



Contents lists available at ScienceDirect

## Rangeland Ecology &amp; Management

journal homepage: <http://www.elsevier.com/locate/rama>

## Research Note

Understanding Management Decisions of Absentee Landowners: More Than Just Presence–Absence<sup>☆</sup>Michael G. Sorice<sup>a,\*</sup>, Kiandra Rajala<sup>a</sup>, Urs P. Kreuter<sup>b</sup><sup>a</sup> Department of Forest Resources & Environmental Conservation, Virginia Tech, Blacksburg, VA 24061, USA<sup>b</sup> Department of Ecosystem Science & Management, Texas A&M University, College Station, TX 77843, USA

## ARTICLE INFO

## Article history:

Received 5 June 2017

Received in revised form 29 November 2017

Accepted 4 December 2017

Available online xxxxx

## Key Words:

absentee landowners

amenity landowners

involvement

woody plant encroachment

## ABSTRACT

Ownership and management of North American rangelands has become increasingly diverse, prompting a need to better understand how changing demographics and values relate to individual land management decisions and land cover. Absentee landowners, who reside away from their rural property, are a growing segment of this changing social landscape. The implications of absentee ownership are not clearly understood, perhaps because the absentee concept is ambiguously defined and inconsistently specified. We introduce the construct of involvement with one's land to clarify and reframe the absentee landowner concept. We analyzed data from a mail survey of rangeland owners in central Texas to explore the relationship between absentee land ownership and the use of brush management to restore woody-plant invaded grasslands. We employed an information-theoretic approach to compare candidate models using indicators of absenteeism (permanent residence on land and distance of permanent residence from land) and involvement. We measured involvement with one's land as hours per week operating or working one's land. We conducted path analysis to examine the relationship between absenteeism and brush management as a function of involvement. Involvement in land management was the best predictor of brush management behavior. Absenteeism, as measured through presence-absence or as distance from land, had no relationship with brush management unless mediated by the involvement construct. Segmenting landowners based solely on the location of their full-time residence provides little information on brush management behavior because it neglects the relationship that landowners may have with their land, regardless of residency. The absentee landowner concept is central to understanding the dynamics of rangeland management and important to get right. Our analysis suggests that getting it right means knowing more than the location of the residence of the landowner.

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## Introduction

In response to changing demographics on rural rangelands, a body of research has emerged focusing on identifying, characterizing, and understanding the implications of the increased presence of landowners who favor natural and cultural amenities over the production potential of their land. These lifestyle-oriented landowners are characterized as differing from production-oriented landowners in their culture, values, and vision for rural areas. Compared with production-oriented landowners, lifestyle-oriented landowners are often characterized by higher incomes (Hunter et al., 2005) and alternate ways of interacting with the local community (Yung and Belsky, 2007). In addition, they tend to have

different preferences for the use of their land and consequently manage it differently than landowners who use their land primarily for income generation (Sorice et al., 2014).

One subset of lifestyle-oriented landowners that receives considerable attention is the absentee landowner, who does not reside full-time on his or her rural land. Absentee land ownership is an increasing component of the rangeland ownership matrix in the American West (Haggerty and Travis, 2006; Redmon et al., 2004). Absentee landowners have been studied as a distinct group (Petzelka, 2012; Petzelka and Armstrong, 2015), and absenteeism is often used as an attribute to characterize differences in land management preferences that have varying implications for maintaining healthy ecosystems (Gosnell et al., 2006; Ferranto et al., 2013). Petzelka et al.'s (2013, p. 161) review summarizes the literature on rangeland absentee landowners:

Absentee owners of rangeland are often affluent, purchase land for investment and recreation opportunities over productive reasons, and may desire to engage in what they deem “environmentally friendly” practices such as construction of ponds, not treating weeds, and increasing wildlife populations.

<sup>☆</sup> This research was funded by grant 2008-51130-19562 from the US Dept of Agriculture National Institute of Food and Agriculture Conservation Effects Assessment Project and supported by the US National Science Foundation, Dynamics of Coupled Natural and Human Systems program (DEB-1413900).

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**Table 1**

Model ranking using Akaike's information criterion (AIC) with Akaike weights ( $w_i$ ). Variables with a "-Q" indicate that a quadratic term was included in the model; "+" indicates a main effects model; and, "x" indicates an interaction.

Model number	Model	AIC	$\Delta$ AIC	$w_i$
1	Involvement-Q	238.19	0.00	0.48
2	Involvement-Q + Distance-Q	238.33	0.14	0.45
3	Involvement	244.52	6.33	0.02
4	Involvement + Distance	244.96	6.76	0.02
5	Absent $\times$ Involvement	245.95	7.75	0.01
6	Absent + Involvement	246.09	7.90	0.01
7	Involvement $\times$ Distance	246.95	8.76	0.01
8	Absent	258.95	20.76	0.00
9	Distance	260.05	21.86	0.00
10	Distance-Q	261.72	23.52	0.00

Despite sustained interest in the absentee landowner concept in the rangeland literature, definition and measurement of the concept vary. The terms *nonresident*, *part-time resident*, *weekend resident*, or *seasonal landowners* have been used to characterize different forms of absenteeism (Gosnell et al., 2007; Abrams and Bliss, 2012; Ferranto et al., 2013; Stroman and Kreuter, 2015). Other scholars have noted a wide range of measures for absenteeism including distance to full-time residence from one's land, simply residing off property, as well as researcher-defined categorical approaches such as living at least 1 mi away, at least 50 mi away, or in a county separate from one's property (e.g., Petrzelka et al., 2013). As a result of the many definitions and measurement approaches, there are inconsistent findings that inhibit a clear understanding of the relationship between absentee landowners and land management (Gosnell and Travis, 2005; Haggerty and Travis, 2006; Huntsinger et al., 2010; Petrzelka, 2012; Ferranto et al., 2013; Petrzelka et al., 2013; Petrzelka and Armstrong, 2015; Stroman and Kreuter, 2015).

