

Communicating with Recreation Visitors: A Brief Synthesis of Findings

Patricia L. Winter⁷

Abstract

This paper reviews some key research findings on communication that are applicable to recreation management. Research on persuasive communication provides a valuable background for understanding the best approaches to communicating with recreation visitors. The source of a message, medium of a message, aspects of the audience, and aspects of the message have all been examined in persuasion research and are briefly summarized. Research regarding sources of information accessed by recreation visitors and general publics, and their trust in these sources, is discussed. Once visitors arrive onsite, signs are an important means of communication in recreation management. Research that examined the wording of messages in signs is reviewed. When addressing a diverse public, international signage is sometimes recommended. But studies show comprehension of international symbols varies among visitors. Innovations that met the communication needs of ethnically and racially diverse publics are briefly discussed to present alternative means of communicating with recreationists. Finally, key lessons from these reviewed areas are presented for management application. As the nation's population becomes more diverse, successful communication strategies are essential to public land management.

Persuasive Communication Research

Persuasion research has focused on several aspects of communication that influence effectiveness, including the source of a message, medium of the message, aspects of the audience, aspects of the message, and the target behavior or attitude. The source of a message, including expertness, trustworthiness, and attractiveness can all influence effective delivery of a persuasive communication (Ajzen 1992, Oskamp 1991, Winter and Koger 2004). For example, communicators who are known experts, or introduced as experts on the topic of the message, are more influential than nonexperts (Cialdini 2001, Oskamp 1991). Perceived similarity between the communicator and the receiver of the message also influences persuasion

(Cialdini 2001, Zimbardo and Lippé 1991). Trust of the managing agency as a message source appears to be essential in how information is perceived (Cvetkovich and Winter 2002, Cvetkovich and Winter 2004, Winter et al. 1999).

The medium of the message (for example, comparing the effectiveness of spoken versus written messages) also influences its effectiveness. For example, when comparing mass communication versus personal communication, researchers have found that face-to-face, or personal communication, is superior to other methods of information dissemination (Oskamp 1991).

Aspects of the audience (including their attention to the message, for example see McCool and Cole (2000)) also affect the effectiveness of a message.

⁷ Research Social Scientist, USDA Forest Service, Pacific Southwest Research Station, 4955 Canyon Crest Drive, Riverside, CA 92507-6099. Email: pwinter@fs.fed.us.

Some personality characteristics, such as self-esteem and intelligence, seem to have a curvilinear relationship with persuasibility. Those with self-esteem that falls to the lower or higher ends of the population distribution for this characteristic tend to be less easily influenced by persuasive messages than those in the mid-range of the normal curve. Personality characteristics may also influence recall of a message and the likelihood of yielding to the message (Oskamp 1991). For example, having high intelligence may greatly improve the retention and understanding of a message, and at the same time, make one less likely to change one's behavior (Oskamp 1991).

Aspects of the message itself (for example, the relative effectiveness of fear appeals versus other types of messages) have been examined. Fear appeals seem most effective when paired with a specific behavioral instruction on how to avoid a negative consequence (Oskamp 1991).

The target behavior has also been examined in persuasion research, with a focus on the persistence of attitude change and how that influences action (Oskamp 1991). Finally, messages are most effective when attitudes are weak or nonexistent about a particular topic (Oskamp 1991). (For a summary of research on the use of persuasion in recreational settings to effect behavior changes see Roggenbuck (1992).)

Communication and Diversity

Communication techniques are linked to issues of equity in recreation access for potential and actual recreation visitors. People of color have reported a lack of information about recreation opportunities as a constraint to recreation participation (Crano et al. 2005, Scott et al. 2004, Tierney et al. 1998). A lack of information onsite has also been reported as a constraint in outdoor recreation participation among ethnic minorities (Winter et al. 2004, Winter and McCollum 2002).

