

Chapter 9: Southwesterners' Views of Threatened and Endangered Species Management: Does Racial/Ethnic Diversity Make a Difference?

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Abstract

This paper presents an examination of trust in the Forest Service to manage threatened and endangered species as measured through a survey of residents of four Southwestern States. Of particular interest were variations by ethnic/racial group, gender, concern about threatened and endangered species, and self-assessed knowledge. Increasing diversity in the United States makes explorations of trust in natural resource managing agencies especially important to understand. Expected trust levels among groups of color³ compared to Whites was not especially clear to us. Some very convincing arguments in natural resource management literature suggesting distrust should be expected among groups of color, while an expectation of higher trust among groups of color also finds strong support. A marginally lower level was found among people who engaged in more frequent outdoor recreation, and who visited national forests more often. Time in the United States was associated with lower trust levels among our non-U.S. born respondents. However, the most influential variables among those we considered were gender, ethnic/racial group, concern, knowledge, and perceived similarity of values to the Forest Service (the most significant of those examined). Findings suggest additional research is needed to fully illuminate the complexities of trust in our diverse society, as implications for natural resource management spill over into communication and collaboration efforts.

Keywords: Ethnic and racial diversity, salient values similarity, trust, concern, knowledge.

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³ Throughout this paper we reference specific ethnic/racial groups. When we refer to people of color we are referring to non-Whites. When we refer to Whites we are including Caucasians and Anglos. Individuals of Hispanic origin are referred to as Latinos, and included Hispanic Americans, Latinos, Mexican Americans, and similar identifications. Asians are referred to as Asian Americans and Pacific Islanders. African Americans refers to Blacks. Native Americans includes First Nations and Aborigines. Finally, Multiracials selected more than one of any of the groups above.

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Introduction

Trust (the willingness to rely upon others to make decisions or take actions on our behalf) in natural resource agencies is essential to gaining public acceptance of management plans and actions (Borrie et al. 2002, Cvetkovich and Winter 2003, Shindler et al. 2004). It has been documented as an essential component of effective risk-related communications (Covello et al. 1986, Frudenberg and Rursch 1994, Johnson 2004, Slovic 2000). Those who trust a communication source are more likely to believe messages coming from that source and are more likely to comply with recommendations made to reduce risk exposure. Within the risk context, believability and compliance are of enhanced value to social agencies as well as publics, presumably because risk will be reduced when compliance is present. As such, trust is a form of social capital, easing acceptance of management decisions.

Understanding the perceptions of risk and responses to risk communications among multiethnic communities has been cited as essential to successful risk management in a diverse society (Johnson 2004, Lindell and Perry 2004). The importance of this line of inquiry is expanding rapidly, as the U.S. population is continuing to increase in ethnic and racial diversity. Implications of trust extend beyond risk management issues of course. Because believability of messages, compliance with messages, and willingness to engage in collaborative endeavors with natural resource managers extend to a broad array of management concerns, trust is especially important to natural resource management agencies. It is clear in some instances that minorities are underrepresented among the recreating public in natural areas (see Winter 2007 for a further examination of equity and access). Additionally, minorities have been found to have differing needs and interests regarding communication approaches and outlets (see Crano et al. Chapter 15 of this publication and Thapa et al. 2002). If differences in trust also exist, these are important to understand so that managers can be equipped to serve these diverse needs and interests.

Research exploring variations in trust across a number of contexts informs the work in this paper. Specifically, trust has been shown to be lowest among females (Delhey and Newton 2002, Patterson 1999), and Latinos or African Americans (Rahn et al. 2003). Higher levels of trust were reported for Whites and Asians (Rahn et al. 2003). Lower levels of trust among groups of color have been explained as a reflection of those groups' histories of being marginalized, historically disadvantaged, or having experienced direct harm or discrimination (Bengston 2004; Bengston and Sanchez 2004; Hardin 1997, 2002; Patterson 1999).

Other studies suggest an underlying complexity easily overlooked in a discussion of White/non-White comparisons. For example, work focused on Latinos

suggests that degree of acculturation influences levels of trust in national government (Wenzel 2006). Participants who were more acculturated into the dominant U.S. culture (measured through language and interethnic social interaction) showed lower levels of trust than those who were less acculturated. Another study reported that while African Americans were consistently less positive and less trusting of government than Whites, Latinos were generally more positive than Whites (Bowler and Donovan 2002). The exception of Latinos as a community of color with more positive views of government than Whites was also reported by Hero and Tolbert (2004).

