

PENNIES FOR PARKS: THE EFFECT OF SOCIAL NORM THEORY ON
DONATION BEHAVIOR IN ARKANSAS STATE PARKS

A thesis

Presented to

The Faculty of the Graduate School

University of Missouri-Columbia

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

By

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DECEMBER 2007

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PENNIES FOR PARKS: THE EFFECT OF SOCIAL NORM THEORY ON
DONATION BEHAVIOR IN ARKANSAS STATE PARKS

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ACKNOWLEDGEMENTS

Many people have assisted me through the thesis and graduate school process and have been involved in the production of this paper who deserve recognition. I would like to thank Dr. Mark Morgan, Dr. David Vaught and Dr. Ronald Phillips for serving as my committee, for reading my report, for their patience, and their valuable advice and feedback. Thanks especially to Dr. Morgan, as the lead member of my committee, for repeatedly looking over my material and providing sound advice. Thanks also go to my friends in Columbia: Harley, Dani, Stone, Joel, Julie and Carri as well as some others. This has been a long process and all of you have helped get me through rough stretches and been fantastic during the easy ones.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS.....	ii
LIST OF TABLES.....	vi
LIST OF FIGURES.....	vii
ABSTRACT.....	viii
Chapter	
1. INTRODUCTION	
Purpose.....	3
Subproblems.....	3
Hypotheses.....	3
Definitions.....	4
Delimitations.....	6
Limitations.....	6
Need for Study.....	8
2. LITERATURE REVIEW	
Altruism and Normative Conduct.....	11
Descriptive Norms.....	15
Injunctive Norms.....	18
Combining Norms.....	26
Summary.....	27

3. METHODS

Sampling Locations.....	29
Crater of Diamonds State Park.....	30
Mammoth Spring State Park.....	30
Parkin Archaeological Park.....	30
Plantation Agriculture Museum.....	31
Prairie County/Lower White River Museum State Park.....	31
Toltec Mounds Archeological State Park.....	31
Prairie Grove Battlefield State Park.....	31
Research Design.....	32
Protocol.....	33
Variables and Statistics.....	34

4. RESULTS

Hypothesis 1.....	36
Hypothesis 2.....	38
Hypothesis 3.....	40
Hypothesis 4.....	41
Hypothesis 5.....	42
Additional Results.....	43
Other Factors.....	45

5. DISCUSSION AND RECOMMENDATIONS

Discussion.....	48
Descriptive norms.....	49

Visibility of the descriptive norm.....	50
Injunctive norms.....	50
Future study.....	52
Recommendations.....	58
REFERENCES.....	60
APPENDIXES	
A. Map of Arkansas State Parks.....	66
B. Design and Instructions.....	68
C. Donation Collection Sheet.....	70
D. Permission Letter to Arkansas State Parks Director.....	72

LIST OF TABLES

Table 1: Donation box revenue under seeded and unseeded conditions.....	38
Table 2: Donation box revenue when using a moral appeal.....	39
Table 3: Donation box revenue using clear and smoky boxes.....	41
Table 4: Comparison of all control conditions and all treatment conditions.....	42
Table 5: Comparison of descriptive and injunctive norm conditions.....	43
Table 6: Analysis of variance between trials.....	43
Table 7: Analysis of variance by day of the week.....	44
Table 8: Comparison of holiday periods versus non-holiday periods.....	45
Table 9: Comparison of donations when charging and not charging fees.....	46
Table 10: Comparison of donation amounts when using box competition.....	47

LIST OF FIGURES

Figure 1: The combinations of variables arranged by trial.....	33
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ABSTRACT

Although donation boxes are common in parks, museums, and historic sites, not much is known about how they influence visitor behavior. Perhaps some donation boxes are more efficient at generating revenue than others. The purpose of this study was to determine if social norms played a role in the donation behavior of visitors at state parks. This was accomplished by measuring the amounts of money received when the box was empty and when the box was “seeded” with a pre-determined amount of bills and coins. Next, the effects of a label placed on the donation box were tested to determine if visitor behavior could be influenced by using a persuasive message. Two conditions were tested: 1) Donation Box; and 2) WE APPRECIATE YOUR DONATION! *All revenue will be used for park improvements.* The last treatment measured the effect of box coloration (clear vs. smoky) to determine if visibility made a difference in donation behavior. This study was conducted during the summer of 2005 at 7 state parks and historic sites in Arkansas. Data was collected over a 16 week time period (8 trials at 2 weeks each). Results of this study showed a non-significant relationship between social norms and donation behavior. However, the literature and anecdotal evidence suggests that other factors such as park entrance fees, holidays, and days of the week may make a difference in donation behavior. More research is needed to understand this topic.

CHAPTER 1

Introduction

About ten million people visit Arkansas State Parks each year to enjoy the cultural and natural resources across the state (Arkansas Department of Parks and Tourism, 2007). A variety of units are in place to meet the mandate of the Arkansas State Park System which states that, “The mission of the department of parks & tourism is to enhance the quality of life in Arkansas by promoting, protecting, interpreting and managing the state's natural and cultural resources.” The Arkansas State Park System consists of 52 sites, 925 buildings, 1,779 campsites and numerous other trails and recreational facilities. Over 1,200 full and part-time staff are employed in the system. The economic impact of Arkansas State Parks is estimated to be approximately \$260 million per year.

According to the 2005-2006 budget report for the state of Arkansas, the Department of Parks and Tourism had an operational expenditure of \$86,843,508 (State of Arkansas, 2006). Funding comes from several sources, but the majority of revenue is derived from a conservation tax. The tax was approved by voters in November of 1996 as Amendment 75, and took effect July 1, 1997 (Arkansas Game and Fish Commission, 2007). This tax amounts to 1/8 of one percent of the state’s general revenue sales tax. This money is divided between the Arkansas Game and Fish Commission (45%), Arkansas State Parks (45%), Arkansas Heritage Commission (9%) and the Keep Arkansas Beautiful Commission (1%). For the 2007 Fiscal Year, the tax provided 33% of the total funding for the Arkansas Department of Parks and Tourism (Arkansas Department of Parks and Tourism, 2007). Other funding sources included state legislative

appropriations (17%), Federal funding (5%), facility generated income (22%) and trust funds, which includes a tourism tax (9%), grants (5%) and general improvement (9%). In the 2005 fiscal year, the conservation tax generated over \$25,000,000 (Department of Parks and Tourism, 2005). Other major sources of park income originated from general revenue funding and operation revenue from park concessions and usage fees.

State parks have many expenses and budget shortfalls can occur. Although parks can generate some revenue, virtually all of it must be returned to the general treasury (Morgan, 1996). However, state parks can keep all the money collected from donation boxes. These funds typically are considered to be “petty cash” used for immediate purchase of necessary materials or supplies. It is in the parks best interest to maximize this revenue stream, despite the fact that it is a small amount of money. Many parks use donation boxes as a way to enhance park revenue, but are not required to do so. The purpose of a donation box is to entice visitors to make voluntary contributions. Why would people put their money in a donation box? Is donation a simple case of altruism or are there other factors that affect to a person’s decision to donate? There is no standardized way of presenting donation boxes to park visitors. Boxes are located at various places, money is collected at different times and the designs of the boxes are inconsistent. Even the coloration of the donation boxes is different. These varied conditions may make some boxes more efficient at generating revenue than others. Environmental cues may play an important role in influencing donation behavior, either positively or negatively, but this topic has not been studied.

Purpose

The purpose of this study is to manipulate three environmental conditions associated with donation boxes: 1) amount of money, 2) coloration, and 3) a written message to test their relative effectiveness on how much money they generate. This will be accomplished by developing a donation ratio (amount of money/ park visitation), and comparing this figure across the different trials.

Subproblems

1. To compare the amount of money donated when a message is present versus conditions when there is no message.
2. To compare the amount of money donated when the box is “seeded” with money and when it is empty.
3. To compare the amount of money donated when a smoky colored box is displayed versus a clear box.
4. To compare the amount of money when all three factors are present with the set of conditions when they are not.

Hypotheses

This study will test five hypotheses. These hypotheses will test the different types of norms associated with social norm theory. Each manipulation, therefore, will be tested under a separate hypothesis. The hypotheses are as follows:

H1: Donation boxes that are “seeded” (descriptive norm) will generate the same amount of revenue as those that are empty.

H2: Donation boxes having a persuasive message (injunctive norm) will generate the same amount of revenue as those having a label simply stating “Donation Box.”

H3: Donation boxes that are clear will generate the same amount of revenue as boxes which are smoky-colored (dark gray).

H4: Donation boxes having all three factors present in the design will generate the same amount of revenue as donation boxes having no factors present.

H5: Donation boxes using a descriptive norm will be as effective as those using an injunctive norm.

Definitions

Many terms will be used throughout the body of this paper. Key terms are as follows:

Altruism: Actions that help someone in need; an unselfish mindset involving the welfare of others (Schwartz & Howard, 1980; Parker, 1997). In this case it will be relevant to a person's desire to assist the park in the form of donations without any apparent rewards in return.

Descriptive norms: "Describes what is typical or normal. It is what most people do, and it motivates by providing evidence as to what will likely be effective and adaptive action: "If everyone is doing it, it must be a sensible thing to do" (Cialdini, Reno, & Kallgren, 1990, p. 1015). The central theme of the study will focus on this concept relating to the suggestion of previous donations and the presence of a sign.

Donation behavior: For the purposes of this study, any action relating to donation that affects the decision of an individual to donate, how much to donate, etc. Examples of this include littering outcomes (Finnie, 1973) and actions that are accompanied with perceived ecological consequences (Reid, Luyben, Rawers, & Bailey, 1976).

Indirect management: Design and information based approaches to management designed to alter behavior and differs from direct management which is based on enforcement of regulations (Gramann & Vander Stoep, 1987). This is a way of implementing a management solution without requiring official or coercive direction from an administrator.

Injunctive norms: Norms in the environment that describe what “ought” to be done in certain situations (Cialdini, 1996). In contrast to the descriptive norms, this will be the focus of the study.

Moral obligation: “This activation process generates personal norms conceptualized as feelings” and leads to “specific helping behaviors (Schwartz & Howard, 1980, p. 441).” This is a concept that is important to understanding and differentiating between types of norms and the behavior that accompanies these norms. This is closely related to injunctive norms.