Information Sources Used and Trusted

Information sources that recreationists and potential recreationists rely on and trust often differ among ethnic and racial groups. In several studies, onsite recreationists reported family and friends as their primary source of information about recreation opportunities and the recreation setting where they were contacted (Chavez et al. 1993, Chavez et al. 1994, Parker and Winter 1998, Simcox and Hodgson 1993). Hispanics/ Latinos typically rely more on their family and friends for information than do Whites and other ethnic/racial groups. A similar reliance on family and friends as the primary source of information about recreation opportunities was found in a telephone survey of residents in the Los Angeles basin (Crano et al. 2005). Again, the proportion of Latinos relying on family and friends was higher than for other ethnic/racial groups. Reliance on other sources showed greater variation by ethnic/racial group. For example, Blacks were more likely than other groups to rely on church as a source of information. In that same study, respondents were asked which source of information they trusted the most. The greatest proportion of respondents chose the Internet and computers as their most trusted source. However, in the Crano et al. (2005) study, as with primary sources used, some variations in trusted source by ethnic/racial group were found. The second most-trusted source among all groups except Whites was family and friends.

Trust in the Internet, found by Crano et al. (2005), corresponds with a national survey on Internet users and nonusers that suggests that importance of the Internet is higher than other forms of media as an information source (Lebo 2004). Results of that same survey found that much of the information on government web sites was thought to be reliable and accurate (Lebo 2004). A cautionary note should be added here about the Internet as a primary and trusted

source of information. Research on access to the Internet across the United States and within certain ethnic/racial groups suggests that people of color are less likely to use the Internet (particularly Hispanics and Blacks) than Whites (Spooner 2003). Education and income are also linked to Internet use; those with less education and lower household incomes are less likely to use the Internet (Spooner 2003). The bulk of non-Internet users report that they do not use the Internet because of a lack of a computer, or lack of a computer good enough to access the Internet (Lebo 2004). Findings are inconsistent regarding actual levels of use of the Internet and access to the Internet. Lebo (2004) reported that over three-fourths of Americans use the Internet, whereas Spooner (2003) suggested that number is just over half of American adults (59% males and 54% females used the Internet in 2001). Only a portion of Internet use is for travel information purposes; the primary use is related to email.

Other work has demonstrated the reliance on ethnic media within some communities of color (Winter et al. 2004). When a type of media source is reported as common among groups, such as newspapers, one cannot assume that the primary newspaper in an area is the one most likely to be used by all groups. In other words, tailoring the outlet to meet the needs of a diverse audience is advisable.

Signs in Recreation Settings

Even though visitors and potential visitors rely on family and friends for information about recreation opportunities and about specific sites, natural resource managers rely heavily on signs for onsite communication. Signs are not necessarily the most preferred mode of information dissemination among managers, nor are they always assumed to be the most effective (Johnson et al. 1994, Roggenbuck et al. 1997, Winter et al. 1998, Wirsching et al. 2003). However, signs

serve an important function in resource management. Signs have the potential to make acceptable behaviors more salient in a setting, which is particularly important to new site visitors unfamiliar with an area. From a law enforcement standpoint, signs help assure that visitors are informed of rules, regulations, safety concerns, and other matters of import related to management and visitor safety.

Research has been conducted on the effectiveness of signs, including aspects related to visitor awareness of signs, comprehension of signs, and the impact of messages in signs on visitor behavior, attitudes, and opinions. Signs that are constructed in keeping with the findings from research for effective messaging are more valuable than those that are not. For example, research suggests that placing too many messages on trailside bulletin boards may lead visitors to spend more time at the location, but visitor retention of those messages is lessened (Cole et al. 1997).

A series of studies was conducted to explore what might make a sign's message more likely to have the desired influence on visitor behavior. Part of the interest was in ascertaining if messages had to be negative to be effective. After all, is it not far more welcoming to post when a site is open for picnicking than when it is closed? In the first study in this series, messages in signs in two states, covering an array of site types, were classified (Winter et al. 1998). Number of signs, likelihood of being viewed by visitors and comprehended, and type of message were coded. Coding of messages focused primarily on message framing, from a normative perspective. Norms (the implicit or explicit expectations for behavior) can be powerful activators of behavior because of their potential sanctions such as through fines or threats of social disapproval. They can be presented as either rules and regulations (injunctive) or statements about the actions of others (descriptive). Descriptive norms, or information about the actions of other people, help define what is appropriate in a setting (Cialdini 2001).

