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The Paradox of Open Space Ballot Initiatives in the American West:

A New West-Old West Phenomenon?

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Abstract: Support for local open space ballot initiatives in the American West is surprising, given that federal land conservation legislation tends to be lightning rod issues. The central focus of this study is to explore the extent to which the New West-Old West concept explains varying levels of support for local land conservation initiatives. Principal component analysis is used to obtain orthogonal variables of regionally relevant data on population, housing, and occupation/industry. Weighted Least Squares Regression is used to regress the factor analysis variables and population migration variables onto percent voting 'yes' for open space initiative. All community variables are significant predictors of levels of support: affluent communities, Old West communities, commuter communities, communities with decennial population increases, communities with non-Western state in-migration, and communities with farm population losses. What explains varying levels of support is not the polarized New West-Old West concept but, rather, a nuanced conception of the changing American West.
Keywords: New West-Old West; open space; land conservation; ballot initiatives; environmental concern

INTRODUCTION

The use of local direct ballot initiatives to preserve open space is a burgeoning yet paradoxical phenomenon in the American West. These local land conservation initiatives propose to raise taxes (sales, property) or issue bonds in order to purchase private land for public open space in or adjacent to the sponsoring municipality or county. As farmlands, foothill acreage, and riverfront property have given way to trophy homes, subdivisions and strip malls, American western municipalities and counties are finding their once expansive open space shrinking. One response to such growth has been citizen-led

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proposals for open space initiatives to create expanses of undeveloped public land (Selmi 2001). While there are debates around whether these ballot initiatives are a response to sprawl (Howell-Moroney 2004, Romero and Liserio 2002), it is widely acknowledged that citizens are utilizing this policy making venue at increasing rates in an attempt to by-pass their state and local governments to institute land conservation statutes (Kotchen and Powers 2006, Rabe 2003). These initiatives are a form of direct democracy and reflect a citizen-driven preservationist value regarding the creation of open space in their communities.

Yet the support for these open space ballot initiatives in the American West is surprising, given that US federal land conservation legislation tends to be lightning rod issues with deep partisan divides. Democrats typically embrace a conservationist philosophy, while Republicans routinely advocate for economic benefit over environmental protection (Dunlap *et al.* 2001, Vig and Kraft 2003). Contemporary examples of this partisan dichotomy over federal land use issues are forest conservation for the protection of the spotted owl, drilling in the Arctic National Wildlife Refuge, and banning snowmobiling from Yellowstone National Park. US western states with direct initiative processes are predominantly Republican (Dresang and Gosling 1996), and yet citizens of the region's municipalities and counties are proposing Democratic-like land conservation statutes via the initiative process. Hence, the juxtaposition of polarized partisan platforms at the federal level with that of a marked increase in the use and support of local direct initiatives (Haskell 2001) in the American West to create land conservation policy is simply unexpected.

In addition to partisanship divides, these land use battles also occur due to changing cultural, social, and economic landscapes. Some research describes the heated battles over public lands in the American West as a 'New West-Old West' phenomenon, resulting from deep cultural divisions (McBeth *et al.* 2005, Shanahan *et al.* 2008, Tierney and Frasure 1998, Wilson, 1997). Many western communities have experienced economic changes that have impacted land use and undergone social transformations as a result of new migration to the region (Power and Barrett 2001) with accompanying higher levels of individual wealth to communities. New West communities are typically conceived as having a service economy, urban access, a professional population, and harboring environmentalist attitudes (Hunter and Brehm 2004, Shumway and Otterstrom 2001, Theodori *et al.* 1998). Old West communities engender a natural resource based economy (farming, cattle ranching, mining, timber), a rural, working class population, and resource-use attitudes (Hays 1991). This New West-Old West dichotomy reflects the theory that there is a varying and conflicting definition over what the environment means today in the American West: a commodity for extractive consumption or an entity to conserve.

In viewing these local land conservation ballot initiatives as a form of environmental decision making about land use (Myers 1999, Slind-Flor 1998), a larger question seeks to shed light on the paradoxical nature of the success of these local ballot initiatives in the changing American West: what are the characteristics of these local communities to drive such seemingly environmentally-oriented behavior? Interestingly, scholarly research (Kahn 2002, Press 2003, Salka 2003, Solecki *et al.* 2004) regarding land conservation ballot initiatives tends to harbor a state level focus as opposed to a local level, i.e., municipal or county. While state-focused studies contribute to understanding the effects of particular variables such as income, population growth, and education on this form of environmental decision making, there are substantive differences between state- and local-level scales. For example, state ballot initiatives can be more of an industry, given the use of professional firms and consultants to gather signatures for the petition (Magleby and Patterson 1998). By contrast, local initiatives are more grassroots, where voter knowledge is higher and the effects are felt more directly and personally through higher taxes and open space acquisition (Selmi 2001). This research seeks to fill a gap in the literature by focusing on municipalities and counties as the unit of analysis for *local* land conservation ballot initiatives.