Releaser cues: Discriminatory cues in the environment that affect one’s behavior; these communicate that an act may be acceptable in a certain environment and can stimulate one’s behavior (Samdahl & Christensen, 1985). In this case, the presence of money and messages qualify as environmental cues.

Stimuli: Perceived qualities of the environment which effect the actions of an individual (Sonnenfeld, 1972). The conditions that are to be tested are controlled stimuli in the environment that will produce a corresponding behavioral reaction in some individuals. In this case, the behavior to be focused on is that relating to donation.

Uninformed violations: Violations of park rules due to ignorance of the consequences of disobeying rules (Gramann & Vander Stoep, 1987). This is a type of violation, which can be affected by norm theory.

Unintentional violations: Violations of park rules that are committed by visitors due to ignorance of the rules (Gramann & Vander Stoep, 1987). This is another type of violation effected by norm theory.

Delimitations

This study was conducted at five State Parks and Historic Sites in Arkansas during a 16-week time period (May 23-September 11, 2005). Those sites were Crater of Diamonds State Park, Mammoth Spring State Park, Parkin Archeological State Park, Plantation Agricultural Museum, and Prairie County/Lower White River Museum. Each of these sites charged an entrance fee. Currently, many boxes that are being used have unique design features. For this study, the donation box design will be consistent at each location in order to minimize inaccuracies within the study. Each site will change the testable conditions of the boxes at set intervals. These measures are to ensure a fair test at each location and uniform measurement throughout sites across the state.

Limitations

- There is a limited geographic area from which to collect data, since only a few state parks in Arkansas are participating in this study. Moreover, this research will be conducted over a relatively short time period during the summer months. A two week trial period for each condition is planned, but it may not be enough to generate a large sample size for statistical testing. This procedure may result in an

unintentional exclusion of some types of visitors. For example, people who travel to see fall foliage or have breaks during the winter.

- Another limitation is due to the method of counting visitors. Visitors will only be counted upon entering the center and paying an admission fee. Perhaps these visitors are less willing to donate after paying a fee for the park attraction. Therefore, these results cannot be generalized to parks which are free (no admission charge).
- Park visitors are inconsistent in their number of trips, length of visits, and places visited. This means that several factors could impact visitors' decisions regarding the use of state parks. These could include such factors as weather, personal or economic conditions, such as the price of gas, and alternative sources of recreation.
- This study will not include any visitor motivations. This fact will limit the ability to explain any empirical relationships after the tests have been conducted.
- The money present in the donation boxes might fluctuate from hour to hour or day to day. As donations increase, the amount of money seen by visitors will increase as well. This limitation, however, is inherent within the design of the study. Ratios will be tested instead of how quickly the money accumulates. However, measurement error due to inconsistent rates of increase is possible. Therefore, as more visitors attend, the possibility of a skewed ratio increases.
- The box design will be consistent at each participating site, however, the actual counting of money and visitors will be done by park workers. This creates the

possibility of lowered reliability in the study through measurement error. This source of error increases with the number of visitors.

- Samples may not be completely independent. It is possible that the same person may have visited multiple parks in the study and contributed money to more than one donation box.

Need for Study

There are two important reasons for conducting this study: 1) practical; and 2) theoretical. Most parks are in need of need additional revenue for maintenance, programs and services that are not included in their operational budgets. “The intensified use of a limited amount of space within parks by increasing numbers of recreationists has caused progressively greater problems for park managers” (Dwyer, Huffman & Jarratt, 1989, p. 21). This leaves parks susceptible to financial constraints that they cannot handle adequately.

While it is overly optimistic to view donation boxes as “treasure chests” that contain a lot of money, they could, however, be used to offset certain types of expenses. Parks have needs for smaller items that do not require administrative approval for purchase. Some park projects could be funded, at least in part, by the donations from visitors. Results of this study could change park policy in regard to donation boxes. A standardized set of guidelines could be implemented to maximize the effectiveness of donation boxes. Perhaps other parks can benefit from this study as well. Philanthropic organizations may be able to utilize concepts presented in this study for fundraising events. It may be useful for schools, blood banks, municipal organizations and other parties interested in influencing donation behavior.

A second need for this study stems from a gap in social norm theory. Harrison and Sarre (1971) state that some personal attributes involve spatial positioning and include reactions to a unit in the life of the individual, and the way in which a person responds. The way an individual perceives and then reacts to a unit in their environment seems to be among the most basic elements of the human psychological structure. A further understanding of this, and other related concepts, may hold great potential for future study and application in areas outside of park use. Additionally, Harrison and Sarre feel that there is a need for further study of environmental units in spatial conceptualization. The potential applications that could be derived from this study are many. Dwyer et al. (1989) pointed out that, “experimental manipulations in field studies to provide a basis for decision making is a very powerful tool and could definitely be used by more practitioners” (p. 29).

Previous studies on norm theory have tended to focus on preventing negative behavior from occurring. Reduction of litter and vandalism are common examples. Studies that have encouraged positive actions typically address behavior dealing with effort, rather than money. Prompting individuals to recycle is one example. Studies that involve the expenditure of money have generally used personal solicitations as their methodology. This study builds on previous literature but is unique in the fact that it encourages a positive behavior using a non-verbal appeal. It provides a theoretical foundation for using a combination of social norms and environmental cues. Further applications include utilization in indirect management strategies at parks to encourage proper clean up or other proactive behaviors. These indirect strategies can also manifest themselves in other arenas of management outside the realm of park agencies. The body

of literature will be increased since possible explanations and the conditions under which norm theory applies to donation behavior will be explored.

CHAPTER 2

Literature Review

Studies have been conducted on behavioral norms for decades. These topics provide a framework for this study. This section will cover the literature on social norms and address issues relevant to this study.

Altruism and Normative Conduct

Altruism can take many forms in society, such as monetary donation, recycling, and picking up litter. Tangible benefits are infrequently associated with these acts since altruism relies on internal, not external rewards. Many people are altruistic at times, but it depends on the situation or circumstances. Since altruism cannot be classified in a dichotomous way, those who are versus those who are not, perhaps this type of behavior can be influenced - at least to some degree.

On the surface, it seems likely that altruism alone could explain donation behavior. After all, people do not often give money for benefits they will not receive. As Henry Goldstein, the chair of Giving USA foundation, states, "People are motivated to give because they value the cause, whether it is religion, education, health care, or international relief" (American Association of Fundraising Counsel, 2004). However, other studies have discovered factors which have been influential in predicting donation behavior.

The fundamentals of norm theory were introduced several decades ago. In 1960, Gouldner proposed that the functional theory of reciprocity can be used to predict behavior in social situations. In fact, the norm of reciprocity exists as a stabilizing

element in society. A person who receives something of value has a tendency to give something back. Also, a person who gives may be doing so to get something else in return. This phenomenon may serve as a driving force in the giving process as people may feel a sense of confidence about their donation; they expect to receive a dividend on their investment. This rule can apply to donation behavior as well. During the donation process, one party creates an obligation through the perception of an unrequited gift. This seems to directly relate to altruism. However, as this study will seek to answer, altruism and benefit/cost analysis is more complicated than these factors would predict.

Sonnenfeld (1972) found that there is a complex network of interactions that can determine the outcomes of personal behavior due to environmental conditions. Various stimuli involving the behavior of others are qualities of the environment, though dependent on man, are no less real in their perceived and subjective aspect, and are capable of influencing behavior” (p. 269). These component “qualities” of the environment in combination with personality factors may yield answers to why and how donation behavior occurs.

Behavior which on the surface appears to be altruistic may in fact be motivated by an intrinsic reward or a fear of social stigma from a group. Volunteers and donors may be divided into two categories: patrons and philanthropists (Barnes & McCarville, 2005). The primary concern of philanthropists is to help others in need. Patrons are donors who give to enhance an organization or service that they will get to enjoy themselves. Visitors at fee-based park sites are comprised mainly of patrons. Most likely, visitors will be concerned with the services provided at the park and their donation amounts would, superficially, reflect the amount of satisfaction derived from their experience.

Altruism is more complex than selfless giving. Parker (1977) divides the act of volunteering into four categories: 1) purely altruistic volunteering; 2) market volunteering; 3) volunteering which serves a valued cause; 4) leisure volunteering. Altruistic volunteering describes an action to assist someone else in need with no perceived benefit to oneself. Market volunteering is giving freely, but with the eventual expectation of return to oneself and is performed to meet a self-serving need. Cause-serving volunteering is freely providing for a movement or ideology. This differs from altruistic volunteering because it benefits a cause as opposed to benefiting individuals at one's own expense. One reason for leisure volunteering is to benefit others, but this motive is not always "pure" since the volunteer wants to have a leisure experience. The benefits of giving may outweigh the financial cost incurred and make the altruistic experience a less graceful act (Rose-Ackerman, 1996).

Altruism may also be examined through recycling behavior. Altruism and recycling are related because the donation of resources has little benefit for the individual. People tend to favor environmentally friendly concepts such as recycling, but may not go out of their way to practice a professed behavior (Ewing, 2001). Indeed, previous theory suggests that people are more likely to help those in need only when their own set of moral values is activated (Schwartz & Howard, 1980). Therefore, altruism practiced for its own sake seems to be more of a rarity than a social norm itself.

Ewing (2001) contends that altruism can play a role in pro-environmental behavior, depending on perceived effort. Ewing surveyed participants in a curbside recycling program to test their attitudes toward recycling. The major finding was that people tended to have a more altruistic attitude toward recycling if given a choice to

participate in the activity. However, subjective norms and a feeling that recycling can be inconvenient were stronger explanations of recycling effectiveness. While it seems that people favor pro-environmental efforts, such as recycling, the perception of effort becomes more important as involvement increases. Ewing states that, “less convenient methods of recycling would encounter much less support” (p. 759).

Ewing’s results are consistent with an earlier study by Bratt (1999). Oftentimes people perceive a cost to environmentally friendly behavior without seeing tangible results to equal to their donation. Therefore, an individual’s decision to practice environmentally friendly behavior may be decided in larger part by normative considerations. Bratt used a mail survey to determine people’s attitudes toward recycling by gauging the influence of normative considerations in the decision-making process. This study showed that normative pressures (which emanated from within the household) were a strong indicator of recycling tendencies. However, the theory that people’s perceived negative consequences of the failure to recycle were not supported by the results. Personal assumptions about the negative impact of not recycling were not shown to influence a personal norm.

