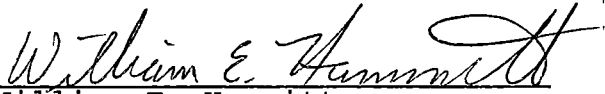
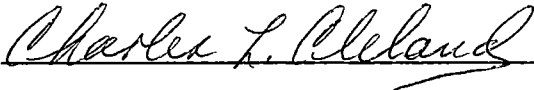


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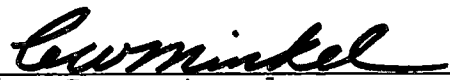
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William E. Hammitt
Major Professor

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RELATIONSHIPS AMONG INTERPRETATION,
SITE CHARACTERISTICS,
AND VANDALISM
N

A Thesis
Presented for the
Master of Science
Degree
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Sara Frances Main

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ABSTRACT

The objective of this study was to identify relationships between vandalism and site specific variables, particularly interpretation at historic sites. Interpretation was the primary focus, but site characteristics and community influence were also studied. Twenty-four sites of historical significance, all located within the Mid-Atlantic Region as defined by the National Park Service, were chosen for the study. On-site inventories and interviews were conducted during the summer of 1987.

The focus on interpretation and how it influences the vandalism a site experiences led to a detailed inventory of the interpretation available at the site. The types of interpretation available (e.g., brochure, tour, audiovisual, etc.) were categorized. Placement (i.e., at the visitor center, in the historic structure, or on the grounds) of all interpretive material was also recorded. Specific details of each incident of vandalism (e.g., type of vandalism, cost, location, etc.) the site experienced within the past fiscal year were used to characterize each incident.

Site characteristics such as administering agency, acreage, annual visitor count and budget for interpretation were used to classify sites.

Frequencies indicated that brochures are the most common form of interpretation and audiovisuals are used to

enhance the existing interpretation. Theft was a common form of vandalism, but was greatly deterred by the presence of interpreter-led tours. The annual visitor count and acreage were the most influential site characteristics affecting vandalism.

Regression analysis, including vandalism as a discriminate function, produced the following results from the data set. Interpreter-led tours were associated with deterring vandalism. Larger numbers of visitors led to more vandalism, and overshadowed the deterring effect of interpretation. Self-guiding signs located on the park grounds, as opposed to at the visitors center, were associated with destructive vandalism. The influence of different site characteristics and community variables is also discussed.

This thesis infers that interpretation can reduce some types of vandalism, but specific site characteristics must be considered. Interpreters will find the results useful in the interpretive profession; managers will find them helpful in identifying ways a site is susceptible to vandalism.

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CHAPTER 1

INTRODUCTION

Through interpretation, understanding; through understanding, appreciation; through appreciation, protection.

(Tilden 1957:38)

Background

A belief in the usefulness of interpretation and a respect for the sites which preserve our nation's history spurred the development of this study. A basic idea underlying the thesis was stated by Tilden (1957:38), "If you vandalize a beautiful thing, you vandalize yourself. And this is what true interpretation can inject into the consciousness." This thesis investigates the relationships between vandalism and site characteristics, surrounding community, and interpretive material provided at small historic sites. If relationships are known, perhaps the destruction of historic sites can be reduced.

The three primary components of this study are interpretation, vandalism, and historic sites. Interpretation is provided by most agencies in an attempt to enhance a visitor's experience. The term "interpretation" refers to a wide spectrum of ways information can be transferred to the

visitor in order to improve the quality of their experience. It can include anything from a guided tour of an area to a sign explaining the resource, and is designed primarily to instill an understanding of the resource and provoke the visitor to want to learn more.