These are noteworthy findings because they suggest that an increasingly ethnically and racially diverse society may be characterized by changes in trust levels (general population surveys reporting levels of trust or distrust in government for example may be affected). However, which direction these changes might take and which groups might be associated with higher or lower levels of trust remains unclear. This could be a source of great concern to natural resource management agencies. Cultural differences may lie at the heart of distrust and could lead to difficult and complex debates (Nie 2003). On the other hand, we may discover that groups of color are more willing to extend trust to natural resource managers.

Many inquiries represent general explorations of trust, rather than trust in specific targets regarding specific issues. Queries of specific issues may yield very different responses than would general questions on trust (Cvetkovich and Lofstedt 1999).

In addition, recent work conducted by the authors challenges the notion of lower trust among groups of color and among females (Winter and Cvetkovich 2007). In that particular study, we applied the salient values similarity model of trust. Trust, as measured through the salient values similarity model (Earle and Cvetkovich 1995), predicts that trust will result when individuals believe that they have salient values similar to those of another individual, group, or agency. Similarity of salient values is assessed through the measurement of public perceptions regarding degree of shared values, goals, and views with the managing agency. Using the salient values similarity approach, we examined public trust regarding fire management. We found a significant difference by ethnic/racial group in salient values similarity and trust, such that Whites had the lowest scores and Latinos the highest (Winter and Cvetkovich 2007). Additionally, males within both groups had significantly lower trust/salient values scores than females.

Additional measures have been examined in our trust and salient values similarity research. Specifically, concern (about threatened and endangered species on local national forests), knowledge (self-assessed), and gender have been found to influence trust and salient values similarity ratings (Cvetkovich and Winter 2003).

Our specific focus on trust in the Forest Service regarding threatened and endangered species management may reveal complexities of trust regarding the issues of acculturation, perceived similar values, gender, race/ethnicity, and knowledge.

Siegrist and Cvetkovich (2000) also found a relationship between trust and knowledge. According to these authors, lay publics and those who have less knowledge about a hazard rely more on trust when making judgments about risks and benefits of management actions, whereas those who possess more knowledge about an issue rely much less on trust.

This paper examines Southwestern residents' trust in the USDA Forest Service to manage threatened and endangered species on wildlands and wilderness areas.⁴ We conducted a telephone survey of residents in four Southwestern States (Arizona, California, Colorado, and New Mexico). In the surveys, we explored ratings of salient values similarity and trust, concern about threatened and endangered species, and knowledge about threatened and endangered species. In particular, we looked for differences by ethnic and racial group and gender because of their implications for researchers, managers, and educators. Findings may aid our continued understanding of the role of diversity in trust and natural resource management. They might also help managers focus their communication and collaboration efforts. Additionally, our specific focus on trust in the Forest Service regarding threatened and endangered species management may reveal complexities of trust regarding the issues of acculturation, perceived similar values, gender, race/ethnicity, and knowledge. Findings should be of use in equipping managers to demonstrate greater cultural competency as discussed by Anderson and Stone (2005).

Methods

A random sample of residential telephone numbers, drawn from regional divisions in each of four states, was used to compile our sample. The total population for each region and state was determined based on state data from the U.S. census. Target sample sizes of 600 respondents in California, and 400 in each of the other three states were set. California's target was established in the first wave of interviewing, and was based on a desired confidence level of 95 percent, plus or minus 4 percent; sampling for the other three states was designed for a confidence level of 95 percent, plus or minus 5 percent. A telephone survey in each state was then conducted.

Procedures

The California data were collected from late summer through early fall 2001, and the data for the other three states were collected in summer 2002. Interviewers contacted the adult in the household (age 18 or older) with the most recent birthday,

⁴ Wildlands and wilderness are used here to refer to semideveloped and undeveloped natural areas, including federally designated wilderness areas.

asked if they were willing to participate in a phone survey, and then noted if they were male or female (each final set of respondents was targeted to have half males and half females).