The motivations that underlie charitable giving are complex. Component variables within motivation include commitment, moral values, and private benefits for individuals (Rose-Ackerman, 1996). The relationship between the donor and receiver is important, but views and charitable motivations differ from person to person (Radley & Kennedy, 1995). It is difficult to explain altruism as the outcome of one universal set of principles.

Descriptive Norms

Descriptive norms tell what is typically done (Cialdini et al., 1990). These types of norms serve as cues within the environment. The evidence of past behavior suggests that people should act in a similar fashion. Unfortunately, cueing includes both positive and negative behaviors. Stimuli within the environment have been shown to elicit certain behaviors more frequently than when the cues are not present.

Studies of credit card insignias have been shown to provoke a cued response. Restaurant patrons who paid by credit cards left an average tip of 16.95%, compared to a 14.95% average on bills paid with cash (Feinberg, 1986). Another study of credit card insignias found similar results. McCall and Belmont (1996) used a restaurant setting to study the effects of credit card insignias on amounts of tips. Their findings showed that when bills were delivered to customers on trays which contained credit card logos, tip amounts increased. Researchers in this study felt that exposure to credit cards through the media and real-life situations created a functional stimulus for future spending behavior. Their discussion goes on to suggest that future research should examine other cues that might influence spending. Restaurants, for example, often display credit card logos at the entrance to the establishment. Both of these studies examine environmental cues as stimuli to spending habits. This information suggests that a prominent display of spending cues could be a powerful tool for donation requests as well.

Feinberg tested if a credit logo affected spending behavior using four related experiments (1986). Two experiments tested the amount of money that subjects would be willing to spend on items displayed in a catalog. Subjects whose catalogs contained credit card insignias were willing to pay more for an item. Two further experiments tested

whether people would be more willing to donate to charities when a credit card insignia was displayed prominently in the environment. The study found that people were willing to donate more money to door-to-door solicitors if a credit card logo was visible nearby. Subjects were also found to be willing to donate a larger amount than average if an insignia was present. Findings of this study indicated that as spending increases, the amount of time it takes for a person to make a spending decision decreases. Moreover, the gross number of people willing to spend increases when a credit card cue is displayed in the environment. The fact that credit cards were not actually used in the experiment by the researchers or solicitors proved to be irrelevant. The conclusion of the study was that as people become more accustomed to credit card usage, “a form of conditioning may occur in which credit card stimuli becomes associated with spending” (p. 355).

Most studies of descriptive norms have been conducted for the purpose of reducing depreciative behavior. One such study focused on campground picnic tables that had been carved on by vandals (Samdahl & Christensen, 1985). This study observed picnic tables at a campground over the course of a summer to determine if there were any patterns of depreciative carving by visitors. Findings showed that the environmental cues stemming from previous behavior directly influenced the prevalence of new carvings. Of the tables which began in a depreciated state, 31.8% were carved on again by the end of the study period. Only 13.7% of tables with no evidence of carving at the beginning of the study were defaced in this manner by the end of the study.

Several studies involving littering behavior have been examined in light of descriptive norm theory. Cialdini et al. (1990) conducted experiments on littering with handbills which were made available to visitors and served as potential sources of litter.

Their first study involved placing a handbill under the windshield wiper of vehicles inside a parking garage. An observer, kept out of sight, studied the littering behavior under two naturalistic conditions (litter free vs. littered garage). The results suggest that the presence of litter in the environment had a positive impact on the frequency of littering behavior. The littered conditions seemed to encourage more litter, whereas the visibly clean conditions tended to discourage littering. A suggestive set of conditions denoting acceptance or rejection of a particular type of behavior, such as a littered area, appears to be correlated with predicted behaviors.

Another study of littering by Finnie (1973) provided similar results. Finnie conducted a series of studies in different cities testing litter collection effectiveness and littering norms. Two of his experiments reinforced the conditional nature of altruism by showing that the presence of trash cans along a highway and in an urban environment reduced the prevalence of littering. A more detailed experiment in Philadelphia studied individuals and conditions surrounding littering activity. These results showed that people littered more frequently in a littered area with both trash cans present (15% to 34%) and with no trash cans present (33% to 51%). In this study, littering was reduced by 45.5 % or 31.4% in clean areas whether a trash can was present or not, confirming a saying that “litter causes litter” (p. 143).

Other studies involving littering have yielded similar results. A study was performed using a person who distributed handbills and then observed the tendency of people to litter (Robinson, 1976). Although this study looked primarily at the demographics of litterers via interviews, it concluded that environmental variables can affect attitudes. The presence and locations of receptacles (Finnie, 1973; Reid et al, 1976;

Luyben & Bailey, 1979) have also been shown to affect littering behavior. Placement of receptacles in specific locations brought about decreases in the amount of litter in public areas (Reid et al, 1976), further strengthening the idea that environmental cues can influence behavior.

An important factor when considering normative conduct is the visibility of the environmental condition in question. Some environmental cues in parks fail to become true descriptive norms because they lack visibility, and this factor may influence behavior. The study of Gramann and Vander Stoep (1987) found that unintentional violations in parks can be corrected by visible acts of communication such as signs, programs, etc. Releasor-cue violations, in which a person is influenced by past evidence of action, can be corrected by removing the offending visual cues from sight. Uninformed violations, or those that occur because the offender does not know the consequences of their behavior, have been shown to be affected by persuasive messages in the Petrified Forest National Park (Widner & Roggenbuck, 2000). These examples offer evidence that the impact of visible objects in the environment approve or discourage certain types of negative behavior.

Injunctive Norms

Injunctive norms are behavioral commands stating what should or should not be done in specific situations (Cialdini, 1996). A moral reasoning component is often implied by the message, either by written or oral communication. These commands denote norms of conduct within society, sometimes enforced through rules and regulations. In parks, regulations are often displayed on signs, in leaflets or inside the visitor center. From a practical standpoint, these reminders are most likely to be seen at

places where the behavior is occurring. Several factors may influence the persuasiveness of one message versus another.

The use of norm theory may influence the effectiveness of park messages. Administrators attempt to influence behavior using signs (one example of an indirect management approach) (Manning, 1999). Well-worded signs have been shown to elicit desired responses in park settings (Cole, 1998). Cole's study used the phrase "please take the time to read these messages" (p. 68). This message greatly increased the amount of time spent by visitors in reading the message. This suggests that a short or simple message may be better at capturing the attention of readers. Cole's study reinforces the theory that sign messages should be presented "in an extremely simple structure and order" (Dwyer et al, 1989, p. 23).

The message, while important, needs to be considered along with the placement and design of the sign. Visitors are not likely to read messages simply because they are visible (Cole, 1998). People have a tendency to pay attention to objects rather than to read a sign (Bitgood, 2000). While an effective sign must draw attention to itself, signs that are too vivid may undermine the persuasive nature of the message. One study has shown that editorials are more persuasive when they are presented in a pallid, rather than a vivid manner (Frey & Eagly, 1993). Subjects who were presented with less vivid editorial descriptions were able to recall more information, were more persuaded by the message, and showed more recognition of the editorial topics. It is likely that, "Vivid elements (e.g., colorful language, picturesque examples, and provocative metaphors) interfere with the full reception or systematic processing of messages" (p.39). For the purposes of moral judgment, it would be useful to promote an injunctive norm.

Therefore, individuals may need a simple message which is absent of distracting elements.

Messages which direct a visitor toward a certain course of action can be classified as prescriptive or proscriptive (Winter, Sagarin, Rhoads, Barrett, & Cialdini, 2000).

Prescriptive messages use positively worded messages while proscriptive messages are negatively worded. Messages can either “prescribe approved environmental conduct by urging recreationists toward it or to proscribe disapproved environmental conduct by urging them against it” (p. 590). Various methods of eliciting the same behavior may be worded in different ways. For example, a proscriptive message informing visitors about a park’s desire to keep dogs on leashes may read “All dogs must be kept on a leash at all times.” A prescriptive message may state “Responsible pet owners keep their pets on a leash.” Positively worded signs match the goal of park administrators in creating a positive environment for the enjoyment of the visitor. A study conducted by Winter et al. (2000) utilized a mail survey to determine the attitudes of NAI (National Association for Interpretation) members in regards to prescriptive and proscriptive messages. Results showed that the prescriptive messages were seen as more effective for producing the desired results. This finding is significant because most parks signs are worded proscriptively (Winter, Cialdini, Bator, Rhoads, & Sagarin, 1998).

Although Winter et al. (2000) felt that poorly worded messages may be counterproductive; the prevalence of proscriptive wording may be due to the way that park managers have done things in the past. Change is slow to occur. Park managers may not use prescriptive messages because they lack training or assume that visitors would not take the time to read a lengthy text. Negatively worded messages tend to be shorter

and easier to fit on a sign and are therefore more cost effective. Proscriptive signs are often created in reaction to a problem, rather than preventing a behavior from occurring. A negatively worded sign may also be the result of frustration, even if park staff felt that the nature of a prescriptive message might be more effective.

It has been shown that when the wording of a message matches the point it is trying to make, it is more effective (Kallgren, Reno, & Cialdini, 2000). This fact puts an emphasis on the wording and purpose of the message. Peoples' attitudes are influenced most effectively when the tone and content of the message are consistent. Messages that attempt to persuade someone to donate money should, in theory, be effective at evoking a positive feeling. Good messages should be able to influence people at some level of moral reasoning (Christensan & Dustin, 1989).

A study by La Hart and Bailey (1975) encouraged children to remove litter along a nature trail using an injunctive norm approach. The study used an anti-littering statement, a short lecture, classroom educational materials, instructions about picking up litter and an incentive to encourage students to remove litter. The statement (injunctive norm) was a short message given to the class before the nature walk by a museum staff worker or adult leader indicating the problem with litter along the trail. It was positively worded. The lecture was a verbal appeal (injunctive norm) at the museum that described the problems caused by litter. According to this study, children largely ignored the anti-littering lectures. The educational materials were distributed at schools and promoted activities to invoke a positive environmental image. The instructors asked, but not demanded, that the children pick up any litter they see and put it in its proper place. Parts of the trail were "salted" with litter to test the effectiveness of litter removal statements.