Ballot initiative research which uses municipalities or counties as the unit of analysis is scant. Romero and Liserio (2002) conduct an empirical study of all municipal and county land conservation initiatives in the United States between 1998-1999; their study centers on the extent to which these open space initiatives are a local response to sprawl. Their findings reveal little support for a relationship between low density and appearance and support for these ballot initiatives. In fact, of those communities whose ballot measures passed, it is high density communities who have higher levels of support. However,

these convention-challenging findings may be due to the study's population parameter of the nation; if the authors had controlled for regional differences, the independent variables may have shown themselves differently. Howell-Moroney (2004) builds on the work of Romero and Liserio in part by analyzing predictors of town-level open space measures within a regional context of a river valley spanning two states. In so doing, the author finds opposite findings to Romero and Liserio, that density has a negative association with open space voting. While the purpose of this study is not to explore the density issue further, this work seeks to add to the nascent literature of local open space ballot initiatives by taking a geo-regional approach to studying open space ballot initiatives. By creating a population parameter of the American West, a more surgical approach is used here to explore the extent to which local community factors predict varying levels of support for land conservation.

Additionally, Romero and Liserio (2002) and Howell-Moroney (2004) include conventional community characteristics as independent variables in their local-scale analyses such as population size, percent of the population who are white (non-Hispanic) and income. While these variables are important in a broad sense, more regionally relevant explanatory variables such as in-migration and occupation/industry are used in this study to better specify a model for explaining this paradox of open space initiative support in American western communities. These scholars also employ dichotomous dependent variables (appearance on the ballot and yes-no passage of the initiative) or focus only on successful initiatives' winning margins, leaving out those that failed. These more truncated variables do not account for a more robust representation of the range of support for these initiatives, such as percent voting in support for the initiative. The results of these pioneering studies leave a broader question unanswered: what are the *regionally relevant* community drivers that explain *varying levels of support* for these local land conservation measures?

To answer this question, this study is anchored in two areas of research: the New West-Old West construct and the environmental concern literature. Below is a brief discussion of these two bodies of literature, followed by research questions, research design and methodology, findings, and conclusion. The central focus of this study is to explain the varying levels of support for local open space ballot initiatives in the American West. Understanding the characteristics of communities in the American West that predict support for these open space conservation initiatives adds to ballot initiative, environmental, and regional research.

THE CHANGING AMERICAN WEST: THE NEW WEST-OLD WEST CONSTRUCT

The media markets the New West-Old West concept as divisive and dichotomous, whereby the traditional ways of life in Old West communities stand in stark contrast to New West communities: cows versus cappuccino; logged out versus logged on; copper mining versus Copper Mountain Ski Resort (Blevins 2003, Carlton 1999, Kenworthy 2001, Lloyd 1998, Robbins, 2001). The dominant theme of these exposés is the value clash between 'cappuccino' community environmental values (conservation; intrinsic value of the environment) and that of the 'cowboy' communities (extractive use of resources; human dominion over the environment) (Rengert and Lang 2001). Scholarly research supports the phenomenon of a changing place-based identity. Economic studies have defined this phenomenon as a shift from extractive-resource-based economies (mining, timber, farming, ranching) to service-based (tourism, retirement) and technology-based economies (Johnson and Rasker 1995, Shumway and Otterstrom 2001). Concurrent with the decline in extractive-based economies are population increases (Power and Barrett 2001, Rengert and Lang 2001), land use changes (Hansen *et al.* 2002) and more urban-like residents (Alm and Witt 1995).

However, studies centered on whether there are differences in environmental attitudes between New West and Old West communities reveal conflicting results. Smith and Krannich (2000) unexpectedly find higher levels of environmental concern with long-term residents (Old West) over newcomers (New West). Yet, Kanagy *et al.* (1994) find that regional residence in the Mountain West is a predictor for higher concerns for the environment. And, yet again, Wright *et al.* (2003) find a high degree of

variability in environmental attitudes and concerns in older New West community residents. Given such varied results, this study examines first whether this dichotomy of a New and Old West holds up in the context of open space initiatives, based on measures such as in-migration, New West and Old West occupations, and wealth. Secondly, this study examines what the relationship is between New West and Old West community characteristics and support for these open space measures.

ENVIRONMENTAL CONCERN LITERATURE

Since the 1970s, scholars have spent considerable time trying to understand public attitudes toward environmental protection (Buttell and Flinn 1976, Guber 2001, Klineberg, *et al.* 1998, Uyeki and Holland 2000, Van Liere and Dunlap 1980, Weigel, 1977). The central focus has been to determine the social bases of concern for the environment: what are the characteristics of people who are most concerned with environmental protection? Studies regarding environmental concern have focused on race/ethnicity, urban-rural differences, farm versus nonfarm populations, and newcomers.

The research on race/ethnicity and environmental concern does not clearly indicate that one ethnic group consistently harbors greater environmental concern than others. Johnson *et al.* (2004) find that Asian Americans, whites, and US born Latino populations have higher levels of environmentalism than that of blacks and foreign-born Latinos. Whittaker *et al.* (2003) find that on issues of proximate concern, Latinos in California had higher levels of environmental concern that that of Caucasians. Greenberg (2005), on the other hand, discovers in a case study in New Jersey that it is white (non-Hispanic) and black populations who have, overall, higher levels of environmental concern than that of Asian Americans and Hispanic Americans. Mohai and Bryant (1998) find no statistical differences between African Americans and whites regarding pollution and nature preservation issues. Romero and Liserio (2002) reveal that communities with local open space initiatives on their ballot have higher percentages of a white population. While the American West is predominantly Caucasian, there are politically active and powerful groups of Native Americans and Hispanics in areas of the western states. Thus, the relationship between the race/ethnicity of the local populations with that of open space initiative success is examined in this study.