Both rules/regulations and statements about actions of others can be presented either positively (prescriptive) or negatively (proscriptive). A preponderance of negatively worded rules and regulations was found, particularly in urbanized locations. The second step in the series was to explore what interpreters (people who are experts in a specialized form of communication and messaging that can be applied to signage) would consider as the most effective message types (Winter et al. 2000). The results of that nationwide survey showed that respondents felt positively worded messages (prescriptive) would be most effective. Because statements about the actions of others were not found in very many signs in the first study in the series, interpreters were only asked to rate statements about rules and regulations. In the final study of the series, an onsite experiment was conducted at the Petrified Forest National Park (Cialdini et al., n.d.). The targeted behavior was theft of petrified wood, which although infrequent has been sufficient over the life of the park to have a dramatic impact on the number, variety, and quality of the Petrified Forest collection. In this study, it was clear that the most effective message in reducing theft of petrified wood was the negatively worded sign (proscriptive-injunctive). It should be noted that the sign was not rudely stated, as it included "please" as well as a short justification for the rule ("Please don't go off the established paths and trails, in order to protect the Sequoias and natural vegetation in this park"). The most ineffective sign, that is the one where the incidence of theft was the highest, contained the proscriptive-descriptive message ("Many past visitors have gone off the established paths and trails, changing the natural state of the Sequoias and vegetation in this park"). Researchers suggest this difference was a reflection of the power of the norm of theft being so clearly stated.

The series of studies discussed above and many others reflect the complexity of selecting sign wording

and messages. Part of this complexity rests in trying to present information to a diverse recreating public that speaks and reads different languages. The challenge to resource management has been to gauge which segments of the population are, or could be coming to recreation settings, and devise strategies to best communicate with them. In areas where visitation is diverse, the use of international symbols has been adopted. Ideally, signs containing international symbols can surpass language barriers and offer a simple representation that eases comprehension. However, research on comprehension of international symbols suggests that not all symbols are equally effective. A series of studies found that while most international symbols presented to recreationists were correctly understood, others were either only partially, or poorly understood (Chavez et al. 2004; Chavez et al. 2003a,b). Most troublesome is the finding that the visitors who had the least difficulty comprehending the symbols tended to be college-educated, White, and repeat visitors. This finding suggests caution in adopting international symbols as a means to address a diverse audience, particularly those new to an area. Researchers suggest that textual messages may need to be combined with the symbols to clarify the intended message. However, if textual messages are presented, they need to be in languages appropriate to the user groups most in need of the information. Drawing from research by Marin (1994), populations that speak a primary language other than English may be unaware of the existence of signs and messages in a setting unless they contain messages in their primary language. New symbols developed for an area or unique purpose may need to be developed in adherence to International Organization for Standardization (ISO) methods for standardization. It may also be necessary to use other methods to communicate essential messages, such as face-to-face communication, and educational programs on- and offsite. (Chavez et al. 2004).

Innovations that Served a Diverse Audience

Although this paper has focused on sources of information, and particularly on signs and aspects of effectiveness, innovations in communication approaches that were designed to meet the needs of diverse recreationists are also of interest. The innovations included the Forest Information Van and the Eco-Teams (Absher and Winter 1997, Absher et al. 1997). Both programs were developed in response to a documented gap between Forest Service communication strategies and the needs and interests of diverse visitors, particularly Hispanics and Asians. Areas of the forests in southern California were seeing a dramatic increase in visitation by Hispanics and Asians. Resource managers recognized a need to provide information and education that would address their unique needs. The Forest Information Van was a traveling display that was moved throughout the Angeles National Forest to locations that had a high minority visitation (Absher et al. 1997). Personnel who staffed the van were Spanish-English bilingual, as were the colorful displays attached to the van. The van involved taking the information directly to the sites and presenting it in a format that was personable and respectful of culture. As such, it was an innovative way to improve communication between the managing agency and the recreating public.

The Eco-Teams was another innovation in communication (Absher and Winter 1997, Absher et al. 1997). Eco-Team members were urban youth, hired to come out to forest settings that tended to see a high level of minority visitation. The youth were people of color, many who were Spanish-English bilingual. Eco-Team members walked through sites, including along riparian corridors, and would visit face-to-face with recreationists. Conversations were brief and friendly, and Eco-Team members would relay bits of information provided to them at the start of the workday in a daily briefing.

Information was focused on safety, fire regulations, and other important matters for the site. Team members also handed out trash bags to assist with proper disposal of garbage. Both innovations have disappeared from the forest landscape for a variety of reasons, primarily a lack of adequate resources to continue them.