Results indicated that the students did not respond well to injunctive requests, however, the statement condition seemed to reduce additional littering. The researchers stated that “making children aware of littering as a problem may be quite effective in reducing littering behavior” (p. 44). Incentives seemed to work well. Their findings showed that placing a value on litter seemed to encourage litter removal. Individuals who return litter for prizes, as in the study by La Hart and Bailey, and people who pick up cans to recycle for money are examples of externally motivated behavior.

The way in which a request is made may affect compliance behavior. Cialdini and Schroeder (1976) found that donation elicitors who added the phrase “Even a penny will help” (p. 600) were much more successful at gaining compliance with donation requests than those who simply asked for a donation. Solicitors in the study, using the American Cancer Society as the charity, asked for donations testing the “Even a penny will help” phrase when using a door-to-door approach. An additional experiment substituting “dollar” for “penny” was found to be less effective at gaining compliance or donation amount than the “penny” condition. Additionally, increased compliance from the “penny” condition did not diminish the amounts of money given. The researchers suggested that this type of request legitimized a donation for those who otherwise would not have felt that a small amount was as acceptable to the solicitor as a larger one. It is also possible that the individual may have felt guilty from turning down such a small request. Their results show that legitimizing any contribution, while not specifically requesting a small amount, will increase the donation.

Follow up research has indicated that this type of request can be applied to organizations that are less well known than the American Cancer Society. A study using

this approach tested the phrase “Even a dollar will help” and “Even five dollars will help” in a similar fashion to Cialdini and Schroeder’s (1976) study using the less well known National Reye’s Syndrome Foundation as the charity (Brocker, J., Guzzi, B., Kane, J., Levine, E., Shaplen, K, 1984). They also wanted to test whether the meaning of the “Even a dollar will help” phrase would be different during the 1980’s than it was during the 1970’s (due to inflation increase). Subjects in this experiment were contacted either by phone or in person. Their findings showed several points of interest. First, compliance was greater when the solicitor asked in person rather than over the phone. Second, both conditions (\$1 and \$5) were more successful at gaining pledges than the control condition, 63%, 57% and 27%, respectively. However, only 27% of participants who pledged in person or over the phone actually donated that amount at a later time. Even with this low percentage of donations, the test conditions still produced greater compliance than the control condition. The researchers speculated that the differences between their study and Cialdini and Schroeder’s were due to inflation and because their study was conducted in an upper-middle-class area where the value of a dollar may be perceived as lower than in other areas. Their overall finding, however, suggested that even unknown solicitors can increase their donation income through legitimizing smaller contributions.

Another study on requests tested whether people were more likely to donate if the solicitor got their “foot-in-the-door” (Reingen, 1978). Solicitors raising money for a local charity tested whether a solicitor was more likely to receive donations when they were first able to get participants to perform a task, in this case filling out a short survey and inserting the “Even a penny will help” phrase during the request. Results showed that

people were more likely to donate when a menial task was requested prior to asking them for money. Again, the “Even a penny will help” phrase raised compliance rates over the same tests without the added phrase. A large request was also tested asking participants to commit to donate monthly for a year, which all participants refused. Donors perceived that the researcher had made a concession by retreating from a larger request and that the donor felt the normative reaction to make a concession as well. This phenomenon was originally examined in a paper by Cialdini and others (Cialdini, Vincent, Lewis, Catalan, Wheeler, & Darby, 1975). People tend to make concessions when they feel that concessions have been made toward them. Their findings indicated that a second request which was smaller than the original request would act as a concession. The absolute size of the task was unimportant relative to the initial request. Researchers felt that this is another manifestation of social norm theory which appears in an interaction between two individuals. This norm requires that one participant reciprocate the concessions of another.

Further study of requested amounts indicated that elicitors who asked for a “generous” contribution were successful fewer times; again with no statistically significant decrease in the amounts donated (Weyant & Smith, 1987). In addition, another study testing the “Even a penny will help” phrase found that other phrases such as “any amount will help,” “we have found that people like you are likely to help,” and “we have found that people who live in neighborhoods like this are likely to help” that were added to charitable requests generated no more money than a standard solicitation (Weyant, 1984, p. 444, 446). This seems to confirm previous research that donations are more likely if the participant feels that their perception of a small donation amount is

legitimized by the soliciting organization. It should be noted, however, that all of the preceding studies have involved solicitations involving personal interactions either door-to-door or over the phone, much different than a non-verbal appeal (message).

One study explored the nature of an impersonal message upon donation behavior (Perrine and Heather, 2000). This study used a field and laboratory study to test two factors. Both experiments tested the effects of adding “Even a penny will help” to an otherwise standard donation box and the effect of a vivid picture accompanying the box. Their findings showed that adding the phrase “Even a penny will help” did not increase donation amounts. This is in contrast to the previous experiments that used this phrase in door-to-door solicitations. The presence of a vivid picture, however, did have an effect on donation amounts. This study used pictures of dogs to accompany donation (perhaps evoking sympathy) for an animal welfare organization. Donation amounts in both studies were higher and 43% of participants in the lab experiment responded that the picture helped them to decide to donate to one box over another. No responses indicated that the phrase was a deciding factor on whether or not to donate. This study has a different conclusion about the effect of vivid elements on donation behavior than the study of Frey and Eagly (1993) which found that colorful editorials were distracting. It is important to note, however, that the Perrine and Heather study (2000) looked at pictures, not message content.

Social factors may affect moral decisions since the expectations within a group can influence the behavior of potential donors. The social pressure exerted over another individual through injunctive norms shows that the influence of one individual will be altered to match another’s (Sugden, 1984). The pressure of an injunctive norm can

“label” a person as unresponsive to a situation others see as morally important. Both the decision of whether or not to give and the amount of the gift may be affected by members of a reference group (Rose-Ackerman, 1996). Particular donation amounts and the potential effect that they may have for the charity are not as important as the relative actions of the rest of the group.

Combining Norms

Field settings may create interactions between different social norms, thus influencing the decision-making process of individuals. Descriptive and injunctive norms are often present within the same environmental condition. If these norms do not match, they may send conflicting messages about the situation, thus decreasing the predictability for each norm.

Descriptive norms seem to have a powerful influence over action. In fact, it has been theorized that descriptive norms are positively connected to counterproductive behaviors when they contradict an injunctive message. An example is the Iron Eyes Cody advertisement from the 1970's in which a Native American sheds a tear when seeing a passer-by littering. This emotional reaction (tear) represents an injunctive norm of disapproval. However, the environment displayed in the public service message is littered, displaying cues of what has been done (descriptive norm). According to Cialdini (1996), these norms may counteract each other, thereby rendering the commercial less effective to prevent littering.

Smoking is another issue that has been studied using norm theory. Social norms, as well as many other factors, are predictors of smoking tendencies in youth. Contradicting information may make one message less effective than another. In the case

of smoking, youth may receive an injunctive norm from adults who disapprove of smoking and approval from peers who smoke. Descriptive norms from exposure to smoking or seeing smoking behavior may also provide a mixed message for its acceptance. One study examined several possible cause and effect relationships of conditions describing participants of a study on smoking behavior (Carvajal, Hanson, Downing, Coyle, & Pederson, 2004). Their method employed questionnaires that were distributed to middle school students in seven California school districts. Social norms were examined along with other factors, such as perceived behavioral control of the individual, intention to smoke and environmental impediments to smoking. All of these factors were found to be positively correlated with an increase in smoking occurrences.

Summary

While the concepts of social norm theory and its applications for predicting social behavior have been studied, few studies have yet addressed voluntary contributions to donation boxes. Studies involving norm theory effects on littering (Finnie, 1973; La Hart & Bailey, 1975; Cialdini et al., 1990), recycling (Bratt, 1999) and smoking (Carvajal et al., 2004) consistently showed the effects of social norms on behavior. These studies primarily focused on preventing negative actions from occurring rather than promoting positive behavior. Most of the previous studies in parks have been designed to focus on a proscriptive approach (against certain behavior) rather than a prescriptive message that encourages specific behavior.

Descriptive norms are relevant because visual cues that are not accompanied by visual actions may not create a sense of moral obligation to another person. The presence

of messages implies an injunctive norm. One purpose of the message is to create a sense of moral obligation in the visitor concerning the function and quality of the park.

The descriptive norms that will be primarily examined during this study have been examined in advertising techniques and found to affect the potency of the advertisement (Cole, 1998). The messages have assumed outcomes in their wordings (Winter et al., 2000). The proper application and applied use of norm theory, therefore, seems to be important in behavior modification.

CHAPTER 3

Methods

This study measured the effects of social norms on visitor behavior associated with donation boxes at selected state park sites in Arkansas. It examined specific factors such as the message (injunctive norm), seeding (descriptive norm) and coloration of the box. The methods and design, statistics and variables of the study will be discussed in this chapter.

Sampling Locations

In order to be selected for this study, parks had to have a visitor center and entrance fee. Only a few of the 52 state parks, historic sites and museums in Arkansas met the selection criteria. After consulting with Arkansas State Parks personnel, seven locations were identified (see Appendix A): 1) Crater of Diamonds State Park; 2) Mammoth Spring State Park; 3) Parkin Archeological State Park; 4) Plantation Agricultural Museum; 5) Prairie County/Lower White River Museum; 6) Toltec Mounds Archeological State Park; 7) Prairie Grove Battlefield Park

The number of people entering the visitor center was counted via entrance fees. Since the donation boxes were located inside the visitor center, only those who entered the building had opportunity to make a contribution. The number of visitors who were exposed to the boxes was necessary to create a ratio (donation per visitor). This calculation was necessary to control for the fact that some parks had more visitation than others, and hence a greater ability to generate more revenue. Visitors at the sites were unaware of the research study. Other than attendance and money, no other information was collected from park visitors.

Park descriptions came from the Arkansas State Parks website (2007), <http://www.arkansasstateparks.com>, and from personal interviews. The descriptions are as follows:

Crater of Diamonds State Park: A geologic park containing a 37 acre field for diamond hunting and rock collecting. Visitors are allowed to keep any precious or semi-precious stones that they unearth at the site. The site also contains a water playground called Diamond Springs. Opportunities for camping, dining and wildlife observation are also present. Fees to enter the diamond search area are \$6.50 for adults and \$3.50 for children. The total area of the site is 911 acres (A. Rasheed, personal interview, April 4, 2007).