Interpretation is not only a service provided to the visitor, it can also be a tool used by an agency to reach management objectives. By educating the public through interpretation, an agency can explain the reasoning behind a controversial management plan and build some public support for it. Interpretation has been proven influential in these situations by improving public attitude towards the policy of prescribed burning (Nielsen and Buchanan 1986). Using interpretation as a tool is not limited to reaching management objectives concerning policy, it can also be useful in protecting the resource. Explaining the effects on the resource of certain visitor actions can be effective in modifying visitor behavior. Interpretation can be a subtle way of applying restrictions on the visitor's actions in order to protect the resource from damage. An example would be interpreting the fragile ecosystem of the plant community in an area and how impact anywhere other than the planned trail can be harmful to the ecosystem. This may encourage those who were unaware of the effects of straying from the trail to avoid leaving the assigned trail.

Vandalism is another major component of this study. Various degrees of vandalism are evident in most any given region of the country or type of community. The concern over vandalism is growing, and the cost is certainly one of the reasons. Over 500 million dollars is spent each year by park and recreation agencies to offset the effects of vandalism (Christiansen 1984). Some agencies have introduced facilities designed specifically to combat vandalism. These facilities cost more to install, but the savings on future repair or replacement cost make the initial expense a good investment. Property can become so damaged by vandalism that its usefulness is lost and the property serves no future purpose.

The loss of property is especially tragic if it occurs at a site of historical significance. Sites that have been set aside to preserve our culture and history provide a window to the past. Identifying with the past is an important part of understanding the present and preparing for the future. The sites which represent the past are an irreplaceable resource. If links with the past are to be continued, these resources need to be preserved. A site where an important historical event took place cannot be created if the original is destroyed, only a representation can be achieved. This uniqueness and irreplaceability of

historic sites is the reason they were chosen as the focus of a study of vandalism.

Statement of the Problem

Millions of dollars are spent in parks and recreation areas each year for the repair, restoration, and clean up necessary after destructive behavior or vandalism. This is a widespread problem that many sites must face on a yearly basis, which raises concern for the protection of these sites. Perhaps of greatest concern is historical sites, which, by their very nature, are irreplaceable.

Preservation can be accomplished by the stroke of a pen in Washington, D.C., but protection must be dealt with on a case by case basis. Some historic sites have been abandoned by the National Park Service due to the extent of damage caused by vandals. New and more effective means of combating the loss of money, property, and history must be developed.

This research examines the relationship between vandalism and the nature and amount of interpretation provided at small historic sites. Other factors which influence the occurrence of vandalism, such as site characteristics and the surrounding community, will also be examined.

The need for research of this kind has been noted by scientists (McAvoy and Hamborg 1984, Szwak 1984). The findings of this research project are intended to assist managers of small historic sites in identifying potential vandalism problems and planning for protection of the site.

Objectives of the Study

This project was designed to study the factors influencing a site's susceptibility to vandalism. The factors identified as having a possible influence were interpretation available at the site, site characteristics, and the surrounding community. Aspects of these factors were quantified to aid in determining the strength of relationships, particularly to the vandalism a site experienced. An emphasis was placed on the interpretation available and its relationship to the vandalism the site experienced within the past fiscal year.

Primary objectives of this project are:

1. Determine which of the variables studied has the greatest influence on vandalism.
2. Determine relationships between individual variables and different aspects of vandalism (e.g., number of incidents, total cost, and average cost per incident for sites experiencing vandalism).

3. Determine if certain types of sites can be said to be more prone to vandalism than other sites.

Approach

General knowledge served as the base for developing the project, but details were needed to aid in designing the framework of the study. The necessary details were found through a review of literature on the topics involved. The review focused on the types of interpretation and their effectiveness at communicating; vandalism, why it occurs, who vandalizes, and where it occurs; and historic sites, their importance, their problems, and their operation.

The information gained through the literature was used as a basis for the production of inventory sheets. These sheets were completed while at the site. The various methods of interpretation that were available were represented on the prepared inventory sheet.

The maintenance or general up-keep of a site was mentioned in the literature on several occasions, so a score sheet for the level of maintenance at the site was developed. The characteristics of the site, such as acreage and number of employees, were obtained through an interview with the site's manager. Each incident of vandalism the site experienced within the past fiscal year was recorded on

a separate inventory sheet. Characteristics of the act of vandalism which could be used to group the acts according to similarities were recorded.