In terms of whether there are urban-rural differences in environmental concern, past research (Tremblay and Dunlap 1978, Van Liere and Dunlap 1980) has shown that those living in an urban setting are found to have a higher level of environmental concern than those living rurally. Tremblay and Dunlap's (1978, p. 477) 'differential exposure theory' explains that those in urban settings live with negative effects of air pollution, water pollution, building dilapidation, and traffic congestion. Because they are more likely to be exposed to such environmental degradation, urban residents are more environmentally concerned than their rural counterparts. However, more current research (Bennett and McBeth 1998, Jones *et al.* 1999, Salka 2003) reveals that this difference may be diminishing as urbanites in-migrate to rural settings. Since New West communities are believed to harbor more urban attitudes (Alm and Witt 1995, Sonya 2003), the urban-rural factor is explored in this study.

The research regarding environmental concern and farm versus nonfarm populations reveals conflicting results as well. Buttell and Flinn (1974) find that rural environmental attitudes are substantially different when farm and nonfarm populations are disaggregated; rural farm residents are less likely to be concerned with environmental problems than rural nonfarm residents. Changes in farming populations occur concurrently—and, perhaps, causally—with rural growth; these newcomers purportedly have environmental values that oppose that of farmers (Sonya 2003). Other research (Cunningham 2005, Law 2005, Ryan *et al.* 2003) indicates that farmers have higher levels of environmental concern, given their involvement in sustainable farming enterprises and land conservation easements. Because much of the loss of open space in the American West is farmland (Hansen *et al.* 2002), farming occupations and changes in a community's farm population are tested to determine if there are associations with farmers or loss of farming occupations and support for local open space initiatives.

Beginning in the 1970s, rural areas across the United States have experienced influxes of population (Smith and Krannich 2000). The research continues to indicate varying results regarding the relationship between newcomers and environmental concern. Some research (Jones *et al.* 1999, Jones, *et al.* 2003) indicates that this new population in rural areas harbors higher levels of environmental concern. Smith and Krannich (2000) find that both the newcomers and long-term residents reported high levels of environmental concern, while Sonya's (2003) case study reveals that newcomers, with expectations of amenities and urban social structures, have actually broken down local social capital activities and adversely affected the character and community of these small towns. In this study, the relationship between both in-migration from non-western states and rate of population change (1990--2000) and level of support for open space initiatives are tested.

In sum, both the New West-Old West and environmental concern literature seek to explain the extent to which various community characteristics and levels of environmental concern are related. Interestingly, much of the research reveals conflicting results, leaving us still pondering what are the social forces behind such environmentally-oriented decisions like open space conservation? Additionally, previous investigations into local land conservation initiatives have not adequately captured this phenomenon at the local level. The central research questions of this study are: (1) is there a New West-Old West construct in the communities which have voted on open space ballot initiatives? (2) if so, does the New West-Old West concept reveal differences in support for local open space ballot initiatives? (3) are there other local community characteristics that explain varying levels of support for local land conservation initiatives?

RESEARCH DESIGN AND METHODOLOGY

The population parameter for this study is the American West. However, social scientists employ different metrics to define the American West: state (Power and Barrett 2001), region (Reibsame 1997) and geography (Thomas 1991). For this study, the American West is defined using both geographic and state guidelines. The geographic metric used is the 100th meridian, also known as the 'dry line;' the lack of water in the arid American West greatly shapes the lifestyles and politics of the region. The state metric used are contiguous US states west of the 100th meridian, excluding California, because it is the most populous and urbanized state in the nation (Thomas 1991). The remaining ten states (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming) are, by contrast, significantly more sparsely populated, contain large expanses of public lands, and engender a historical similarity of the uses of land as an economic resource through extractive occupations.

Two data sources are utilized in this study. First, the US Census 2000 Summary File 3 (SF3) (http://www.census.gov/) is employed for its detailed population and housing data that are estimates (1-in-6 households, weighted to represent the total population) of the actual figures that would have been obtained from a complete count. Second, the *LandVote* database (https://www.quickbase.com/db/bbqna2qct?a=dbpage&pageID=10), constructed by the interest group Trust for Public Land (www.tpl.org) that tracks the occurrence and outcomes of land conservation ballot initiatives, is used because it is a comprehensive national database of all open space initiatives between 1988-2009. There are three reasons particular cases from the *LandVote* database were excluded. The *LandVote* database includes initiatives for recreation and park facilities; these cases were excluded, as they are different in quality from open space acquisition. Also excluded are duplicate initiatives from the same locale; the earliest initiative is retained, as it eliminates any effect a second round might have on voting outcome. Finally, because US Census data were collected in the year 2000, the initiatives gathered from *LandVote* are limited to nine years prior and after the 2000 Census to have an even distribution around the year of the Census. Thus, between 1991-2009, the total number of unduplicated local open space land conservation initiatives in the American West is 132.