We examine the construct of involvement as a way to clarify the absentee landowner concept. Involvement is the degree to which people devote themselves to operating or managing their land. The common understanding is that absentee landowners differ in values and land management behavior from those who live full-time on their land. However, the measurement of absenteeism as simple presence-absence, distance from land, or duration of residence on the land may be neither necessary nor sufficient to understand land management behavior. Although researchers have measured the amount of time absentee landowners live on (Ferranto et al., 2013) and visit (Petrzelka, 2012) their property, these measures do not explicitly consider how absentee landowners engage with their land. For example, an individual who lives on his or her land year-round but owns it primarily to experience the rural lifestyle and enjoy nature may lease out the land for hunting or livestock grazing and not be involved with land management decisions or actions. Conversely, an individual who lives 50 mi away and commutes to his or her property regularly may be engaged with the land on a daily basis. In these cases, both landowners would be misclassified by a simple presence-or-absence measure of absenteeism, increasing error in statistical models.

We hypothesized that involvement with land management acts as a common underlying variable that discriminates between land management behavior of those who do and do not live on their land. That is, involvement mediates the relationship between absenteeism and land management.

We examined a series of candidate models using an information-theoretic approach to explore the relationship between absentee land ownership and brush management. Specifically, we compared the utility of simple indicators of absenteeism, presence-absence and distance from land, as well as involvement to explain land management behavior. We focused on brush management in Texas as a specific example of land management because woody plant invasion is a major issue faced by rangeland landowners.

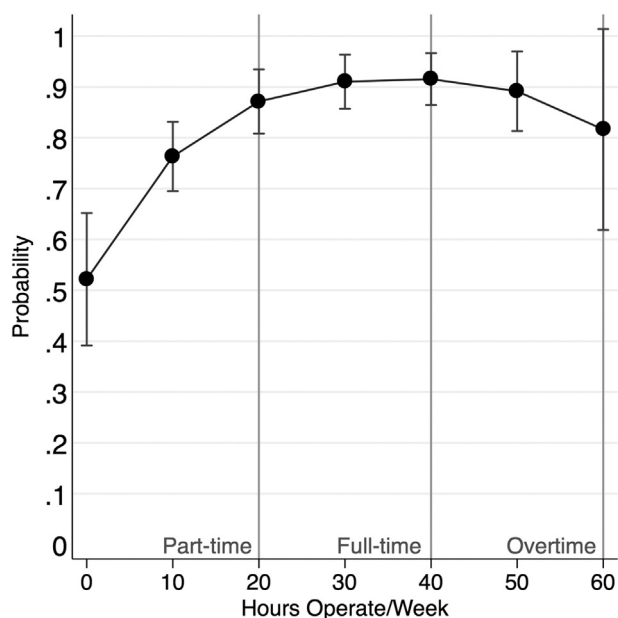
## Methods

The dataset comes from a survey of rangeland owners in central Texas conducted in 2010 (see Sorice et al., 2012 for details on survey methods). We focused on landowners in the Cowhouse Creek watershed in central Texas. Land cover in this area consists almost exclusively of rangelands that are dominated by livestock grazing. We randomly selected 767 landowners owning at least 20 ha using county tax appraisal rolls. We conducted a mail survey to obtain information on land use, land ownership motivations, landowner characteristics, and demographics (Dillman et al., 2009).

We operationalized absenteeism in two ways. First, we asked landowners: "Do you reside full-time on your place?" Second, we asked landowners who did not live full-time on their land to indicate the distance of their full-time residence from their closest rural property. For this measure, we considered landowners who live full-time on their land to live 0 miles from their property, providing a continuous distance-based measure of absenteeism. Our indicator of involvement focused on time devoted to land management. We asked landowners to indicate the number of hours they spend "operating or working on" their place in "a typical week." We deliberately chose this broad language to capture the many ways that landowners, from producers to lifestyle-oriented owners, engage in management activities on their land.

Our ongoing research program examines the conversion of rangelands from grasslands to woodlands (Sorice et al., 2012; Hurst et al., 2017) leading us to select woody plant reduction (brush management) as the dependent variable of interest. Brush management can be a continuous process (e.g., through manual or mechanical removal) but may also be periodic (e.g., through the application of prescribed fire at 3- to 5-yr intervals). We dichotomized this variable to include all landowners who indicated that they currently manage brush or have done so in the past using any combination of herbicide, mechanical control, or prescribed fire.

We used the Akaike's information criterion (AIC) to compare the goodness of fit of several logistic regression models. We constructed 10 candidate models based on the literature and results of exploratory



**Figure 1.** Predicted probability of engaging in brush management based on involvement. Note: Part-time, Full-time, and Overtime markers are used for illustrative purposes to provide benchmarks related to a typical work week.

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