Survey Instrument

A questionnaire for telephone administration was developed in both English and Spanish. It was modeled after prior surveys on trust in natural resource management used by the authors and their colleagues (Cvetkovich and Winter 2003, 2004; Winter et al. 1999). A pretest on a randomly selected sample of residents led to minor refinements to a portion of the introductory statement and to two questions. Respondents were asked about sociodemographics, concern about threatened and endangered species (assessed using an 8-point scale where 1 = not at all concerned, 8 = very concerned), knowledge about threatened and endangered species within their state of residence (assessed using an 8-point Likert-type scale where 1 = not at all knowledgeable, 8 = very knowledgeable), similarity of salient values with the Forest Service (measured by asking about values, goals, and views, with 1 = a dissimilarity anchor, and 8 = a similarity anchor, for example, “The Forest Service does not share your values” represented dissimilarity), and trust of the Forest Service (on a scale from 1 to 8, where 1 = do not trust the Forest Service at all, 8 = trust the Forest Service completely).

Participants

In total, 1,807 telephone surveys were completed (603 in California, 401 in Arizona, 402 in Colorado, and 401 in New Mexico). All respondents were residents of the states within which they were contacted (this was a screening item during the telephone interview). The vast majority of surveys were completed in English (93.0 percent), with the balance conducted in Spanish by a bilingual interviewer. Data for the English- and Spanish-speaking respondents are combined in this paper. Cooperation rates were high across states, ranging from about 84 to 90 percent.

Results

Respondents

Approximately equal numbers of males and females (50.1 percent female) participated. The majority (74.5 percent) of respondents had attended at least some college. The greatest proportion of respondents (58.5 percent) was between 35 and 54 years of age, and most (82.3 percent) had lived in the United States their entire lives. Those who were born outside of the United States reported an average of 26.13 years lived here. The majority of respondents were White (66.2 percent),

with about one-fifth (19.6 percent) selecting Latino as their ethnic identity. Fewer indicated that they identified with multiple ethnicities/races (3.2 percent), Native American (2.9 percent), African American (2.8 percent), or Asian (2.0 percent).

General engagement in outdoor recreation activity showed that about one-fourth recreated several times a week (23.4 percent), or several times a month (25.9 percent), while about one-tenth recreated at least monthly (15.3 percent). About one-third reported infrequent participation in outdoor recreation (17.3 percent once or twice a year, and 17.3 percent rarely or never). The vast majority (80.5 percent) had visited a national forest in their state, and average number of visits in the past 12 months was 11.48 visits (SD = 44.36, n = 1,438).

Concern About Threatened and Endangered Species

Ratings of concern over threatened and endangered species differed significantly by ethnic/racial group (based on the six ethnic/racial groups, table 9-1), with the highest concern among Latinos. Comparisons among ethnic/racial groups showed Whites provided significantly lower concern ratings than did Latinos.

Table 9-1—ANOVA exploring variation in concern by ethnic/racial group

Ethnic/racial group	Mean ^a	n	Degrees of freedom	F	p
Asians	6.06	36	5, 1,732	7.65	< 0.01
African Americans	6.20	50			
Latinos	6.37	353			
Native Americans	5.96	51			
Whites	5.64	1,185			
Multiracial	6.24	58			

^a Scale was 1 = not at all concerned, 8 = very concerned.

Followup *t*-tests comparing males and females within each ethnic/racial group revealed significant differences by gender for Whites, with White females (mean = 5.92) showing more concern than their White male counterparts (mean = 5.35, *t* = -4.69, *p* < 0.001).

Knowledge About Species in Respondent’s State of Residence

As with concern, knowledge also differed significantly by ethnic/racial group (table 9-2), with Native Americans and Whites rating their own knowledge about species the highest. Differences between males and females within each ethnic/racial group were also significant for Whites, with males rating their knowledge higher (mean = 4.82) than did females (mean = 4.48, *t* = 3.18, *p* < 0.01). Across all six groups, the tendency was for males to rate their knowledge higher than did females.

Table 9-2—ANOVA exploring variation in knowledge by ethnic/racial group

Ethnic/racial group	Mean ^a	n	Degrees of freedom	F	p
Asians	4.11	36	5, 1,735	5.97	< 0.01
African Americans	4.10	49			
Latinos	4.06	349			
Native Americans	4.88	52			
Whites	4.64	1,192			
Multiracial	4.53	58			

^a Scale was 1 = not at all knowledgeable, 8 = very knowledgeable.

Salient Values Similarity and Trust

Perceptions of similar salient values, goals, and views were high, ranging from 5.5 to 6.0 on the 8-point scale. A majority (56.1 percent) of respondents selected 6, 7, or 8 for the shared-values scale, as well as for shared goals (51.9 percent), and for shared views (52.8 percent). Even more (60.4 percent) chose 6, 7, or 8 on the scale for overall trust in the Forest Service to manage threatened and endangered species. The salient value items were highly correlated with each other (ranged from 0.63 to 0.70). The salient values items were averaged to create a salient values similarity scale ($\alpha = 0.86$).