Notes were also taken concerning the observations of managers. Any trends in vandalism the manager had noticed over the years, who they suspected to be responsible for the vandalism, and observations on the attitude of the surrounding community towards the historic site were all recorded. Observations of the researcher about the relative placement of structures, general appearance and amount of use were also recorded for future reference.

The influence of the surrounding community has also been indicated to affect the kind and amount of vandalism an area experiences. Therefore, general notes and observations by the manager and the researcher on the local community were made while on site. Statistics were later collected through secondary analysis on certain aspects of the community to provide a description of the community surrounding each of the study sites.

A closer look at the literature relevant to this project will help the reader understand the basis for the details of the collection of field data. The underlying reasons for the questions and observations of the study will help clarify why the study was conducted and enhance the understanding of the results of the project.

CHAPTER 2

LITERATURE REVIEW

The literature review has focused on three major topics: interpretation, vandalism, and historic sites. This chapter represents what has been found by the researcher in these three areas that pertain to this study.

Interpretation

The principle of using interpretation, and it's resulting knowledge, to increase appreciation and appropriate behavior towards the environment was vocalized by Freeman Tilden in his book Interpreting Our Heritage (1957). This principle has been analyzed and used as a basis for research since its publication. Psychologists have developed a socio-psychological theory to explain what Tilden believed would happen when visitors were exposed to good interpretation. The model developed from this theory suggests that behaviors flow from attitudes grounded in beliefs, and if an individual's beliefs are changed an attitudinal and behavioral change will follow (McAvoy and Hamborg 1984).

Channel Islands National Monument, California initiated a program to promote understanding of their park by talking to visitors. Almost all their vandalism stopped. The only violations that did occur were committed by people they had not contacted (Sutton 1976). Providing the visitor with the "why" of regulations to increase their understanding is essential (Sharpe and Gensler 1978, Leatherbury and Lime 1981). An earlier study by Clark, Hendee, and Campbell (1971) is useful in supported the previous point. The data from their study indicate that people will cooperate if the situation is explained to them. They wrote, "it seems likely, therefore, that the public will support attempts to reduce depreciative behavior if it understands the underlying reasons" (Clark, Hendee, and Campbell 1971:12). For individuals to change their beliefs, they must be provided with information they believe to be reliable.

Oliver, Roggenbuck, and Watson (1985) conducted a study that suggested education may significantly reduce destructive behavior. Three different forms of presenting an educational message; brochure alone, brochureplus-contact, and brochure plus-contact-plus-assistance-request were compared to a control group. An inventory of all previous depreciative behavior evident at campsites was made before a group was assigned to camp at that site. The campsite was reinventoried when the group left the area.

The additional evidence of any depreciative behavior was recorded and the group was categorized according to the type of educational message they received. The results indicated that providing an informational brochure decreased depreciative acts by 50%. Brochure plus personal contact decreased depreciative acts by 80%. Requesting camper assistance did not further decrease depreciative acts. Figure 1 is a reproduction of a table Oliver, Roggenbuck and Watson used to display their study results.

Educational treatment	No tree damage		One or more incidents of tree damage	
	No of camper groups	%	No of camper groups	%
Control ^b	65	61.9	40	38.1
Treatment 1—brochure alone ^c	67	79.8	17	20.2
Treatment 2—brochure + contact ^d	77	96.3	3	3.7
Treatment 3—brochure + contact + assistance request	103	90.4	11	9.6

^aTree damage includes nails pounded in trees, wires or cords on trees, bark or limbs removed, and axe or knife carvings

^bControl differs from each treatment at $p < 0.01$

^cBrochure alone differs from brochure + contact ($p < 0.01$) and from brochure + contact + assistance request ($p < 0.05$)

^dBrochure + contact does not differ significantly from brochure + contact + assistance request message

Figure 1. Tabular results of Oliver, Roggenbuck and Watson (1985) indicating the effectiveness of different methods of communicating with campers.