Conclusions

This paper started out with the idea that communication about outdoor recreation opportunities on and off-site is needed to fill the interests and desires of visitors and potential visitors. Various modes of communication were discussed. The use of ethnic media by some groups of color was also noted. Signage onsite that relays rules and regulations, or seeks behavioral change, was examined. One series of studies suggests that signs are most effective when messages state the prohibited act negatively (but politely). Another set of studies suggests that international symbols may need to be constructed through ISO development procedures, paired with textual messages, and possibly other means of communication. A brief description of two innovations in communication shows the range of possibilities in addressing the need for effective communication with a racially and ethnically diverse recreating public.

References

- Absher, J.; Winter, P. 1997.** Evaluation of the 1995 Eco-Team Program. Unpublished report. On file with: USDA Forest Service, Pacific Southwest Research Station, Wildland Recreation and Urban Cultures Research Work Unit, 4955 Canyon Crest Drive, Riverside, CA 92507.
- Absher, J.; Winter, P.; James, K. 1997.** Delivering environmental education and interpretive messages in urban proximate field settings: "lessons" from Southern California. *Trends* 34(4): 30-27.

- Ajzen, I. 1992.** Persuasive communication theory in social psychology: a historical perspective. In: Manfredo, M.J. Influencing human behavior. Champaign, IL: Sagamore Publishing Inc.: 1-28.
- Chavez, D.J.; Knap, N.E.; McCollum, D.G. 2004.** Assessing national forest visitors' comprehension of international symbols for communicating outdoor recreation messages. *Journal of Park and Recreation Administration*. 22(3): 1-21.
- Chavez, D.J.; McCollum, D.G.; Knap, N.E. 2003a.** International symbols report 2002: the Willamette National Forest. Unpublished report. On file with: USDA Forest Service, Pacific Southwest Research Station, Wildland Recreation and Urban Cultures Research Work Unit, 4955 Canyon Crest Drive, Riverside, CA 92507.
- Chavez, D.J.; McCollum, D.G.; Knap, N.E. 2003b.** International symbols report 2002: the Gifford Pinchot National Forest. Unpublished report. On file with: USDA Forest Service, Pacific Southwest Research Station, Wildland Recreation and Urban Cultures Research Work Unit, 4955 Canyon Crest Drive, Riverside, CA 92507.
- Chavez, D.J.; Winter, P.L.; Mainieri, T. 1993.** Recreation day use series – Report 2. Angeles National Forest. Unpublished report. On file with: USDA Forest Service, Pacific Southwest Research Station, Wildland Recreation and Urban Cultures Research Work Unit, 4955 Canyon Crest Drive, Riverside, CA 92507.
- Chavez, D.J.; Winter, P.L.; Mainieri, T. 1994.** Recreation day use series—Report 3. Los Padres National Forest. Unpublished report. On file with: USDA Forest Service, Pacific Southwest Research Station, Wildland Recreation and Urban Cultures Research Work Unit, 4955 Canyon Crest Drive, Riverside, CA 92507.
- Cialdini, R.B. 2001.** Influence: science and practice. 4th ed. Needham Heights, MA: Allyn & Bacon.
- Cialdini, R.B.; Barrett, D.W.; Bator, R.; Demaine, L.; Sagarin, B.J.; Rhoads, K.L.; Winter, P.L. [N.d.]** Activating and aligning two types of social norms for persuasive impact. On file with: P. Winters, USDA Forest Service, Pacific Southwest Research Station, Wildland Recreation and Urban Cultures Research Work Unit, 4955 Canyon Crest Drive, Riverside, CA 92507.
- Cole, D.N.; Hammond, T.P.; McCool, S.F. 1997.** Information quantity and communication effectiveness: low-impact messages on wilderness trailside bulletin boards. *Leisure Sciences*. 19: 59-72.
- Crano, W.; Quist, R.; Winter, P.L. 2005.** Getting the Forest Service's message out to the people: a study of information channels among diverse publics in the Los Angeles basin. Unpublished report. On file with: USDA Forest Service, Pacific Southwest Research Station, Wildland Recreation and Urban Cultures Research Work Unit, 4955 Canyon Crest Drive, Riverside, CA 92507.
- Cvetkovich, G.T.; Winter, P.L. 2002.** Social trust and the management of threatened and endangered species: a study of communities of interest and communities of place. Res. Paper PSW-RP-247. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station.
- 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, CA: San Francisco State University: 46-50.