Additional insights into those who trusted and those who did not—

Given our need to understand variations in trust to the greatest degree possible, we conducted an additional set of analyses exploring potential differences between those who trusted (provided a rating of 5, 6, 7, or 8) and those who did not (provided a rating of 1, 2, 3, or 4). The division at the mid-point of the scale was for future comparative purposes with other data sets, and helped standardize our point of comparison.

Gender was associated with variations in trust, such that males were more likely to be in the distrust group (62.4 percent), females in the trust group (55.1 percent; $\chi^2_{1\ 1537} = 38.52, p < 0.01$). Education level also differed significantly by trust group, such that respondents with more education had a greater percentage of their members in the distrust group ($\chi^2_{4\ 1529} = 41.05, p < 0.01$). Around 80 percent of respondents with a high school degree or less were in the trust group, whereas 60 percent of those with at least some graduate education were in the trust group. Age was also associated with trust where younger respondents were much more likely to be in the trust group (above 80 percent of respondents between 18 and 24, and 25 and 34) than were older respondents (between about 60 and 70 percent in the trust

group for ages 35 and up). This difference was also significant ($\chi^2_{5\ 1524} = 43.19$, $p < 0.01$). Although these comparisons were significant, their combined ability to predict trust ratings was marginal ($R^2 = 0.07$; $F_{3\ 1729} = 44.77$, $p < 0.001$).

Influence of acculturation was examined for respondents born outside of the United States. Among those born outside of the United States, years lived in the United States was higher in the distrust group (35.31 years) than in the trust group (22.78 years, $t = 4.77$, $p < 0.01$).

Members who distrusted the Forest Service engaged in outdoor recreation more frequently than the trust group. Of those recreating several times a week, more than one-fourth were in the distrust group. Respondents that recreated rarely or never had fewer members in the distrust group (only one-fifth, $\chi^2_{4\ 1525} = 13.16$, $p < 0.05$). Having visited the states' national forests was also associated with a greater proportion of those in the distrust group (15.9 percent of respondents who never visited were in the distrust group compared to 32.1 percent of those who had, $\chi^2_{1\ 1519} = 29.80$, $p < 0.01$). Finally, number of visits to a national forest in the past 12 months was significantly higher in the distrust group ($M = 17.69$, $SD = 56.55$, $n = 389$) than in the trust group ($M = 7.61$, $SD = 32.04$, $n = 828$, $t = 3.95$, $p < 0.01$). Predicting trust score from outdoor recreation frequency and number of visits to a national forest revealed a marginal effect ($R^2 = 0.02$; $F_{2\ 1383} = 18.20$, $p < 0.01$).

Predicting trust based on salient values similarity, knowledge, concern, ethnic/racial group, gender, and education—

The ability to predict trust based on the salient values similarity scale, knowledge, concern, ethnic/racial group, gender, and education (following our prior research cited in Winter and Cvetkovich 2007) was examined through regression. A significant amount of the overall variance in trust was explained by these predictors ($R^2 = 0.47$, $F_{6\ 1627} = 239.88$, $p < 0.001$, table 9-3). The salient values similarity scale was the most influential predictor in the regression, although each of the predictors was a significant contributor to the equation.

To further examine variations in trust, the trust ratings were analyzed by ethnic/racial group, and significant variation by group was revealed (table 9-4). The lowest average trust scale ratings were provided by White respondents and Native American respondents, the highest by Latino respondents.

Contrasts by gender within each ethnic/racial group revealed significant differences for Whites and Latinos, with females (White mean = 5.91, Latinos mean = 6.84) giving higher trust scale ratings than their male counterparts (White mean = 5.27, Hispanic mean = 6.40, $t = -5.55$, $p < 0.01$ and $t = -2.24$, $p = 0.03$).

Table 9-3—Summary of regression analysis to predict trust ratings

Independent variable	β	t	p	sr ^{2a}
Similar salient values	0.67	33.93	< 0.01	0.38
Knowledge	-.05	-2.67	< .01	< .01
Ethnicity/race	-.09	-4.98	< .01	< .01
Concern	-.13	-6.35	< .01	.01
Gender	.04	2.39	< .02	< .01
Education	-.09	-4.52	< .01	< .01

^a Squared semipartial correlation is a measure of the unique contribution of the independent variable to the amount of variance explained within that set of independent variables. According to the numbers shown, similar salient values is the only variable contributing a substantial unique variance beyond the other independent variables.