In order to assess the predictors of open space conservation initiatives, a Weighted Least Squares Regression (weighted for total population to address heteroskedasticity) is utilized. The dependent variable, support for land conservation initiative (i.e., percent voting 'yes'), is obtained from the

LandVote database. The range for this variable has a minimum of 17.89% and maximum of 83.23% voting in support of the ballot initiative, with a mean value of 55.35%. Thus, the distribution of the dependent variable enjoys variability, unlike Romero and Liserio (2002) who found little variation in support once the initiative reaches the ballot in the two years of their study. There is a slight negative skew to the dependent variable's distribution, but the magnitude of the skew is not significant (determined by skewness/standard error of skewness; -.316/.211 = -1.50, whose absolute value is less than 2; Pollock 2003).

To achieve independent variables that are not multicollinear, this study begins with a principal component analysis to capture underlying constructs amongst highly correlated variables (Mertler and Vannatta 2002) that are reflected in the New West-Old West and environmental concern literatures. The factor loadings are, in turn, used in the regression model as independent variables. Table 1 reveals the descriptive statistics for the variables used in the principal component analysis.

Table 1: Descriptive statistics for variables used in principal component analysis

Variable	Definition	Mean	S.D.
professional occupations	% management, professional and related occupations (non-farm) range: 20.94-68.01	37.52	9.11
extractive occupations	% farming, fishing, and forestry occupations range: 0.00-20.16	1.28	2.53
extractive industries	% agric, forestry, mining and fishing/hunting, industries range: 0.00-23.05	1.89	2.93
commuting workers	scale variable: % of workers commuting 30-59 minutes and % working out of place range: 16-139	76.39	33.81
education	in years, weighted average of educational attainment range: 11.70-15.87	13.81	.82
income	median household income range: 24959-112300	48866.59	13044.98
rent	median gross rent range: 367-1625	712.54	190.73
housing value	median housing value range: 57900-732800	190631.82	80317.43
size of house	median number of rooms range: 3.9-9.0	5.30	0.51
urban population	% living inside urban area range: 0.00-100.00	79.93	31.77
white population	% of the total population who is white (non-Hispanic) range: 40.02-97.72	86.76	8.91

n=132
source: U.S. 2000 Census, SF3, http://factfinder.census.gov/

The principal component analysis reveals that these 11 variables load onto three components. After careful review of the loadings, these components reflect a more nuanced insight into the changing American West than that of the dichotomous New West-Old West concept. The first factor loading consists of housing value, education, rent, income, professional occupations, and white population and is named 'affluent community.' While New West communities do indeed reflect this dimension, not all affluent communities are New West. If the population change variables (in-migration, farm, and aggregate) had loaded here, then this would be confidently named 'new west community;' however, without the population change variables loading, this construct lacks an essential piece of what it means to be a New West community and is thus named 'affluent community.' The second factor loading, called 'old west community,' is a bipolar factor loading (Stevens 2002), with extractive industries and occupations having positive loading values and urban population loading with a negative value. This component does clearly reflect the rural, extractive-based economies of Old West communities. The third factor loading, entitled 'commuter community,' loaded with two variables: size of house and long commute for its workers. This component reflects a different kind of community in the changing American West, one that has decent sized homes with workers who have hefty commutes to work. In sum, the resulting factor components reveal not just two but three constructs to reflect American West communities, thus beginning to put into question the polarized New West-Old West concept.

Table 2: Variable definitions and descriptive statistics

Variable	Definition	Mean	Median	S.D.
Dependent Variable				
Y_1 = support	% of support for land conservation initiative	55.35	55.47	13.21
Independent Variables				
X_1 = affluent community	factor analysis loading: median house value, median rent, weighted average educ attainment, median income, professional occupations (non farm management only), % anglo population	0.00	0.00	1.00
X_2 = old west community	factor analysis loading: % of old west industries, farming, fishing, forestry occupations, % urban population	0.00	0.00	1.00
X_3 = commuter community	factor analysis loading: median number of rooms and scale variable of commuting to work	0.00	0.00	1.00
X_4 = population change	rate of population change between 1990-2000	51.74	32.63	59.62
X_5 = in-migration	% of those moving into area from outside Western Region[a] since 1995	49.69	50.79	14.81
X_6 = farm population change	change in the farming population between 1990-2000	-23.09	0.00	73.86

n=132

a: Census defines four regions: Northeast, Mid-west, South, and West. The Western Region includes three states excluded from this study: California, Alaska and Hawaii

sources: Trust for Public Land https://www.quickbase.com/db/bbqna2qct?a=dbpage&pageID=10; U.S. 2000 Census, SF3 File, http://factfinder.census.gov/

The independent variables include the three variables that resulted from the factor analysis—affluent community (X_1), old west community (X_2), and commuter community (X_3). The remaining three independent variables are those which did not successfully factor load: the rate of population change between 1990--2000 (X_4), the percent of those migrating in from non-western states since 1995 (X_5), and the change in farm population from 1990--2000 (X_6). The null hypotheses for each variable assume that there is no relationship between level of support for local open space initiatives and the six independent variables. The alternative hypotheses are all two-tailed, given the contradictory results for each in previous research.