- Johnson, D.R.; Vandekamp, M.E.; Swearingen, T.C. 1994.** A survey of park managers/ perceptions of noncompliant visitor behavior causing resource damage in the national park system. Tech. Rep. NPS/PNRUW/NRTR-92-07. Seattle, WA: College of Forestry, University of Washington.
- Lebo, H. 2004.** The digital future report. Surveying the digital future, year four. USC Annenberg School Center for the Digital Future. www.digitalcenter.org.
- Marin, G. 1994.** Self-reported awareness of the presence of product warning messages and signs by Hispanics in San Francisco. *Public Health Reports*. 109(2): 275-283.
- McCool, S.F.; Cole, D.N. 2000.** Communicating minimum impact behavior with trailside bulletin boards: visitor characteristics associated with effectiveness. In: Cole, D.N.; McCool, S.F.; Borrie, W.T.; O'Loughlin, J., comps. *Wilderness science in a time of change conference-volume 4: wilderness visitors, experiences and visitor management*. Proceedings. RMRS-P-15-VOL-4. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station: 208-216.
- Oskamp, S. 1991.** *Attitudes and opinions*. 2nd ed. Englewood Cliffs, NJ: Prentice Hall, Inc.
- Parker, J.D.; Winter, P.L. 1998.** A case study of communication with Anglo and Hispanic Wilderness visitors. *Journal of Interpretation Research*. 3(1): 55-59.
- Roggenbuck, J.W. 1992.** Use of persuasion to reduce resource impacts and visitor conflicts. In: Manfredi, M.J. *Influencing human behavior*. Champaign, IL: Sagamore Publishing Inc.: 149-208.
- Roggenbuck, J.W.; Widner, C.J.; Stratton, D.W. 1997.** Reducing theft of petrified wood at Petrified Forest National Park. Unpublished report. On file with: Department of Forestry, Virginia Tech, Blacksburg, VA 24061.
- Scott, D.; Herrera, S.L.; Hunt, K.S. 2004.** Constraints to outdoor recreation among ethnic and racial groups. In Tierney, P.T.; Chavez, D.J.; tech. cords. *Proceedings of the Fourth Social Aspects and Recreation Research Symposium*. San Francisco, CA. San Francisco, CA: 17-20.
- Simcox, D.E.; Hodgson, R. W. 1993.** Strategies in intercultural communication for natural resource agencies. In: Ewert, A.W.; Chavez, D.J.; Magill, A.W., eds. *Culture, conflict, and communication in the wildland urban interface*. Boulder, CO: Westview Press: 123-134.
- Spooner, T. 2003.** Internet use by region in the United States. Pew Internet & American Life Project. www.pewInternet.org.
- Tierney, P.T.; Dahl, R.F.; Chavez, D.J. 1998.** Cultural diversity of Los Angeles County residents using undeveloped natural areas. Res. Paper PSW-RP-236. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station. 76 p.
- Winter, D.D.; Koger, S.M. 2004.** *The psychology of environmental problems*. 2nd ed. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Winter, P.L.; Cialdini, R.B., Bator, R.J., Rhoads, K., Sagarin, B.J. 1998.** An analysis of normative messages in signs at recreation settings. *Journal of Interpretation Research*. 3(1): 39-47.

Winter, P.L.; Jeong, W.C.; Godbey, G.C. 2004.

Outdoor recreation among Asian Americans: a case study of San Francisco Bay Area residents. *Journal of Park and Recreation Administration*. 22(3): 114-136.

Winter, P.L.; McCollum, D. 2002. Recreational participation and environmental activities at Frank Bonelli Regional Park. Unpublished report. On file with: USDA Forest Service, Pacific Southwest Research Station, Wildland Recreation and Urban Cultures Research Work Unit, 4955 Canyon Crest Drive, Riverside, CA 92507.

Winter, P.L.; Palucki, L.J.; Burkhardt, R.L. 1999.

Anticipated response to a fee program: the key is trust. *Journal of Leisure Research*. 31(3): 207-226.

Winter, P.L.; Sagarin, B.J.; Rhoads, K.; Barrett,

D.W.; Cialdini, R.B. 2000. Choosing to encourage or discourage: Perceived effectiveness of prescriptive and proscriptive messages. *Environmental Management*. 2(6): 588-594.

Wirsching, A.; Leung, Y.F.; Attarian, A. 2003.

Swatting litter bugs. *Parks & Recreation*. 38(11): 16, 18-22.

Zimbardo, P.G.; Leippe, M.R. 1991. The psychology of attitude change and social influence. New York: McGraw Hill.