Education may not be as effective in reducing intentionally destructive behavior, but it can reduce or eliminate careless, unskilled, or uninformed actions

(Hendee, Stankey, and Lucas 1978, Gramann and Vander Stoep 1986). The 1971 study by Clark, Hendee, and Campbell, had five categories for the apparent motivations for depreciative acts. Of these five categories, ignorance of the rules contained one third of all the acts, and 65% of the nuisance acts. It was this uninformed majority, not the destruction oriented minority, that Tilden had in mind when he made his proposition that if users could be educated to the problems, they would respond in a positive way and protect the resource (McAvoy and Hamborg 1984). It is an ignorance of the rules, problems, and consequences of individual actions that has placed our resources, both natural and cultural, in jeopardy. Wagar (1973) recognized this and concluded, "It is increasingly important to help people understand the dynamics of the natural environment and the consequences of their actions," as one of his four basic reasons for offering interpretation. One of the best reasons to turn to interpretation as an aid in educating users is that it can increase human enjoyment of the resource without increasing human impacts on that resource (Wagar 1975).

The most effective media for interpretation and education has been under close scrutiny for the past twenty years. Since brochures are so widely used by agencies dealing with recreation, the effectiveness of brochures has

been the subject of numerous research projects. One such project found that the effectiveness of a brochure alone was no more, or less, effective than a brochure plus personal contact in changing the behavior of campers (Roggenbuck and Berrier 1982). This lack of significant difference has been disputed in other research, and particularly by Oliver, Roggenbuck and Watson (1985). This study concluded that the brochure alone was not as effective as the brochure plus personal contact. One fact, however, has been agreed upon in a number of research articles--that visitors would much rather hear a message than read it (Wagar 1971; Wagar 1973; Grannary, Douglas, and Smythe 1986; Neilsen and Buchanan 1986). Exhibits using mounted photos and printed texts are described as less interesting when rated by visitors (Wagar 1971). Most people on pleasure trips do not want to spend time reading (Wagar 1975).

Other factors besides just audio must be involved. Fazio (1979) tested radio, television, newspapers, brochures, and a taped slide presentation as methods of communicating with visitors. Results indicated radio and television to be poor methods of providing users with the desired information. The taped slide presentation proved to be the most effective media for increasing visitor knowledge of the desired information.

Reasons for the effectiveness of the slide presentation can be found in research conducted by others. Wagar (1971) found that exhibits with motion, recorded sound, and shifting lighting were much more interesting to visitors. The level of interest will affect the exhibit's ability to attract and hold the attention of the visitor, which is of major importance when dealing with interpretation (Wagar 1973, Keyes and Hammitt 1984). Additional advantages of using an audiovisual presentation are that the presentation will have the full attention of the audience and runs no risk of being lost by the visitor, unlike brochures which can be provided to the visitor at inopportune times such as when trying to pay entrance fees or orient themselves to the area (Grannary, Douglas, and Smythe 1986). This is not to say that interpreters should be replaced by slide machines. Knowledge gained from a slide program was only slightly higher than that gained from an interpretive guide (Nielsen and Buchanan 1986). Indeed, many people are still ardent about the idea of rangers adding to the experience of visitors (Tilden 1957; Fazio 1979; Oliver, Roggenbuck, and Watson 1985).

Vandalism

Vandalism is a term derived from Vandals, a Germanic tribe who sacked Rome in 455 A.D. They were traditionally regarded as the great destroyers of Roman culture and, their actions were associated with general ignorance (Ward 1973, Einolander 1976). Their destructive behavior centuries ago was a forerunner to the problem we now call vandalism. A more modern legal definition of vandalism is "willful or malicious destruction, injury, disfigurement, or defacement of property without the consent of the owner or person having custody or control" (Einolander 1976:25).