RESULTS

In conducting the principal component analysis, two tests are used to determine that the variables share common factors and are thus appropriate for analysis. The Bartlette's Test of Sphericity indicates that there is an identity matrix (approximate Chi-Square = 1458.894; *df* = 55; sig. .001); Kaiser-Meyer-Olkin Measure reveal that there is sufficient shared variance with a result of .634. There are three components with an eigenvalue greater than one (4.570, 2.058, and 1.683), and these three eigenvalues explain a cumulative total of 75.56% of the variance, exceeding the 70% variability rule of thumb (Stevens 2002). To increase interpretability of the factors, the components are rotated using Varimax rotation, as it is designed so that each factor tends to load high on a smaller number of variables and low on the other variables (Stevens 2002). Table 3 reveals the factor loadings after Varimax rotation.

Table 3: Factor loadings

Factor	Loading
Factor 1: affluent community (X_1)	
education	.901
house value	.899
rent	.751
income	.684
professional occupations	.646
anglo population	.552
Factor 2: old west community (X_2)	
old west industries	.911
farm, fish, forest occupations	.882
urban population	-.669
Factor 3: commuter communities (X_3)	
size of house	.885
commuting workers	.847

Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization
n=132
source: U.S. 2000 Census, SF3, http://factfinder.census.gov/

These results are revealing for how the variables loaded and for the variables which did not load. Firstly, the 11 variables chosen for the factor analysis not only have high levels of correlation, they are characteristics of the New West-Old West phenomenon. However, one of the central characteristics of the New West is population growth, in-migration, and loss of farming populations. Interestingly, these

variables did not load onto any component, nor did they load together. A Chronbach's alpha revealed no internal reliability in building a scale variable from any combination of the three population variables; thus each variable is retained as an independent variable. Therefore, the three orthogonal variables derived from the principal component analysis are robust community characteristics in the region of the American West, but not solely dichotomous, as the New West--Old West concept indicates. These results add a more nuanced understanding of the changing place-based identity in the American West.

This study seeks to explain the varying levels of support for land conservation initiatives in the American West through a Weighted Least Squares regression model. The model is weighted by total population as a way to remedy heteroskedasticity (Studenmund 2001). Before the variables are regressed on the dependent variable, tests for multicollinearity are conducted. As shown in Table 4, this model shows no singular correlative relationships between the variables; the highest Pearson correlation coefficient is .434, well below the threshold of .80 (Stevens 2002). In addition, with Variation Inflation Factors ranging from 1.115 to 1.453, this model satisfies the assumption of no severe multicollinearity.

Table 4: Zero-order correlations

Variable	(Y_1)	(X_1)	(X_2)	(X_3)	(X_4)	(X_5)	(X_6)
Y_1 support	1.000						
X_1 affluent community	.026	1.000					
X_2 old west community	-.068	.000	1.000				
X_3 commuter community	-.174*	.000	.000	1.000			
X_4 population change	-.031	.297**	-.034	.434**	1.000		
X_5 in-migration	.155	.331**	.083	.005	.138	1.000	
X_6 farm pop change	-.027	.000	.027	-.049	.013	.032	1.000

n=132
sources: Trust for Public Land https://www.quickbase.com/db/bbqna2qct?a=dbpage&pageID=10; U.S. 2000 Census, SF3 File, http://factfinder.census.gov/
**p<.01; *p<.05

Table 5 displays the results of the Weighted Least Squares regression. The goodness of fit of the model reveals an R^2_{adj} of .376, indicating that the variables together explain 37.6% of the total variance of support for land conservation initiatives. The model, taken as a whole, significantly explains the variance of level of support for land conservation initiatives ($F(6, 125) = 14.167$, $p < .001$). All six variables reveal statistically significant relationships with support for open space initiatives for two-tailed *t*-tests, holding all else constant.

Table 5: Weighted least squares estimated effects of community characteristics on percent of votes supporting land conservation ballot initiatives

Variable	*B*	S.E.	Beta	*t*	Sig.
affluent community (X_1)	-3.014	1.515	-.150	-1.989	.049
old west community(X_2)	-5.980	1.900	-.235	-3.147	.002
commuter community (X_3)	-3.740	1.361	-.217	-2.748	.007
population change (X_4)	.088	.028	.242	3.157	.002
in-migration from non-western state (X_5)	.236	.083	.205	2.829	.005
farm population change (X_6)	.058	.012	.358	4.995	.001
F-statistic		14.167		.001	
Constant		35.560		.001	
R^2		.405			
$\boldsymbol{R^2_{adj}}$		**.376**			

n=132
source: 2000 U.S. Census, SF,, http://factfinder.census.gov/

Higher levels of support for open space ballot initiatives are associated with increases in decennial population changes (*t*-statistic = 3.157, p<.002), increases in non-western state in-migration since 1995 (*t*-statistic = 2.829, p<.005), and decreases in farming population (*t*-statistic = 4.995, p<.001). While each of these variables is reflective of what scholars refer to as characteristics of the New West, they importantly retain their own dimensions. Thus, while these results support the assertion that New West communities are more likely to harbor environmentally-oriented values, they also indicate a finer delineation of population change amongst New West communities.