Mammoth Spring State Park: Located in northern Arkansas, this park contains the largest spring in Arkansas and the headwaters of the Spring River, which is a popular trout fishing stream. It also contains an historic train depot and the remains of a mill and hydroelectric facility. Admission rates are \$2.50 for adults, \$1.50 for children, \$9.00 for a family and \$1.25 per person for school groups. The park size is 52 acres (A. Davis, personal interview, April 9, 2007).

Parkin Archaeological Park: This site preserves the remains of a prehistoric Native American settlement in eastern Arkansas. The park contains an archaeological research lab, visitor center with interpretive displays, auditorium, picnic area, playground and outdoor pavilion. Admission fees are \$2.75 for adults, \$1.75 for children, \$9.00 for families and \$1.75 per person for school groups. The park size is 233 acres (S. Lewis, personal interview, April 13, 2007).

Plantation Agriculture Museum: A museum that interprets the history of cotton production in Arkansas. This museum is closed on Mondays. Fees are \$3.00 for adults, \$2.00 for children and \$10.00 for families. The park size is approximately 12 acres (L. Goza, personal interview, April 9, 2007).

Prairie County/Lower White River Museum State Park: This is a museum display covering the history of the local country through which the White River flows. Admission rates are \$3.00 for adults, \$1.75 for children and \$9.00 for families. Admission is free the first Sunday of every month. The museum building is located on about a ½ acre of land (N. Boatright, personal interview, April 13, 2007).

Toltec Mounds Archeological State Park: This park preserves the tallest remaining American Indian mounds in the state of Arkansas. The park contains exhibits, a theater, sales area, educational pavilion and trails. Admission is free the first Sunday of every month. Walking tours of the mounds are \$3.00 for adults, \$2.00 for children and \$10.00 for families. Tours are also available by tram and cost \$3.75 for adults, \$2.75 for children and \$13.00 for families.

Prairie Grove Battlefield State Park: This park protects and interprets the site of the 1862 Civil War battle of Prairie Grove. The park contains a visitor center, museum, and visitors can take a walking or driving tour of the site. Admission is free the first Sunday of every month. Fees for the museum and self-guided tour are \$3.00 for adults, \$2.00 for children, \$10.00 for families and \$1.75 per person for school groups.

During this study, park staff collected and counted all the money. They were given specific instructions on this procedure. Data were collected on a daily basis, but reporting occurred at the end of each trial period (every two weeks). Money was

collected and counted before the start of each new business day. Arkansas state law requires that two people count the money collected to ensure honesty. After being counted, the money was taken into possession by the park, following the normal procedure. The amount of money generated during the test period was calculated and reported, via phone, fax or email. In addition, the data for each trial will be recorded on the “Donation Collection Sheet” provided to each site (See Appendix C).

Two of the seven state parks and historic sites were treated differently than the others. Both sites provided additional (anecdotal) evidence for park managers as they consider various options for enhancing donation box revenue. This data was not combined with the other parks, but instead, analyzed separately. Prairie Grove tested the effects of competition by employing two donation boxes (one blue and one gray), thus mimicking the Civil War colors at the park site. Toltec Mounds did not charge admission for the first three trial periods. Beginning on the 4th of July, they charged admission fees like the other sites. The park was open for business during the entire study, but was undergoing construction during the first three trials. The construction was an inconvenience for visitors so the park elected not to charge fees. Their data will be analyzed and reported separately.

Research Design

This field-based study used a quasi-experimental design. Certain factors were manipulated by the researcher, testing visitor behavior with each new change. Three independent variables (message, seeding, and coloration) were examined. There were eight combinations of variables tested to compare effects on the dependent variable (amount of money donated). These combinations were: Trial 1 (message, no coloration,

and seeding); Trial 2 (message, no coloration, and no seeding); Trial 3 (message, coloration, and seeding); Trial 4 (no message, no coloration, and seeding); Trial 5 (message, smoky, and no seeding); Trial 6 (no message, no coloration, and no seeding); Trial 7 (no message, smoky, and seeding); Trial 8 (no message, smoky, and no seeding).

The various combinations addressed in this study are shown in Figure 1.

Trial	Dates	Message		Coloration		Seeding	
		No	Yes	Smoky	Clear	No	Yes
1	5/23 – 6/5	No	Yes	Smoky	Clear	No	Yes
2	6/6 – 6/19	No	Yes	Smoky	Clear	No	Yes
3	6/20 - 7/3	No	Yes	Smoky	Clear	No	Yes
4	7/4 – 7/17	No	Yes	Smoky	Clear	No	Yes
5	7/18 – 7/31	No	Yes	Smoky	Clear	No	Yes
6	8/1 – 8/14	No	Yes	Smoky	Clear	No	Yes
7	8/15 – 8/28	No	Yes	Smoky	Clear	No	Yes
8	8/29 -9/11	No	Yes	Smoky	Clear	No	Yes

Figure 1. The combinations of variables arranged by trial

A ratio of money donated per visitor was created to control for the differing levels of visitation that occurred at these park locations. Data were collected over a 16 week time period between the dates of May 22nd and September 10th, 2005. Tests were conducted during two-week intervals at which time the conditions of the donation box were changed.

Protocol

A detailed description of the procedures was developed and proof-read by state park administrators (See Appendix B). It was sent to each park site, along with donation collection sheets (see Appendix C) in advance of the experiment. Follow-up phone calls were made to ensure that park staff had received and understood the information. The sheets were completed and returned to the researcher.

The following procedures were designed to minimize the effects of extraneous influences, otherwise the data would be tainted. The specific variables to be tested were the presence of a message (injunctive norm), seeding (descriptive norm) and coloration (amount of visibility). The message was printed on a small piece of white card stock and placed on top of the donation box. The background was white with black lettering to maximize visibility. The message simply read, “WE APPRECIATE YOUR DONATION! *All revenue will be used for park improvements*” When the message condition was not in effect, a card was used which stated “Donation Box.”

The boxes were either smoky colored (limited visibility), or clear (full visibility). The boxes had a slot on the top-center for depositing the money. Unfortunately, boxes were not placed at exactly the same locations throughout all the test sites. Although an attempt was made to control this variable, it was not possible due to the unique configuration of visitor centers.

If seeded, the boxes contained one \$10 bill, one \$5 bill, five \$1 bills, and \$1 in change (two quarters, three dimes, three nickels, and five pennies). This configuration gave variety to the types of money in the box and provided an amount that represented a clear distinction between the seeded and unseeded conditions. This meant that the starting amount of money was either \$21.00 or \$0.00, depending on which treatment was in effect.

Variables and Statistics

The independent variables used in this study were seeding, coloration, and the message. The dependent variable was the amount of money donated. The independent variables were measured dichotomously and coded as a “No” or “Yes” (0 or 1,

respectively). A ratio was created to measure the amount of money per visitor. This calculation was made for each set of conditions, per day. The purpose of the ratio was to create an equitable way of measuring the sites, controlling for the fact that some sites attracted a larger numbers of visitors than others.

This study will determine which, if any, of the treatments influenced donation behavior. The rate at which money was added to each box during each combination of conditions will ultimately determine any differences between sets of conditions.

This study used parametric statistics including measures such as means and standard deviations. The conditions were tested using an independent samples t-test. The .05 alpha level was used as the basis for accepting or rejecting the null hypothesis. Each condition was tested to determine if any or none of the conditions produced significant results. Computations were made using Statistical Package for the Social Sciences (SPSS) 13.0 for Windows.

CHAPTER 4

Results

This chapter will report on the results from the data that was collected. Each hypothesis was tested for statistical significance. Empirical evidence will be presented to accept or reject each hypothesis.

The primary data set consisted of donation box revenue from five state parks and museums in Arkansas: Crater of Diamonds, Mammoth Spring, Plantation Agriculture, Prairie County/Lower White River and Parkin. These parks reported all their data in a timely fashion and had no extenuating circumstances that tainted data collection.

However, there were two noteworthy exceptions. Toltec Mounds State Park reported all their data, but started charging admission fees after three of the trial periods had concluded due to park construction during the first portion of the study. Prairie Grove Battlefield was tested separately because of the unique arrangement of donation boxes at this site which tested competition between blue and gray boxes. Data gathered from these two sites were tested separately and were not included with the five primary sites. Each day represented one observation “N” with a maximum of 70 observations for each trial (five parks multiplied by 14 days). Sample sizes for each trial ranged from 51 to 64 observations at each site. This variation was due to the fact that a few parks reported no visitation on some days. Subsequently, these days were omitted from the calculations.

Hypothesis 1 - Seeding (Descriptive Norm): Donation boxes that are “seeded”

(descriptive norm) will generate the same amount of revenue as those that are empty.

H1: Accept.

Hypothesis 1 tested the effects of seeded vs. non-seeded donation boxes. Actually, four separate tests were conducted (trial 1 vs. trial 2; 3 vs. 5; 4 vs. 6; and 7 vs. 8). The hypothesis was that the amount of money in the boxes would have no effect on the amount of money donated. In order to reject this hypothesis, the test would have to show levels of significance between the seeded and non-seeded conditions.

Means were compared using a matched-pair design and analyzed using an independent samples t-test. The tests matched trial 1 (2.1 cents) vs. trial 2 (1.2 cents), trial 3 (4.2 cents) vs. trial 5 (1.8 cents), trial 4 (7.7 cents) vs. trial 6 (2.2 cents) and trial 7 (0.6 cents) vs. trial 8 (4.4 cents). These tests were all non-significant at the .05 alpha level. However, the seeded condition produced a higher donation level than the non-seeded condition in three out of the four comparisons (See Table 1).

Table 1.

Donation box revenue under seeded and unseeded conditions (Descriptive Norm)

Trial	N	M	SD	df	t	p
1	63	.0206	.0734	121	.801	.425
2	60	.0122	.0355			
3	58	.0416	.1638	113	.975	.332
5	57	.0176	.0886			
4	64	.0768	.4577	120	.873	.384
6	58	.0223	.1338			
7	51	.0058	.0146	107	-1.567	.120
8	58	.0435	.1710			

Hypothesis 2 - Message (Injunctive Norm): Donation boxes having a persuasive message (injunctive norm) will generate the same amount of revenue as those having a label simply stating "Donation Box."

H2: Accept.