Destruction due to vandalism is seriously endangering our historic sites. Valuable artifacts and research material has been lost to looting and vandalism, and these things can never be replaced. Help arrived when the Archeological Resources Protection Act of 1979 (P.L. 96-95) allowed courts to administer criminal penalties and large fines for looters (Michel 1981). An alternative of closing some of the historic areas from public access has been suggested and even put into action at some parks, but the public demand and importance of interpreting these areas to the general public is too great for this to become an established method of dealing with vandalism (Woodward 1985). With most of the United States' population in the

East where the majority of historic areas are located, the problem of destruction, intentional or not, may be more pronounced east of the Mississippi River. The threats to historic sites are real, and must be addressed by both private and government organizations to preserve what is left. "There will be no second chance. What we fail to save now will be lost forever" (Michel 1981:19).

Vandalism is certainly not limited to historic areas. In fact, the National Park Service in their 1980 "State of the Parks" report said the fourth most prevalent threat facing the entire park system was overuse "and related problems such as vandalism" (Loomis 1985:13). The increasing rate of vandalism has led the Park Service to place more emphasis on law enforcement within the parks, and the jobs of many park rangers now include acting as a law enforcement officer.

The Park Service is not alone in it's recognition of the increasing seriousness of vandalism, the general public has also turned it's attention to the matter. In a survey of public opinion carried out in California, combating vandalism was rated as having top priority over problems related to public transport, homes, jobs, and some 20 other subjects (Sykes 1979).

Identifying Vandals

Who is involved with these acts of vandalism and other forms of depreciative behavior? The general agreement seems to be that the majority of the acts are committed by the young (Sykes 1979). Federal Bureau of Investigation data shows a significantly large group of persons arrested for vandalism to be between the ages of 13 and 14 (Morrison 1976). Differences in the type of vandalism and where it was committed tend to determine what age group is primarily responsible. A study by Clark (1971) on undesirable behavior in campgrounds substantiates this belief. The study found teenagers and children responsible for most of the depreciative acts occurring in the campground, but each age group differed in the type of violations committed. Teenagers were the most likely to violate campground rules, and younger children were most often responsible for acts of vandalism.

Vandalism is certainly not completely dependant on young people. Anyone strong enough or old enough to cause property damage is a potential vandal. All of us may be considered vandals at one time or another, depending on how our actions effect the property surrounding us. So vandalism is not necessarily the result of any particular age group (Miller 1976). There are grounds for believing that destructive behavior declines with age and tends to be

outgrown with the passage of time (Clinard and Wade 1958). "Data provided by the Federal Bureau of Investigation shows that ages of persons arrested for vandalism ranges from very young to quite old" (Morrison 1976:24).

The debate about the influence of age on vandalism may continue for years to come, but it is generally agreed that most acts of vandalism are committed by groups (Clinard and Wade 1958; Clark, Hendee, Campbell 1971; Kenline 1976; Samp 1976; Williams 1976; Autry and Langenbach 1985; Gramann and Vander Stoep 1986).

As might be expected, more boys than girls are involved in vandalism. Statistics from the Children's Bureau, as well as studies from Detroit to Great Britain bear out this relationship (Clinard and Wade 1958).

Race seems to have little or no effect on whether or not a person will be involved with vandalism (Kenline 1976, Miller 1976, Francis 1983). It was reported by Clinard and Wade (1958) that data from the Children's Bureau indicated there is little difference between blacks and whites and the amount of vandalism they commit.

Why They Vandalize

A partial understanding of why people vandalize may provide more insight into who the vandals are. A prerequisite for controlling vandalistic behavior is

understanding the motivations behind the behavior (Szwak 1984). According to research, the reasons for vandalism range from troubled childhoods to sociological explanations of peer group behavior to changes in the demographic composition and attitudes of society. Different age groups tend to have different reasons for vandalizing.

Children. Most of the vandalism by children occurs during play. Boredom, carelessness, or not realizing the consequences of their actions may override the intentional aspect of certain kinds of vandalism (Clark, Hendee, and Campbell 1971; Francis 1983). Clinard and Wade (1958) wrote, "with younger children vandalism is not, therefore, necessarily malicious; rather it is more often destructive play motivated largely by curiosity." Kenline (1976) also stated that damage is caused by children as part of their play and motivated by curiosity and the spirit of competition. The idea of competition being fuel for the destruction rather than maliciously doing something they know is wrong has also been presented in other works (Williams 1976, Sykes 1979, Francis 1983).