Lower levels of support for open space ballot initiatives are associated with increases in affluent community characteristics (*t*-statistic = -1.989, p<.049), increases old west community characteristics (*t*-statistic = -3.147, p<.002), and increases commuter community characteristics (*t*-statistic = -2.748, p<.007). The negative association between affluent community characteristics and support for open space land conservation is interesting, because wealth is believed to be generally associated with higher levels of environmental concern. Thus, not only are affluent communities differentiated from New West communities (understood as those with differing population changes), there is a statistically significant inverse relationship between affluent community characteristics and support for open space initiatives. Perhaps this dimension reflects a particular political value orientation not measured in this study (due to inability to derive municipal-level election results in a consistent fashion); conservative political ideologies tend to be associated with wealth and resistance to governmental interventions, such as taxes. In fact, Salka (2003) found county conservative partisan preferences to be related to lower levels of support for state-level open space initiatives. There is also a statistically significant inverse relationship between Old West community characteristics and support for open space iniatives. Land use in these communities is centered on extraction; place-based identity of the Old West is thought of as rugged individualism with values of human dominion over nature. These results indicate that the construct of the Old West has validity and that, interestingly, Old West community environmental values do resist public preservationist actions. Finally, commuter communities, those with large homes and long distances to drive for work, are well-known in the American West as either subdivison or exurban areas. These communities also have a negative association with support for open space initiatives. Some write (Duany *et al.* 2000, Hiss 1990) that such communities have less social and physical connectivity to place due to drive time and the ensuing road-centered community identify; thus attachment to place in a physical sense through open space conservation is lacking or even perhaps deemed unnecessary. In sum, while lower levels of support are not surprising for areas with Old West community characteristics, it is new to the literature to identify different kinds of communities in the American West, that of affluent communities and commuter communities, which also harbor lower levels of support for open space initiatives.

CONCLUSION

The existence of and support for open space initiatives in the American West is paradoxical, given heated federal land use battles in the region. Does the New West-Old West construct of the changing American West explain this paradox? The short answer is yes, but not completely. To more fully understand this cryptic answer, let's turn to the three research questions.

Is there a New West-Old West construct in the communities that vote on an open space initiative between 1991-2009? The results of this study reveal that this dichotomous conception of the region is perhaps too simplistic, as a more multi-dimensional concept is discovered. The New West communities demonstrate having differing, not monolithic, population movement dynamics. For example, some New West communities may have high rates of in-migration from nonwestern states as compared to western states, yet moderate decennial population changes and no farm population change. Yet, these three population variables are descriptive of New West communities throughout the scholarly literature (e.g., Johnson and Rasker 1995, Shumway and Otterstrom 2001) but in a ubiquitous manner. Additionally, this study uncovers two types of communities that are differentiated from New West communities, that of affluent communities and commuter communities. This disaggregation of community characteristics is new to the regional research and further studies are needed to determine the reliability of this new construct. Yet, again, New West communities are often described as wealthy, sprawling communities;

these results indicate that these communities are not necessarily associated with those that have experienced more dramatic population shifts. Old West community characteristics are revealed as a stable construct. Thus, while the nuanced characteristics of communities in the changing American West are an exciting addition to the regional land use and environmental studies, this also means that the New West-Old West construct alone cannot be held up to explain the varying levels of support for local open space initiatives.

Do New West and Old West communities reveal differences in support for these environmentally-centered open space initiatives? This study does reveal statistically significant differences in support for local open space ballot initiatives between Old West and the New West (defined by population changes) communities; the latter are more likely to support open space ballot initiatives than the former. However, this construct does not wholly address the question of open space initiative support. This study identifies other local community characteristics of import in the changing American West, that of commuter communities and affluent communities. Interestingly, they join Old West communities in harboring lower levels of support for land conservation initiatives. While New West communities do support this environmental effort, Old West, affluent, and commuter communities decidedly do not.

The paradox remains: in contrast to federal level public land battles, there is support for preserving open space through the initiative process. However, the simple dichotomy of the New West-Old West does not explain the varying support. New West communities have higher levels of support as opposed to Old West communities, but additional community types of the changing American West have emerged to explain the varying levels of support for open space ballot initiatives.

REFERENCES

Alm, L. and Witt, S. (1995). Environmental policy in the intermountain west: The rural-urban linkage. *State and Local Government Review, 27,* 127-136.

Bennett, K. and McBeth, M.K. (1998). Contemporary western rural USA economic composition: Potential implications for environmental policy and research. *Environmental Management, 22,* 371-381.

Blevins, J. (2003). Planned whitewater kayak parks pit ‘old west’ against ‘new west’ in Colorado. *The Denver Post, 2 June*, p. A-01.

Buttell, F. H. and Flinn, W.L. (1974). The structure of support for the environmental movement, 1968—1970. *Rural Sociology, 39*, 55-69.

Buttell, F.H. and Flinn, W.L. (1976). Environmental politics: The structuring of partisan and ideological cleavages in mass environmental attitudes. *Sociological Quarterly, 17*, 477-490.

Carlton, J. (1999). Over a mine, a shootout of the old west and the new. *Wall Street Journal, 17 August*, p. B-1.

Cunningham, M.A. (2005). A comparison of public lands and farmlands for grassland bird conservation. *Professional Geographer, 57 (1),* 51-65.