Source: Tabachnik and Fidell 2000.

Table 9-4—ANOVA exploring variation in trust ratings by ethnic/racial group

Ethnic/racial group	Mean	n	Degrees of freedom	F	p
Asians	6.28	36	5, 1,692	16.53	< 0.01
African Americans	6.13	47			
Latinos	6.62	349			
Native Americans	5.71	51			
Whites	5.59	1,157			
Multiracial	6.32	53			

Discussion

Findings suggest that ethnic/racial diversity and gender are of importance in management of Forest Service lands. Concern about threatened and endangered species, knowledge, and similar salient values, along with gender and ethnic/racial group, were highly predictive of trust ratings. Those who trusted and distrusted differed some in age group, outdoor recreation participation, and visits to national forests. Some difference was found linked to potential acculturation, where average time in the United States was greater among those in the distrust group. However, these differences told us less about trust in the Forest Service to manage threatened and endangered species on forest lands.

Males had a tendency to rate their concern about threatened and endangered species lower than females. Ratings of concern differed significantly by ethnic/racial group with Whites indicating the lowest levels of concern, Latinos the highest. Similar to concern, ratings of knowledge were higher among males within all ethnic/racial groups. Ratings of knowledge also varied significantly by ethnic/racial group, with Whites indicating the highest levels, Latinos the lowest.

Findings suggest that ethnic/racial diversity and gender are of importance in management of Forest Service lands. Concern about threatened and endangered species, knowledge, and similar salient values, along with gender and ethnic/racial group, were highly predictive of trust ratings.

Based on the trust literature cited earlier (Rahn et al. 2003), we might have expected that Whites and Asians would have the highest trust ratings, and that groups of color would have the lowest. Furthermore, because females tend to have less advantage than males, trust ratings should be lower for females across all groups. Neither of these predictions found support in our data. In fact, groups of advantage, particularly White males were among the lowest in their trust ratings. This finding is in line with what we report elsewhere regarding fire and fire management (Winter and Cvetkovich 2007). The higher trust level among Latinos is in line with findings reported by Bowler and Donovan (2002). Some of this may have been accounted for by less time in the United States, as expected from the literature reporting an inverse relationship between acculturation and trust. While this would require further exploration, our findings suggest that greater experience living in the United States and recreating on national forests may both be associated with lesser trust. A longitudinal study exploring trust upon immigration and its evolution over time would of course require significant investment but would be more definitive on clarifying the relationships between acculturation, experience with the managing agency, and development of trust. If the inquiry were specific to threatened and endangered species management, a direct measure of knowledge and experience with that topic would be of special interest.

Forest Service resource managers and public information officers working in ethnically and racially diverse areas can use these findings by anticipating that the various ethnic/racial groups will respond uniquely to some management actions. In particular, trust regarding threatened and endangered species management might differ greatly by ethnic/racial identification. Given the significance of salient values similarity and trust, it seems advisable to establish and maintain ongoing relationships with different ethnic/racial groups to foster trust. As the Nation continues to increase in diversity, the importance of such efforts will increase. Interestingly enough, the predictions of decreasing trust in government affiliated with an increase in groups of color in the population do not find support here. However, groups of color may seek out different interaction styles and types of information from the managing agency, which could affect efforts to establish and maintain trust over time. In addition, as groups of color become more engaged and interested in natural resource management, the basis of information from which they derive trust judgments could change, shifting the patterns of higher trust reported in this paper. As direct knowledge increases, other factors may become more important than trust.

Finally, note that this inquiry was specific to issues of Forest Service management in four states regarding threatened and endangered species. Results should not be assumed to indicate a broader trust in government across other topics/matters of concern among groups of color, or among women of any ethnic/racial group. The complexities of trust, which no doubt differ by topic of concern, by target of trust, by individuals that we are interested in, and by comparison with other issues of concern, dictates caution. In addition, although trust is important and valuable, its ultimate behavioral outcomes are not always clear cut. We know from risk management research that trust has been linked to greater acceptance of messages and greater compliance. However, individuals who trust might also be just as likely to be willing to engage more in dialogue about threatened and endangered species management, believing that their concerns and arguments will be attended to and they can help determine management direction. On the other hand, those who trust government in some matters (such as threatened and endangered species management) may have determined this is an appropriate area of concern to leave to the Forest Service to handle on their behalf, while they concern themselves with matters of social policy such as education or health care. The specific species may create other variations in trust, adding to the complexity of public/agency interactions. Ultimately, the minimum amount of trust necessary to conduct the business of natural resource management has not been determined, but it seems important to maintain as a concern of public agencies.