The peer pressure children face may also be a contributing factor to their involvement in vandalism (Clinard and Wade 1958, Autry and Langenbach 1985, Gramann and Vander Stoep 1986). A study conducted in a classroom

setting found that if the disruptive behavior of some of the students in the classroom was reduced, the other members of the class would also show a reduction in disruptive behavior. This was linked to the fact that children rely heavily on interaction with other children both for support and initiation of actions (Autry and Langenbach 1985).

Another motivation for young people to vandalize may be the need for recognition. Recognizing this as a possible motivation, an elementary school in California implemented a program designed to provide positive recognition for the students. The program had good results in reducing vandalism among these children (Miller 1976). A possible explanation for the previously mentioned fact that more boys are involved with vandalism than girls could be their desire to assert their masculinity. A boy perceives goodness as a symbol of femininity, and reacts negatively to norms associated with goodness by engaging in depreciative behavior (Clinard and Wade 1958).

Adults. Adult motivations for vandalism sometimes differ greatly from the underlying reasons for vandalism by children. Inconvenience is one of the primary reasons for adults to vandalize (Clark, Hendee, and Campbell 1971). Gramann and Vander Stoep (1986) identify a category of violations of regulations and vandalism by adults in a

natural environment as "responsibility-denial." Here visitors recognize the normally accepted behaviors, but believe them to be unreasonable or unapplicable in their particular circumstance. If the adjustments they are asked to make seem impossible to accomplish without disrupting the goals of their trip, then the violations seem justifiable (Morrison 1976, Gramann and Vander Stoep 1986). Clark, Hendee and Campbell (1971) studied the vandalism occurring in Washington state campgrounds during the summer of 1968. The resulting information included the age group and motivation associated with different types of depreciative acts. The study revealed that "vandalistic acts of adults were often associated with camp chores where appropriate behavior stymied their completion" (Clark, Hendee, and Campbell 1971:7). Figure 2 shows the types of depreciative acts by age groups, and is reprinted from their research report.

General. There is a broad scope of alternatives for why any age group commits an act of vandalism. In the study of depreciative acts in Washington State, almost one-fourth of the vandalism directed toward camp facilities seemed to be for entertainment. Vandalism of the natural environment was most often for entertainment, but was also due to ignorance of the rules or the consequences of the act (Clark, Hendee, and Campbell 1971). Figure 3 illustrates

Depreciative act ^{1/}	Adults (N=197)	Teenagers (N=66)	Children (N=82)
	----- Percent ^{2/} -----		
Nuisance acts	47.7	27.3	53.7
Vandalism	4.6	4.5	19.5
Law violations	47.7	68.2	26.8
Total depreciative acts	100.0 (57.1)	100.0 (19.1)	100.0 (23.8)

^{1/} Only those depreciative acts for which "age group" could be determined were included in this table.

^{2/} Numbers in parentheses are percentages of "total depreciative acts."

Figure 2. Clark, Hendee and Campbell's (1971) representation of the relationship between age group and type of depreciative act committed in a campground.

Depreciative act ^{1/}	Enter- tainment	Conven- ience	Dis- regard	Ignorance	Rules interfere with goal	Total ^{2/}
	----- Percent -----					
Nuisance acts (N=119)	16.0	5.0	14.3	64.7	0	100.0
Vandalism (N=31)	32.3	6.5	45.2	16.1	0	100.1
Law violations (N=120)	16.7	10.0	47.5	6.7	19.2	100.1
Total depreciative acts (N=270)	17.9	7.3	33.3	33.3	8.4	100.2

^{1/} Only those depreciative acts where "apparent motivation" could be determined were included in this table.