Dresang, D.L. and Gosling, J.L. (1996). *Politics and policy in American states and communities*. Boston, MA: Allyn and Bacon.

Duany, A., Plater-Zyberk, E., and Speck, J. (2000). *Suburban nation*. New York: North Point Press.

Dunlap, R.E., Xiao, C. and McCright, A.M. (2001). Politics and environment in America: Partisan and ideological cleavages in public support for environmentalism. *Environmental Politics, 10 (4),* 23-48.

Greenberg, M.R. (2005). Concern about environmental pollution: How much difference do race and ethnicity make? A New Jersey case study. *Environmental Health Perspectives, 113 (4),* 369-374.

Guber, D.L. (2001). Voting preferences and the environment in the American electorate. *Society and Natural Resources, 14 (6),* 455-469.

Hansen, A.J., Rasker, R., Maxwell, B., Rotella, J.J., Johnson, J.D., Parmenter, A.W., Langner, U., Cohen, W.B., Lawrence, R.L., and Kraska, M.P.V. (2002). Ecological causes and consequences of demographic change in the new west. *Bioscience, 52 (2),* 151-162.

Haskell, J. (2001). *Direct democracy or representative government?* Colorado: Westview Press.

Hays, S.P. (1991). The new environmental west. *Journal of Policy History, 3,* 223-348.

Hiss, T. (1990). *The experience of place*. New York: Vintage Books.

Howell-Moroney, M. (2004). What are the determinants of open-space ballot measures? An extension of the research. *Social Science Quarterly, 85 (1),* 169-179.

Hunter, L.M. and Brehm, J.M. (2004). A qualitative examination of value orientations toward wildlife and biodiversity by rural residents in the intermountain region. *Human Ecology Review, 11 (1),* 13-26.

Johnson, C.Y., Bowker, J.M. and Cordell, H. K. (2004). Ethnic variation in environmental belief and behavior: An examination of the new ecological paradigm in a social psychological context. *Environment & Behavior, 36 (2),* 157-186.

Johnson, J.D. and Rasker, R. (1995). The role of economic and quality of life values in rural business location. *Journal of Rural Studies, 11 (4),* 405-416.

Jones, R.E. and Dunlap, R.E. (1992). The social bases of environmental concern: Have they changed over time? *Rural Sociology, 57 (1),* 28-47.

Jones, R.E., Fly, M.J., Talley, J., and Cordel, H.K. (2003). Green migration into rural America: The new frontier of environmentalism? *Society and Natural Resources, 16,* 221-238.

Jones, R.E., J. Fly, M.J. and Cordell, H.K. (1999). How green is my valley? Tracking rural and urban environmentalism in the southern Appalachian. *Rural Sociology, 64 (3),* 482-499.

Kahn, M.E. (2002). Demographic change and the demand for environmental regulation. *Journal of Policy Analysis and Management, 21 (1),* 45-62.

Kanagy, C.L., Humphrey, C.R., and Firebraugh, G.. (1994). Surging environmentalism: Changing public opinion or changing publics? *Social Science Quarterly, 75 (4),* 804-819.

Kenworthy, T. (2001). Peaks, valleys define today's west. *USA Today, 18 May,* p. A-03.

Klineberg, S.L., McKeever, M. and Rothenbach, B. (1998). Demographic predictors of environmental concern: It does make a difference how it's measured. *Social Science Quarterly, 79 (4),* 734-753.

Kotchen, M.J. and Powers, S.M. (2006). Explaining the appearance and success of voter referenda for open-space conservation. *Journal of Environmental Economics and Management, 52,* 373-390.

LandVote Database, https://www.quickbase.com/db/bbqna2qct?a=dbpage&pageID=10.

Law, F. (2005). Conservation programs can help landowners improve habitat and profitability. *Southeast Farm Press, 32 (13),* 8-9.

Lloyd, J. (1998). Static over rock-star takeover. *Christian Science Monitor, 90 (72),* 3.

Magleby, D.B. and Patterson, K.D. (1998). Consultants and direct democracy. *PS: Political Science & Politics, 31 (2),* 160-169.

McBeth, M.K., Shanahan, E.A., and Jones, M.D. (2005). The science of storytelling: Measuring policy beliefs in greater yellowstone. *Society and Natural Resources, 18,* 413-429.

Mertler, C.A. and Vannatta, R.A. (2002). *Advanced multivariate statistical methods*. 2nd ed. Los Angeles, CA: Pyrczak Publishing.

Mohai, P. and Bryant, B. (1998). Is there a 'race' effect on concern for environmental quality? *Public Opinion Quarterly, 62 (4),* 475-505.

Myers, P. (1999). *Livability at the ballot box: State and local referenda on parks, conservation, and smarter growth, election day 1998. Available from: http://www.iandrinstitute.org/Studies.htm* [Accessed 01 February 2009]

Pollock, P.H. (2003). *An SPSS companion to political analysis*. Washington, D.C.: CQ Press.

Power, T.M. and Barrett, R.N. (2001). *Post-cowboy economics: Pay and prosperity in the new American west.* Washington, D.C.: Island Press.

Press, D. (2003). Who votes for natural resources in California? *Society and Natural Resources, 16,* 835-846.