Hypothesis 2 tested the effects of a message that was displayed on top of the donation box. There were two conditions: a message containing a moral appeal ("WE APPRECIATE YOUR DONATION! All revenue will be used for park improvements") or a control label ("Donation Box"). The hypothesis was that the presence of a message would make no difference in the amount of money donated. Once again, the test would

have to show a significant difference between the message present condition and the message absent condition to reject the hypothesis. Four trials were matched and tested.

The four matched pair tests were trial 1 (2.1 cents) vs. trial 4 (7.7 cents), trial 2 (1.2 cents) vs. trial 6 (2.2 cents), trial 3 (4.2 cents) vs. trial 7 (0.6 cents) and trial 5 (1.8 cents) vs. trial 8 (4.4 cents). Again, none of these tests were significant at the .05 alpha level. The message condition produced a higher average mean donation level in only one out of the four comparisons. Based on this evidence, hypothesis 2 was accepted (See Table 2).

Table 2.

Donation box revenue when using a moral appeal (Injunctive Norm)

Trial	N	M	SD	df	t	p
1	63	.0206	.0734	125	-.964	.337
4	64	.0768	.4577			
2	60	.0122	.0355	116	-.568	.571
6	58	.0223	.1338			
3	58	.0416	.1638	107	1.553	.123
7	51	.0058	.0146			
5	57	.0176	.0886	113	-1.017	.311
8	58	.0435	.1710			

Hypothesis 3-Visibility: Donation boxes that are clear will generate the same amount of revenue as those which are smoky-colored (dark gray).

H3: Accept.

Hypothesis 3 tested the effects of donation box visibility on the amount of revenue. There were two conditions: clear and smoky-colored. The hypothesis was that box visibility would make no difference in the amount of money donated.

The four matched pair tests were trial 1 (2.1 cents) vs. trial 3 (4.2 cents), trial 2 (1.2 cents) vs. trial 5 (1.8 cents), trial 4 (7.7 cents) vs. trial 7 (0.6 cents) and trial 6 (2.2 cents) vs. trial 8 (4.4 cents). None of these tests were significantly different at the .05 alpha level. The clear condition produced a higher donation level in only one out of the four comparisons. Based on this evidence, hypothesis 3 was accepted (See Table 3).

Table 3.

Donation box revenue using clear and smoky boxes (Visibility)

Trial	N	M	SD	df	t	p
1	63	.0206	.0734	119	-.922	.358
3	58	.0416	.1638			
2	60	.0122	.0355	115	-.437	.663
5	57	.0176	.0886			
4	64	.0768	.4577	113	1.107	.271
7	51	.0058	.0146			
6	58	.0223	.1338	114	-.742	.460
8	58	.0435	.1710			

Hypothesis 4-Combined Treatments: Donation boxes having all three factors present in the design will generate the same amount of revenue as donation boxes having no factors present.

H4: Accept.

Hypothesis 4 tested if the combined effects of descriptive and injunctive norms were more effective at generating revenue than the control condition. Trial 1 used all treatment conditions and trial 8 used all control conditions. Trials 1 (2.1 cents) and 8 (4.4 cents) were paired in an independent samples t-test. Results were non-significant at the

.05 alpha level (see Table 4). In fact, trial 8 (pure control) generated over twice the revenue as trial 1 (all treatments).

Table 4.

Comparison of all control conditions and all treatment conditions

Trial	N	M	SD	df	t	p
1	63	.0206	.0734	119	-.971	.334
8	58	.0435	.1710			

Hypothesis 5-Descriptive vs. injunctive: Donation boxes using a descriptive norm will be as effective as those using an injunctive norm.

H5: Accept

Hypothesis 5 tested the effectiveness of the descriptive and injunctive norms used in this study. A total of four trials were combined using all injunctive and all descriptive norm conditions. Trials 2 and 5 used a message without seeding. Trials 4 and 7 used seeding without a message. The results of the two trial pairs were combined and recoded as 1 (injunctive) and 2 (descriptive). Each set had one use of a clear box and one of a smoky-colored box to negate potential effects from this variable. Data were analyzed using an independent samples t-test. Though the descriptive condition generated more revenue than the injunctive condition (4.5 cents and 1.5 cents respectively), results were non-significant at the .05 alpha level (See Table 5).

Table 5.

Comparison of descriptive and injunctive norm conditions

Norm	N	M	SD	<i>df</i>	<i>t</i>	<i>p</i>
Injunctive	117	.0148	.0666	230	-.947	.345
Descriptive	115	.0453	.3422			

Additional Results

A one-way ANOVA procedure was used to test the means between all trials. Trial 4, which tested the conditions of no message, high visibility and seeding produced the highest donation (7.7 cents per visitor). The lowest donation (0.6 cents per visitor) was produced during trial 7 (no message, low visibility and seeding). Results were non-significant between trials (see Table 6).

Table 6.

Analysis of variance between trials

Trial	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between Groups	.225	7	.032	.811	.578
Within Groups	18.275	461	.040		

A second ANOVA test was performed to analyze donation behavior by days of the week at the five test sites. Donation amounts were higher on Mondays (10.6 cents) than other days of the week, but this difference was not statistically significant at the .05

alpha level. Mondays generated nearly three times as large an amount as the next largest mean average, Saturdays at .0340. The lowest average occurred on Fridays with .0122 (See Table 7).

Table 7.

Analysis of variance between days of the week

Day	N	M	SD
Monday	41	.1058	.5727
Tuesday	75	.0312	.1320
Wednesday	68	.0325	.1501
Thursday	70	.0150	.0750
Friday	75	.0122	.0587
Saturday	76	.0340	.0587
Sunday	64	.0161	.0527

	SS	df	MS	F	p
Between groups	.289	6	.048	1.221	.294
Within groups	18.211	462	.039		

Another test was conducted comparing trial periods containing a national holiday versus those which did not have a holiday. Memorial Day, Independence Day and Labor Day occurred during trial periods 1, 4 and 8, respectively. The total revenue per visitor

figures of these three trials was compared against the other five trials. The holiday trial periods generated more than two times the amount of revenue per visitor as compared to the non-holiday trial periods (4.7 cents to 2 cents). However, these results were not statistically significant at the .05 alpha level (See Table 8).

Table 8.

Comparison of holiday periods versus non-holiday periods

Trial	N	M	SD	df	t	p
Holiday Periods	185	.0472	.2883	467	1.440	.150
Non-holiday Periods	284	.0202	.1050			

Other Factors

Since donation behavior at state parks has not been studied, other tests were conducted on the data. Data was collected from Toltec Mounds State Park, but was not included with the other data because they did not charge entrance fees during the first three trial periods. A comparison was made testing the amount of donation revenue generated per visitor during the first three trials versus the last five trials. Though the sample size was small for each comparison (N=37 and 62), the results were significant (P=.000). Donations averaged nearly 25 cents per visitor during the first three trial periods. This amount was over five times larger than the largest average mean for any of the other individual trial periods. By comparison, the last five trial periods at Toltec Mounds after they began charging admission fees generated an average of only three cents per visitor (See Table 9).

Table 9.

Comparison of donations when charging and not charging fees

Trial	N	M	SD	df	t	p
No Fees	37	.2497	.2752	97	5.977	.000
Fees	62	.0303	.0702			

Prairie Grove State Park tested the effect of competition (different coloration) between two boxes. The results were non-significant. Trials 1, 2, 4 and 6 had the competition variable in effect and Trials 5 and 8 did not. Other variables in effect were identical to other test sites during the individual trial period. Competition results are indicated in Table 10. Competition did not make a significant difference in the amount of revenue.

Table 10.

Comparison of donation amounts when using box competition

Trial	N	M	SD	<i>df</i>	<i>t</i>	<i>p</i>
1	14	.0356	.0475	26	-.699	.491
5	14	.0508	.0664			
2	14	.0139	.0318	26	-1.875	.072
5	14	.0508	.0664			
4	14	.0221	.0323	26	-.878	.388
8	14	.0447	.0909			
6	14	.0369	.0690	26	-.255	.801
8	14	.0447	.0909			

CHAPTER 5

Discussion and Recommendations

This chapter summarizes the results of the study. The conclusions drawn from this study will be reported to the Arkansas State Parks Department. These results may be useful for re-thinking the policy on donation boxes. Although all the hypotheses proved statistically non-significant, some practical issues were addressed.

Discussion

This field experiment produced mixed results, but most of the factors generated less revenue than the control group. The seeded condition (descriptive norm) generated a higher amount of revenue in three out of four trials, but the persuasive message (injunctive norm) produced a higher amount of revenue in only one of the four comparisons. A higher amount of revenue was generated using the clear box condition in only one out of the four paired tests. Trial 1 (combined treatments) generated only about half the revenue of trial 8 (control conditions). A one-way ANOVA comparison showed no statistical difference between individual trials 1 through 8. Factors other than those manipulated in this study accounted for a large variation in donation behavior.

There are several possible explanations that may account for the lack of statistical significance. Previous studies of norm theory, while quite expansive, have often focused on discouraging negative actions rather than encouraging positive actions. This study was designed to encourage donation behavior using social norm theory. Unfortunately, the results of the study did not provide much evidence to suggest that social norms influenced donation behavior of visitors, at least in park settings. Studies involving altruistic activities, such as recycling and litter removal, require the expenditure of time

or effort, rather than money. While previous studies have explored moral reasoning associated with donation behavior, their focus was mainly on personal solicitations. Contributions were made in the presence of another person. Participants in this study were park visitors who may or may not have seen the donation box, along with its design features. In addition, the studies of donation behavior using environmental cues are limited.

Descriptive norms

Though descriptive norms were more powerful in three out of four comparisons, this study failed to demonstrate statistically that descriptive norms affected donation behavior in a park setting. Hypothesis 5 failed to show that descriptive norms were more powerful than injunctive norms. This is somewhat surprising considering the consistent literature confirming the strength of descriptive norms.

The studies of Feinberg (1986) and McCall and Belmont (1996) showed that environmental cues can affect consumer spending. The failure of this study to confirm the effectiveness of these cues to generate revenue may be due to the lack of conditioning for a particular cue. Credit card insignias are seemingly omnipresent in magazines, businesses and in the media and are a common way for people to spend money. While people may encounter donation boxes at various attractions, they do not necessarily prompt spending behavior. In other words, simply viewing a donation box may not motivate a person to spend money because they have not been conditioned to do so.