Conclusions

We examined the role of trust and salient values similarity in opinions regarding threatened and endangered species. Results demonstrate the significance of perceived similar salient values, trust, and concern related to species management. Analyses exploring the roles of gender and racial/ethnic identity indicate heterogeneity between groups of color, as well as between males and females on some measures. Other indicators of potential experience with natural resources and the agency (specifically measured as outdoor recreation and visits to national forests) told us much less about trust judgments.

These findings offer insight into the ever-increasing complexity of managing natural resources, as well as forming informational and educational strategies that are sensitive to the diverse cultures of the region. Findings suggest caution in assuming that all groups of color can be considered homogeneous. Recent research has revealed the importance of considering heterogeneity within ethnic groups (Alvarez et al. 2004, Tierney et al. 1998), further emphasizing the complexity of a diverse public.

Ultimately, the minimum amount of trust necessary to conduct the business of natural resource management has not been determined, but it seems important to maintain as a concern of public agencies.

However, additional research is needed to further illuminate the differences and similarities within and between ethnic/racial groups and by gender. Larger numbers within each ethnic/racial group would be helpful in continuing this line of inquiry. The amount of influence risk has on individuals should also be considered (Shindler et al. 2004) and was not assessed here. It may be a factor in the determinations of trust that are complicated by a number of factors, including ethnic/racial group membership. Direct experience with threatened and endangered species, or more personalized concerns about species management, may be affiliated more with some ethnic/racial groups than others. The continuing increase of diversity within an already diverse society speaks to the importance of these lines of inquiry.

References

- Alvarez, A.N.; Juang, L.; Liang, C.T.H. 2004.** Asian Americans and racism: the role of racial identity and racial socialization. Paper presented at the 112th annual convention of the American Psychological Association. On file with: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station, 4955 Canyon Crest Drive, Riverside, CA 92507.
- Anderson, D.M.; Stone, C.F. 2005.** Cultural competencies of park and recreation professionals: a case study of North Carolina. *Journal of Park and Recreation Administration*. 23(1): 53–74.
- Bengston, D.N. 2004.** Listening to neglected voices: American Indian perspectives on natural resource management. *Journal of Forestry*. 102(1): 48–52.
- Bengston, D.N.; Sanchez, J.J. 2004.** Hispanic American views on the stewardship of federal land management agencies: an exploratory analysis of the ethnic NewsWatch database. In: Tierney, P.T.; Chavez, D.J., tech. cords. Proceedings of the 4th social aspects and recreation research symposium. San Francisco, CA: San Francisco State University: 5–9.
- Borrie, W.T.; Christensen, N.; Watson, A.E.; Miller, T.A.; McCollum, D.W. 2002.** Public purpose recreation marketing: a focus on the relationships between the public and public lands. *Journal of Park and Recreation Administration*. 20(2): 49–68.
- Bowler, S.; Donovan, T. 2002.** Why do people like their state and local government more than the federal government? <http://www.ac.wvu.edu/~donovan/likegov4.pdf>. (March 27, 2007).
- Covello, V.T.; Winterfeldt, D.v.; Slovic, P. 1986.** Risk communication: a review of the literature. *Risk Abstracts*. 3(October): 171–182.