Rabe, B.G. (2003). Power to the states: The promise and pitfalls of decentralization. *In:* N.J. Vig and M.E. Kraft, eds. *Environmental policy: New directions for the twenty-first century*. Washington, DC: Congressional Quarterly Press, pp. 33-56.

Riebsame, W., ed. (1997). *Atlas of the new west: Portrait of a changing region*. New York, New York: W.W. Norton.

Rengert, K.M. and Lang, R.E. (2001). Cowboys and cappuccino: The emerging diversity of the rural west. *Census Note Series,* 01:04. Washington, D.C.: Fannie Mae Foundation.

Robbins, J. (2001). Debate over national monument emphasizes old west-new west divide. *New York Times, 20 August,* p. A-13.

Romero, F.S. and Liserio, A. (2002). Saving open spaces: Determinants of 1998 and 1999 'antisprawl' ballot measures. *Social Science Quarterly, 83 (1),* 341-352.

Ryan, R.L., Erickson, D.L., and De Young, R. (2003). Farmers' motivations for adopting conservation practices along riparian zones in a mid-western agriculture watershed. *Journal of Environmental Planning & Management, 46 (1),* 19-37.

Salka, W.M. (2003). Determinants of countywide voting behavior on environmental ballot measures: 1990-2000. *Rural Sociology, 68 (2),* 253-277.

Selmi, D.P. (2001). Reconsidering the use of direct democracy in making land use decisions. *UCLA Journal of Environmental Law & Policy, 19 (2),* 293-359.

Shanahan, E.A., McBeth, M.K., Hathaway, P.L. and Arnell, R.J. (2008). Conduit or contributor? The role of the media in policy change theory. *Policy Sciences, 41,* 115-138.

Shumway, J.M. and Otterstrom, S. (2001). Spatial patterns of migration and income change in the mountain west: The dominance of service-based, amenity-rich counties. *Professional Geographer, 53 (4),* 49-502.

Slind-Flor, V. (1998). Election result: Litigation over propositions: They're racing to court in Montana, California, and Washington State. *The National Law Journal, 21 (12),* A1.

Smith, M.D. and Krannich, R.S. (2000). 'Culture clash' revisited: Newcomer and longer-term residents' attitudes toward land use, development, and environmental issues in rural communities in the rocky mountain west. *Rural Sociology,* 65 (3), 396-421.

Solecki, W.D., Mason, R.J. and Martin, S. (2004). The geography of support for open-space initiatives: A case study of New Jersey's 1998 ballot measure. *Social Science Quarterly, 85 (3),* 624-638.

Sonya, S. (2003). From hometown to nontown: Rural community effects of suburbanization. *Rural Sociology, 68 (1),* 1-23.

Stevens, J.P. (2002). *Applied multivariate statistics for the social sciences*, 4th ed. Mahwah, NJ: Lawrence Erlbaum Associates.

Studenmund, A.H. (2001). *Using econometrics*. Boston, MA: Addison Wesley Longman.

Theodori, G.L., Luloff, A.E., and Willits, F.K. (1998). The association of outdoor recreation and environmental concern: Reexamining the Dunlap-Heffernan thesis. *Rural Sociology, 63(1),* 94-108.

Thomas, C.S., ed. (1991). *Politics and public policy in the contemporary American west.* Albuquerque, NM: University of New Mexico Press.

Tierney, J. and Frasure, W. (1998). Culture wars on the frontier: Interests, values, and policy narratives in public lands politics. *In*: A.J. Cigler and B. Loomis, B., eds. *Interest group politics.* Washington, DC: CQ Press, pp. 303-326.

Tremblay, K.R. and Dunlap, R.E. (1978). Rural-urban residence and concern for environmental quality: A replication and extension. *Rural Sociology, 43 (3),* 474-491.

Trust for Public Lands, http://www.tpl.org.

U.S. 2000 Census SF3 File, http://www.census.gov/.

Uyeki, E.S, and Holland, L. (2000). Diffusion of pro-environmental attitudes? *American Behavioral Scientist, 42 (4),* 646-661.

Van Liere, K.D. and Dunlap, R.E. (1980). The social bases of environmental concern: A review of hypotheses, explanations and empirical evidence, *Public Opinion Quarterly, 80 (44),* 181-197.

Vig, N.J. and Kraft, M.E., eds. (2003). *Environmental policy: New directions for the twenty-first century.* Washington, DC: CQ Press.

Weigel, R.H. (1977). Ideological and demographic correlates of proecology behavior. *Journal of Social Psychology, 103,* 39-47.

Whittaker, M., Segura, G.M., and Bowler, S. (2003). Racial/ethnic groups attitudes towards environmental protection in California: Is 'environmentalism' still a white phenomenon? *Western Political Association Conference,* 27-29 March 2003 Denver, Colorado.

Wilson, M.A. (1997). The wolf in Yellowstone: Science, symbol, or politics? Deconstructing the conflict between environmentalism and wise use. *Society and Natural Resources, 10,* 453-468.

Wright, S.D., Caserta, M., and Lind, D.A. (2003). Older adults' attitudes, concerns, and support for environmental issues in the "new west." *International Journal of Aging & Human Development, 57 (2),* 151-179.