The effectiveness of any social norm is only as strong as the ability of people to observe it. Three separate but related experiments were found to increase the frequency of behavior connected to social norms by focusing attention on certain environmental

conditions (Kallgren, Reno, & Cialdini, 2000). One conclusion from this study was that the power of descriptive norms was connected to the amount of focus a person had on the conditions. This would imply that directing attention to the norm would be necessary, prior to determining the importance of a norm. The experimental conditions being tested during the studies of Kallgren et al. were seen by participants. In this study, there was no way of knowing how many visitors either saw the donation boxes or took the time to read the messages. Future research testing the visual attraction of donation boxes might prove to be useful.

Visibility of the descriptive norm

The coloration of the boxes produced inconclusive results. This study was unable to demonstrate that highly visible money increased the strength of the descriptive norm. This could be attributed to box location being a stronger factor for visibility of the descriptive norm. Previous studies have not used large quantities of cash as a descriptive norm. It is possible that in the case of donation boxes, visitors who see large amounts of money are discouraged from donating believing that their donations are unnecessary; another type of descriptive norm.

Injunctive norms

This study did not show that injunctive norms were effective at generating revenue in a park setting. This finding is not as surprising, given the more consistent results in previous studies using this approach. The presence of an injunctive norm, such as a moral appeal, may be less effective than a simple image or logo advertising the acceptability of spending. The phrase “Even a penny will help” with personal solicitations (Cialdini & Schroeder, 1976), may be an effective strategy for donation

boxes although it was not tested in this study. The phrase is designed to legitimize the actions of the donor to the solicitor. Perhaps the presence of a solicitor makes this phrase effective. Donation boxes may not legitimize donation amounts, but this factor has not been tested. Another drawback for donation boxes may involve the give-and-take nature of reciprocity for request compliance. The research of Cialdini et al. (1975) examined the nature of reciprocity on request compliance. Donors agreed to comply with a smaller request when concessions had been made from a larger request. Donation boxes make no concessions to visitors. The impersonal request of the message, therefore, may be less effective than a personal request. This might be because of the lack of a reciprocal norm during interaction.

Personal requests are imperfect predictors of donation behavior. Despite the personal nature of their request, La Hart and Bailey (1975) found that compliance (anti-littering) did not improve, at least for children. The different levels of moral responsibility in children versus adults may make the results of this study a poor example of message effectiveness. An incentive for children who picked up litter was the only condition that proved effective at inducing a pro-social behavior. Using this approach might be difficult (or impossible) for state parks. Some evidence suggests that an appeal based on moral reasoning was ineffective at stimulating altruistic actions. This information strengthens the possibility that reciprocity is a powerful inducement of non-personal, pro-social behaviors. While children may not be the best indicators of moral responsiveness, the universal failure of any moral appeal to induce compliance shows that factors other than personal requests are involved.

The simple act of giving may be perceived by some as a social norm. Barnes and McCarville (1995) found that new patrons (paying consumers) seemed to be influenced more by friends in relation to donation behavior. Seasoned park visitors may be allies to assist with recruitment efforts because of the complex web of social networks that seem to surround donation behavior. Any form of social pressure to donate may be classified as a type of injunctive norm. The social stigma of non-compliance may be the most powerful type of injunctive norm for donation purposes. “Solicitation by friends and neighbors is useful if people want others to view them as good and generous” (Rose-Ackerman, 1996, p. 714). Injunctive messages, such as signs and labels, may only be as effective as social pressure would allow. The observed actions of others may create a self-induced pressure to avoid being labeled as a “free rider” (Sugden, 1984). This suggests that future studies of injunctive norms should focus on the donation behavior of groups versus individuals. One group member may pay entrance fees while another provides a donation. For example, parents may pay fees while children provide donations. Qualitative analysis of group dynamics may provide evidence about this phenomenon. If it is determined that children donate to the boxes, despite the fact that it may be their parents money, perhaps it would be beneficial to use more kid-friendly designs. For example, the coin vortex used in many museums may be more appealing to kids than adults.

Future study

The design of this study differed from most previous studies of social norms. Previous studies in outdoor settings were in response to negative behaviors and preventing further abuses. This study also tested a combination of descriptive and

injunctive norms simultaneously. Generally speaking, descriptive norms are more powerful than injunctive norms, but they may only predict some pro-social activities.

Many social norm studies have involved altruistic activities, i.e. recycling, that required the expenditure of time and effort, rather than money. Robinson (1976) offers several possible reasons why social norms and littering may be connected. These include awareness of consequences, the chances of being noticed by others (peer pressure) and ease of compliance. In addition, Robinson suggested that behavior could only be understood within an environmental context since it is closely related. In fact, norms and impacts may need to match to induce behavioral change. Bratt's study (1999) found that normative conduct and environmentally friendly behavior might be connected, regardless of the impact of assumed consequences. Indeed the contribution in Bratt's study found the link between behavior and assumed consequences to be somewhat disconnected. This would suggest that donation behavior, on one level, might be more instinctive than logical. The social pressure to follow the acts of others as descriptive norms may indeed be more powerful than a moral appeal. The social instinct to follow the behavior of others may be more powerful than the treatments tested in this study. The various manifestations of norms may be perceived differently for time, rather than money.

Norm potency is affected by ease of compliance. The study of recycling container proximity by Finnie (1973) showed that the ease of following a norm affected the potency of anti-littering campaigns. It is conceivable that one location may be better than another; similar to candy being placed at a checkout counter in the grocery store. The placement of a donation box within a room may increase its visibility, thus making it easier to generate revenue. The exact placement of donation boxes for this study was

inconsistent, due to the variation in floor plans. In other words, this variable could not be controlled. Placement on a counter, near the receptionist, may be the best location for visitors to see the box and comply with the request. Some social pressure may also be exerted by the presence of a receptionist near the box, but this factor may or may not result in more revenue.

Practical significance is not the same as statistical significance. Managers are more interested in practical significance. In other words, the best design is the one which produces the most amount of revenue. Anecdotal evidence suggests some possible ideas for park managers to consider. Donations per day of the week showed much variation. Although the reasoning is unclear, some days were much higher than others. For example, visitors on Mondays donated an average of 15 cents per person as opposed to visitors on Thursday and Friday who donated only 1.5 cents and 1.2 cents, respectively. This data is inconclusive because some of the locations were closed on Monday.

This difference (roughly ten times) suggests that variations exist between visitors, depending on what day they visited the park. Perhaps weekday visitors tend to have more discretionary time and/or income than weekend visitors. Weekday park visitors may be retired individuals or those traveling without children since they are able to visit during the week. On the other hand, family groups, who tend to visit parks during weekends, may account for a higher number of individuals, thus decreasing the donation per visitor. Parents may have less disposable income than other park visitors. Additionally, money that families spend at the park may be aimed more toward souvenirs for the children, rather than park improvements, which provide no immediate tangible benefits. It is not known how many children put money in the donation boxes, but it would be interesting

to study this phenomenon. Along similar lines, it may be useful to have data concerning group behavior. Radley & Kennedy (1995) feel that future studies of social interactions might include the effectiveness of donation boxes. Information about group size in relation to donation behavior would be helpful to compare the amounts given by families or large groups, versus couples or individuals. Additional information concerning group structure may also be useful to understand the dynamics of norm theory and donation behavior.

Barnes and McCarville (1995) described the difference between patrons and philanthropists. Most visitors at these locations are patrons because they paid an entrance or admission fee to enter the park. It is unlikely that many park visitors would be classified as philanthropists since these people receive pleasure from financial contributions. Additionally, philanthropists generally donate large sums of money, not smaller amounts typically found in donation boxes. Park patrons might see their experience more like a business transaction. Patrons may feel that ticket prices and any other purchased items provide sufficient financial support for the park. Park patrons might be less likely to donate if they felt that their ticket price was sufficient for the experience. An experience above expectations might draw some additional money from visitors, but this would be after the experience. Many do not go back into the visitor center after their park experience.

Anecdotal evidence from Toltec Mounds demonstrated a strong connection between donation amounts and fees. The donation amounts before and after Toltec began charging a fee is very large (25 to 3 cents per visitor). This seems to show that visitors are much more willing to donate when they are not charged an additional fee. While this

evidence is not surprising, it does suggest some themes for future study. Perhaps visitors have a different perception of a site which would normally charge fees, but is currently not doing so. This may be seen by visitors as an initial step in an exchange of reciprocity, encouraging a show of gratitude from visitors in exchange. However, the inconvenience caused by the construction would also likely temper some generous feelings of certain visitors. There may be a type of unspoken injunctive norm associated with giving to an organization that provides a service without demanding anything in return. It is also possible that the visible signs of construction may have helped to encourage donations – a different type of descriptive norm. Visitors may see the construction as a financial burden for the park and may think that their donations were being put to good use.

More anecdotal evidence was collected at Prairie Grove Battlefield State Park, a preserved Civil War battlefield. A test was performed between two competing donation boxes, blue and gray. The overall mean at the battlefield was slightly higher than the overall means for the sample, .036 to .031, respectively, but neither box outperformed the other one. It seems likely that the gray box would have been more effective at collecting money since it was consistent with the Civil War colors. The battle of Prairie Grove was a Confederate victory and Arkansas was aligned with the Confederacy at that time. However, the blue box outperformed the gray box as often as not. Perhaps modern social pressures create a certain stigma in the eyes of some visitors who view Confederate values as hatred and hostility. The political nature of the boxes may entail an entirely different set of social norms. Furthermore, the colored boxes and the nature of the competition would seem to naturally draw the attention of visitors, but this may not be the case as evidenced by the relatively similar amounts collected as compared to the

control group. The small sample size makes this data nothing more than anecdotal evidence of the complex nature of norms and donation boxes.