^{2/} Percentages may not total 100.0 percent due to rounding

Figure 3. The apparent motivations for depreciative acts committed in campgrounds studied by Clark, Hendee and Campbell (1971) as represented in their report.

the apparent motivation for depreciative acts as recognized by Clark, Hendee and Campbell (1971). For most purposes, vandalism requires that violations be willfully committed. These acts may be motivated by numerous factors, including retaliation, financial gain, protest or identification, or selfish personal gain.

Retaliation vandalism is exemplified by the man who was fired from his job one day and went to the construction site next door and used their bulldozer to destroy many facilities in the area (Ward 1973). Financial gain is the reason for the "pot hunter" to vandalize an archeological site in search of artifacts to sell for profit (Gramann and Vander Stoep 1986, Ward 1973), or the visitor to extract a handful of money from the contribution box. Protest or identification can be something as simple as drawing a symbol on the wall of the restroom (Morrison 1976), or dismantling equipment to prevent the production or transportation of products one feels opposed to for moral reasons. Selfish personal gain can be sacrificing trees and undergrowth in a camping area for firewood or painting over historic pictographs so they will provide enough contrast with the rock to make a good photograph (Miller 1976).

Community Influence

The word "community" can have many different meanings, each one being correct. Any community can change in size

and shape depending on the variable used to identify it (i.e., population density, means of income, water districts, or political boundaries (Warren 1963)). Units of social and territorial organization, called communities, have no set limits and "depending upon their size, may also be called hamlets, villages, towns, cities, or metropolitan areas" (Poplin 1972:3). Although the size of what can be termed a "community" may vary, it is agreed that there must be social interaction between persons within a geographic area to be considered a community (Warren 1963, Poplin 1972).

When studying the influence of community on behavior, attitudes, and values, it is usually assumed that a change in one variable is the cause of change in another variable. Studies of this nature are necessarily based on the assumption that there is something about communities which causes them to influence human behavior, attitudes, and values (Poplin 1972).

Identifying the reasons for vandalism on a larger scale, Clinard and Wade (1958) also look at economic influences. They cite one study that indicated no difference in vandalism from poor sections to higher socioeconomic areas of the city. They also make reference to a study, after stating on page 495 that "Evidence concerning the relationship of vandalism to social class position is conflicting and fragmentary" (Clinard and Wade

1958:495), pointing to low income sections as the primary group responsible for vandalism. Reasons for vandalism among this group may be that they are attacking symbols of middle class respectability and superiority. By destroying these symbols, the lower economic class protests its inferiority to the middle class. A juvenile delinquency study in Kansas City, that was also noted in the article by Clinard and Wade (1958), disclosed that the highest incidence of vandalism was from middle class areas. Self expression and freedom seem to be a catalyst for this group to attack property--the symbol of status that they have been taught to treat with care.

What is Vandalized

Further explanation of the question of why acts of vandalism are committed can be found in the type of property that is most often vandalized--public property (Clark, Hendee, and Campbell 1971; Kenline 1976; Sykes 1979). Any property that does not have a readily recognizable owner is a candidate for vandalism. This allows the offender to regard the act as not so serious or not important at all (Sykes 1979). The reason empty houses often have their windows broken, and abandoned cars are common targets for vandalism is this appearance of having no owner (Sykes 1979). In the study of campgrounds in Washington State by

Clark, Hendee, and Campbell (1971), almost 68% of the acts of vandalism observed were against public property. Only 2% of the acts were committed against private property (the remaining percentage was against the natural environment).

Maintenance. Public property may also receive the brunt of most of these acts due to general lack of care given to public property by the agencies in charge of them. Research has shown that incidence of vandalism rises as deterioration due to lack of maintenance increases (Szwak 1984). Any minor damage that is not quickly repaired encourages further damage (Sutton 1976, Whelan 1976, Sykes 1979, Schoening 1984, Gramann and Vander Steop 1986), and with the lack of funding for both repairs and staff to conduct those repairs, many slightly damaged facilities in park systems will soon be the objects of the majority of vandalism that will occur in the United States this year. The general appearance of the park could also influence the susceptibility of a park to vandalism (Sykes 1979). Schoening (1984) remarks that observation and experience indicate unkempt, neglected parks are more prone to vandalism, and well maintained, clean parks promote an image of caring that discourages vandalism. The idea of poorly maintained sites encouraging further damage has also been supported by research using the amount of litter present at

a site, and the resulting relationship to the amount of litter deposited thereafter (Clark 1971, Gramann and Vander Stoep 1986).

