play a central role in ensuring the success of public land management goals. The attitudes of ranchers toward wildlife management, endangered species, and land conservation can have an important impact on the ability of public agencies to successfully implement policy priorities (Sheridan et al., 2014). Ranchers share primary responsibility with federal agencies for the day-to-day management of approximately 330 million acres of public rangelands.

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* Correspondence: Aaron M. Lien, 1064 E Lowell St, Room N355, University of Arizona, Tucson, AZ 85721, USA. Tel.: +1 520 626 2873.

E-mail address: amlien@cals.arizona.edu (A.M. Lien).

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While federal agency personnel from the Bureau of Land Management and US Forest Service are responsible for planning and implementation of congressional mandates for multiple-use management including grazing, wildlife habitat, and recreation uses, ranchers are responsible for ensuring on-the-ground implementation of these policies through the management of their herds and construction of improvements such as fences and water sources.

Just as tensions between antigovernment protesters and federal land managers were escalating over the past decade, a long, contentious process—centered on legal designation of critical habitat for endangered jaguars (*Panthera onca*) under the federal Endangered Species Act (ESA)—was under way in southeastern Arizona and southwestern New Mexico. We use the context of this controversy to develop and analyze a case study to understand the attitudes of southwestern ranchers toward the federal government and conservation. According to the ESA, critical habitat is the portion of an endangered species's range essential to its conservation (16 USC §1532). Critical habitat may include both public and private lands, though the impact of critical habitat regulations on private lands is limited.

The achievement of endangered species conservation goals on both public and private lands necessitates an understanding of the rancher's attitudes toward conservation and willingness to participate in conservation efforts, which are often government sponsored. Past survey research shows that ranchers have diverse attitudes about conservation. In a survey of ranchers in Utah and Texas, Jackson-Smith et al. (2005) found ranchers have a range of views on property rights and associated conservation obligations, ranging from strongly individualistic views to a belief that individual rights are conditioned by obligations to society and nature. Looking more closely at conservation behavior, Kreuter et al. (2006) found that in Texas, Utah, and Colorado, ranchers who are more dependent on public land for grazing also have a stronger interest in conservation than ranchers who use mostly private grazing lands. The findings of a survey of California ranchers indicates that ranchers are willing to consider landscape-scale conservation efforts by cooperating across property boundaries in order to conserve wildlife (Ferranto et al., 2013). Our own research in the Southwest indicates a strong interest in large-landscape conservation in the ranching community (Svancara et al., 2015).

While these and other similar studies help to improve our understanding of the attitudes of the ranching community, they fail to provide a holistic understanding of the totality of viewpoints held by individuals (Watts and Stenner, 2012). For example, a rancher may believe he or she has a land stewardship obligation to future generations, while also holding strong antigovernment and individualistic views. This type of complex viewpoint may be lost in the results of typical survey research. A misunderstanding of the contours of rancher viewpoints in their entirety could lead to poorly targeted policy and management.

Sayre (2004) has called for more qualitative research of range management to improve our understanding of the complex motivations of

ranchers. The study we describe applies a quantitative–qualitative research technique borrowed from psychology, called *Q Methodology*, to identify three distinct, complex viewpoints held by ranchers in southeastern Arizona and southwestern New Mexico toward conservation and government. The results of this study provide a better understanding of the perspectives and motivations of individuals in the ranching community in the region and, when combined with previous research, indicate that ranchers across the west may be open to land management approaches that support wildlife conservation and sound range management.

Methods

The long-running public debate about the designation of critical habitat for jaguars provides the context for our study. To understand rancher attitudes, we used Q Methodology because it allows for the development of a holistic, quantitative, and qualitative understanding of individual and group perspectives on a given topic. There are two major differences between traditional survey research and Q Methodology. First, rather than asking multiple questions, Q Methodology elicits a participant's opinions on an issue by having him or her rank a set of predetermined statements in a way that is consistent with his or her point of view. The act of ranking statements on a scale of more and less how he or she thinks exposes the many facets of the respondent's thinking on the issue (Watts and Stenner, 2012; McKeown and Thomas, 2013). Second, in Q Methodology the response variables are not a series of responses to questions, but the participants themselves. By treating the respondents as the variables, it is possible to develop a comprehensible interpretation of the various viewpoints present in the community of respondents (Watts and Stenner, 2012; McKeown and Thomas, 2013). Q Methodology has been applied to understand viewpoints on conservation issues and conflicts (Webler et al., 2003; Danielson et al., 2009; Sandbrook et al., 2010; c.f. Chamberlain et al., 2012).

There were four steps in the design and completion of our study: 1) selection of the study topic and a corresponding group of statements for use in the study (the statements are called a “q set”); 2) selection of the participants for the study; 3) implementation of the study by asking participants to sort and rank the statements (the “q sort”); and 4) statistical analysis of the results using factor analysis or principle components analysis (Brown, 1980). These steps and associated results are summarized in Table 1. Our research protocols were submitted to the University of Arizona Human Subjects Protection Program (Protocol Number 1401187773) and received exempt approval.

Selection of Statements and Development of the Q Set

Because the topic of the present study is ranch management, all participants were presented with a single request, “Describe your views on ranch management, from what is most like the way you think about

Table 1
Summary of Q methodology implementation.

| Step | Description | Results |
|---------------------------------|--|--|
| 1. Selection of topic and Q set | 1. We focus on views on ranch management 2. Q set drawn from interviews, survey results, and public statements by ranchers | Q set consisting of a balanced sample of 40 statements addressing 4 theme areas and 10 subthemes |
| 2. Selection of participants | Ranchers participating in University of Arizona Cooperative Extension workshops; all ranchers in study region invited to participate | Workshops: Sonoita, AZ, February 3, 2015 Douglas, AZ, February 10, 2015 Arivaca, AZ, March 12, 2015 |
| 3. Study implementation | Participants provided with fixed distribution ranging from +4 to –4 and a deck of 40 cards with one statement printed per card | 30 ranchers completed q sorts, providing sufficient data to complete statistical analysis |
| 4. Statistical analysis | Correlation of individual q sorts and principal components analysis using “qmethod” package in R | Identification of 3 factors explaining 51% of variance: Radical center ranchers: 20% of variance Innovative conservationists: 19% of variance Traditional ranchers: 12% of variance |

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