Other anecdotal evidence suggests that park visitors are more likely to donate during holiday periods. Although the results were non-significant, data show that trials 1, 4 and 8 produced relatively higher average donations than other periods. Memorial Day weekend, Independence Day and Labor Day weekend occurred during these three trials, respectively. Trial 1, which was thought to produce the highest mean, produced 2.1 cents per visitor, almost twice the mean, 1.2 cents per visitor, of the adjacent trial 2. Trial 4, which was thought to produce a mid-range mean, instead produced the highest average of all trials, 7.7 cents per visitor. Trial 8, which was thought to produce the lowest average, produced a relatively large mean, 4.4 cents per visitor. This was the second highest amount and much higher than the adjacent trial 7 which produced the lowest mean, .6 cents per visitor. This information suggests that park visitors during holidays are more likely to donate than during non-holiday periods. This may be due to the festive attitude of the visitors who might be in a better mood than at other times. Perhaps the special nature of the holiday festivities in the community or at the park draws more attention to the usefulness of civic services. There may be a sense of patriotic duty to assist government institutions. Parks may want to consider instituting more celebrations at their facilities, such as the park's "birthday," opening attractions or other worthwhile occasions. A heightened sense of ownership may turn casual patrons into those who are willing to contribute money. Perhaps they will draw additional patrons to the park through positive word of mouth communications.

The mood of an individual when donating might be an interesting topic for future research. Some research has shown that people are more willing to help others when they are in a good mood themselves. Isen and Levin (1972) used experimental situations to test whether subjects were more likely to help others when they were in a good mood. They used cookies, which were distributed in a library, and dimes found in a phone booth to induce a positive mood. They found that people who received unexpected good fortune were more likely than others to volunteer their time and assist others with small tasks like picking up something they dropped. This suggests that people are more likely to donate if their experience was pleasant. For example, punch and cookies could be served near the donation box.

The timing of the donation request may also affect contributions. Parks may have a window of opportunity to elicit donations from people who have just had a positive experience at the park rather than before visitation occurred. Placing the donation boxes in an area that will be visible by visitors exiting the park may be more effective than a box that is present at a ticket-purchasing window. Many museums require visitors to walk through a gift shop before exiting. Perhaps this would be a good location for the donation box, if not contaminated by souvenir sales. Parks that are also able to offer small gifts or souvenirs may be able to increase their contribution amounts. Further research of small gifts, meant to act as an investment to induce donations, may lead to a better understanding of how mood affects donations.

Recommendations

Based on this research and literature review, parks should consider the following options in regard to their donation boxes:

- 1) Parks should consider seeding their boxes. Seeded boxes in this study generated more revenue than empty boxes. In addition, parks should consider collecting money from their boxes less frequently in order to create a stronger descriptive norm.
- 2) Parks should consider using pictures instead of words to create a moral appeal. If an injunctive message is used, it should make an appeal to visitors that helps make people aware of what their donations are used for. Based on previous research, this appeal should be able to legitimize any contribution amount.
- 3) Parks should consider providing visitors with a small incentive to donate such as snacks or souvenirs. This might be a way to draw attention to the donation box and increase the number of children who are willing to donate. This might also be a way to put the visitor in a more giving mood using the theory of reciprocity.
- 4) Parks should emphasize community ownership of the park through such methods as promoting events and celebrating holidays. This might help to increase overall visitation, help create a festive mood and increase the number of park patrons who are willing to donate.

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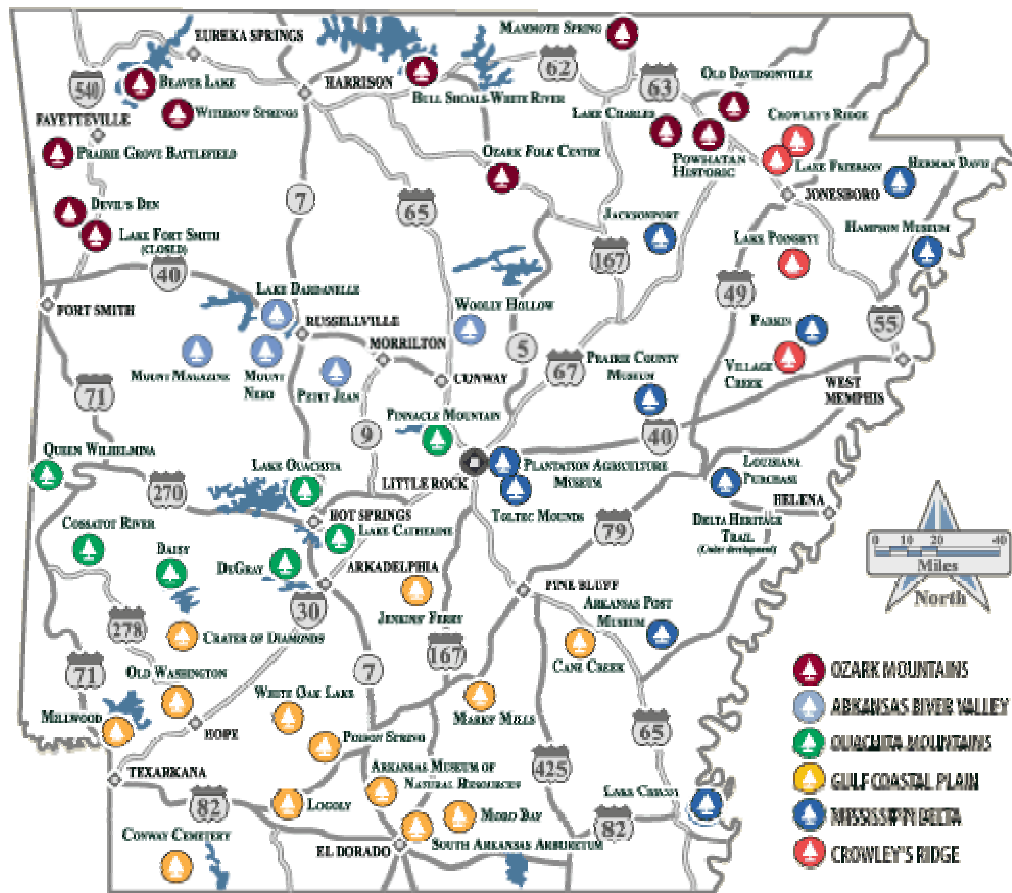
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APPENDIX A

Map of Arkansas State Parks



(Arkansas State Parks, 2007).

Parks used in this study were: Crater of Diamonds, Mammoth Springs, Parkin Archeological Site, Plantation Agricultural Museum, Prairie County/Lower White River Museum, Prairie Grove Battlefield and Toltec Mounds.

APPENDIX B

Design and Instructions

DONATION BOX STUDY ARKANSAS STATE PARKS & HISTORIC SITES							
Trial	Dates	Message		Coloration		Seeding	
1	May 23 - June 5	No	Yes	Black	Clear	No	Yes
2	June 6 – June 19	No	Yes	Black	Clear	No	Yes
3	June 20 – July 3	No	Yes	Black	Clear	No	Yes
4	July 4 – July 17	No	Yes	Black	Clear	No	Yes
5	July 18 – July 31	No	Yes	Black	Clear	No	Yes
6	Aug 1 – Aug 14	No	Yes	Black	Clear	No	Yes
7	Aug 15 – Aug 28	No	Yes	Black	Clear	No	Yes
8	Aug 29 – Sept 11	No	Yes	Black	Clear	No	Yes
SHADED CELL MEANS THAT TREATMENT IS IN EFFECT							

NOTES

Dates – All the “conditions” need to be changed on Sunday night BEFORE your trial begins on Monday. Each trial lasts two weeks. For example, On May 22, please insert the text message card into the clear box and “seed” it with the proper amount of money. Your box should be ready to display on Monday morning, May 23. Please do not deviate from these pre-determined dates. Consistency is very important.

Message – There are two cards to use (both have a schedule on the back). The “no” condition simply means to insert the card that says “**Donation Box**” into the slot. The “yes” condition is the actual message,

WE APPRECIATE YOUR DONATION!
All revenue will be used for park improvements

Coloration – There are two colorations, Black and Clear. Please use only the “new” donation boxes. Do not use any existing or “old-style” boxes during this study. Your black donation boxes will be ready on Monday, May 30 (at the Exhibit Shop).

Seeding – There are two conditions. “No seeding” means that the box should be completely empty - NO money is left in it at the start of four trials. The “yes” condition means that your box should be “seeded” with \$21 using this combination: one \$10 bill, one \$5 bill, five \$1 bills, and \$1 in change (two quarters, three dimes, three nickels, and five pennies). Make sure that you have \$21 available at four trials. On two occasions, you will need to “seed” a black box. I know this sounds weird, but please do it anyway.

Reporting – Please count your visitors each day. In addition, please COUNT your money, but REPLACE it immediately. This will require you to empty the box temporarily, but put ALL the money back in. Please use the form to report your data.

APPENDIX C

Donation Collection Sheet

**ARKANSAS STATE PARKS
DONATION BOX STUDY**

Park Name: _____

Trial: _____

Starting Date: _____

Ending Date: _____

Day	Day of Week	Visitor Count	Donation Amount
1	Monday		
2	Tuesday		
3	Wednesday		
4	Thursday		
5	Friday		
6	Saturday		
7	Sunday		
8	Monday		
9	Tuesday		
10	Wednesday		
11	Thursday		
12	Friday		
13	Saturday		
14	Sunday		

Park Employee: _____

Contact Information: (Phone) _____ (Email) _____

University Contact:

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Graduate Student
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APPENDIX D

Permission Letter to Arkansas State Parks Director

April 14, 2005

Greg Butts, Director
Arkansas State Parks
One Capitol Mall
Little Rock, AR 72201

Dear Mr. Butts:

I am requesting permission to conduct a "Donation Box Study" at selected state parks and historic sites in Arkansas this summer. My graduate student and I have developed a carefully controlled experimental design to test the effects of three variables on visitors' donation behavior. The factors we want to manipulated are: 1) a written appeal – the presence or absence of a message; 2) coloration – gray vs. clear box color; and 3) seeding – a predetermined amount of money placed in the box after the contents are emptied.

It is anticipated that some variables will influence donation behavior more than others. However, this type of study has never been conducted before, so no one knows for sure. But speculation is rampant. This study should resolve some of those questions. Most importantly, the results can be applied directly to Arkansas State Parks. One possible outcome is an increase in donation behavior. A copy of the report will be furnished upon completion of the study.

The costs associated with this project are minimal. The only expenditure will be the purchase of several clear plexi-glass donation boxes to test the effect of coloration. Other costs are non-monetary, such as staff training and reporting time. It is anticipated that the benefits of this project far outweigh the costs. Your approval is needed before initiation. Thanks for your consideration.

Sincerely,

Dr. Mark Morgan, Assistant Professor
Natural Resources Recreation Management