- Cvetkovich, T.T.; Lofstedt, R.E. 1999.** Social trust: consolidation and future advances. In: Cvetkovich, G.; Lofstedt, R.E., eds. Social trust and the management of risk. London: Earthscan Publications, Ltd: 153–156.
- Cvetkovich, G.T.; Winter, P.L. 2003.** Trust and social representations of the management of threatened and endangered species. *Environment and Behavior*. 35(2): 286–307.
- Cvetkovich, G.T.; Winter, P.L. 2004.** Seeing eye-to-eye on natural resource management: trust, value similarity, and action consistency/justification. In: Tierney, P.T.; Chavez, D.J., tech. cords. Proceedings of the 4th social aspects and recreation research symposium. San Francisco, CA: San Francisco State University: 46–50.
- Delhey, J.; Newton, K. 2002.** Who trusts? The origins of social trust in seven nations. FS III 02-402. Berlin: Social Science Research Center, Social Structure and Social Reporting Research Unit. 45 p.
- Earle, T.C.; Cvetkovich, G.T. 1995.** Social trust: toward a cosmopolitan society. Westport, CT: Praeger Publishers. 240 p.
- Frudenberg, W.R.; Rursch, J.A. 1994.** The risks of “putting the numbers in context”: a cautionary tale. *Risk Analysis*. 14: 949–958.
- Hardin, R. 1997.** Distrust. Presented at the Russell Sage Foundation conference on distrust, Bellagio, Italy. http://www.russellsage.org/publications/working_papers_trust.htm. (August 6, 2001).
- Hardin, R. 2002.** Trust & trustworthiness. New York: Russell Sage Foundation. 256 p.
- Hero, R.E.; Tolbert, C.J. 2004.** Minority voices and citizen attitudes about government responsiveness in the American state: Do social and institutional context matter? *British Journal of Political Science*. 34: 109–121.
- Johnson, B. 2004.** Arguments for testing ethnic identity and acculturation as factors in risk judgments. *Risk Analysis*. 24(5): 1279–1288.
- Lindell, M.K.; Perry R.W. 2004.** Communicating environmental risk in multiethnic communities. Thousand Oaks, CA: Sage Publications. 276 p.
- Nie, M. 2003.** Drivers of natural resource-based political conflict. *Policy Sciences*. 36: 307–341.

- Patterson, O. 1999.** Liberty against the democratic state: on the historical and contemporary sources of American distrust. In: Warren, M.E., ed. *Democracy and trust*. United Kingdom: University Press, Cambridge: 151–207.
- Rahn, W.M.; Yoon, K.S.; Garet, M.; Lipson, S.; Loflin, K. 2003.** Geographies of trust: explaining inter-community variation in general social trust using hierarchical linear modeling (HLM). Presented at the 58th annual conference of the American Association for Public Opinion Research. On file with: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station, 4955 Canyon Crest Drive, Riverside, CA, 92507.
- Shindler, B.; Brunson, M.W.; Cheek, K.A. 2004.** Social acceptability in forest and range management. In: Manfredo, M.J.; Vaske, J.J.; Bruyere, B.L.; Field, D.R.; Brown, P.J., eds. *Society and natural resources: a summary of knowledge*. Jefferson, MO: Modern Litho: 147–158.
- Siegrist, M.; Cvetkovich, G. 2000.** Perception of hazards: the role of social trust and knowledge. *Risk Analysis*. 20(5): 713–719.
- Slovic, P. 2000.** Informing and educating the public about risk. In: Slovic, P. *The perception of risk*. London: Earthscan Publications, Ltd: 182–198.
- Tabachnik, B.G.; Fidell, L.S. 2000.** *Using multivariate statistics*. 4th ed. Needham Heights, MA: Allyn & Bacon. 966 p.
- Thapa, B.; Graefe, A.R.; Absher, J.D. 2002.** Information needs and search behaviors: a comparative study of ethnic groups in the Angeles and San Bernardino National Forests, California. *Leisure Sciences*. 24: 89–107.
- Tierney, P.T.; Dahl, R.; Chavez, D.J. 1998.** Cultural diversity of Los Angeles County residents using undeveloped natural areas. Res. Pap. PSW-RP-236. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station. 76 p.
- Wenzel, J.P. 2006.** Acculturation effects on trust in national and local government among Mexican Americans. *Social Science Quarterly*. 87(s1): 1073–1087.
- Winter, P.L. 2007.** Equity in access to recreation opportunities: a synthesis of research and management implications. In: Kruger, L.E.; Mazza, R.; Lawrence, K., eds. PNW-GTR-698. *Proceedings: national workshop on recreation research and management*. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station: 167–180.

- Winter, P.L.; Cvetkovich, G.T. 2007.** Diversity in southwesterners' views of Forest Service fire management. In: Kent, B.; Raish, C.; Martin, W., eds. Wildfire risk: human perceptions and management implications. Washington, DC: Resources for the Future Press: 156–170.
- Winter, P.L.; Palucki, L.J.; Burkhardt, R.L. 1999.** Anticipated responses to a fee program: the key is trust. *Journal of Leisure Research*. 31(3): 207–226.