Another explanation why the majority of vandalism is directed at public property is that most public property is public domain. Sociologists suggest that since the social structure that regulates our daily lives breaks down in the recreational setting, a condition termed as an "anomie" is formed. Anomie refers to a condition in which social norms no longer control people's actions. This allows people to explore those areas that they are restricted from in their daily activities (Anson 1976).

Deterrents

Design and construction of facilities represent the most commonly used technique to combat vandalism (Szwak 1984), but they will not be addressed in this work. Understanding the motivations for committing acts of vandalism and some of the general characteristics of the type of property that is most often vandalized helps us to plan for some methods that may be effective in deterring depreciative acts. Providing children with more constructive forms of play while on public land may reduce the amount of vandalism, especially in isolated outdoor settings. As stated previously, keeping public property in a

more attractive state that looks well cared for has also been observed to reduce vandalism (Sykes 1979, Christiansen 1984, Schoening 1984). The presence of park personnel or police patrols in the area can discourage acts of vandalism (Christiansen 1984, Schoening 1984, Szwak 1984, Gramann and Vander Stoep 1986). The study by Clark, Hendee, and Campbell (1971) of campground vandalism reported that very few depreciative acts occurred when rangers were in the immediate vicinity. Data from the study were insufficient to statistically support the notion that the presence of rangers acts as a deterrent to vandalism, but the authors say it is logical that it is true. Patrols of the area have the possibility of greatly reducing the amount of vandalism in a park. Due to monetary restraints, this highly effective method of controlling vandalism can seldom be fully practiced. Szwak's 1984 review of literature pertaining to vandalism indicated that the authority associated with rangers or police patrols need not be present, that just having people around can also be an effective deterrent. Data from other studies, particularly Clark, Hendee, Campbell (1971), provide some doubt about the effectiveness of the presence of other people. That study reported 47% of the vandalism recorded had been committed while others were around.

A rather harsh deterrent is being used in increasing amounts--warning potential vandals that certain acts may

evoke penalties or may put the perpetrator in danger (Sykes 1979). Penalties seem to be effective in decreasing vandalism, but promote bad connotations for the agency from the public. A more subtle approach to decreasing vandalism is providing the area with good lighting (Sykes 1979, Schoening 1984, Szwak 1984).

Self-regulation (having people assume responsibility for their own behavior) has been shown to produce the same effects as external regulation, and also appeared to have more long term effects (Autry and Langenbach 1985). The best ways to encourage self-regulation are through education, training, and reinforcement. DeYoung's study (1986) found that the typical reinforcement, through material reward, is not as important to a person's motivation as nonmaterial rewards such as knowing there will be something for their grandchildren to see. Another approach to reducing vandalism includes information and education programs (Blake 1976, Sutton 1976, Christiansen 1984, Schoening 1984, Gramann and Vander Stoep 1986). These programs describe the rationale for rules and regulations through positive signage or interpretive services. Education programs focus on instilling proper values and attitudes about vandalism and its effects on the environment so that appropriate behavior will result (Szwak 1984).

Focusing on information and education, the role that interpretation can play in reducing vandalism becomes clear.

Historic Sites

An historic property was defined by King et al. (1977) as any place where something can contribute--through its study or continued availability--to our consultable record of human existence. Fortunately, historic sites were being preserved and interpreted long before National Park Service authorization in 1916. Each year millions of Americans spend their time and money to see these places of historical significance. The National Park Service and other agencies attempt to respond to this demand for public viewing while protecting the resource and preserving it for the future.

Their Role in the National Park System

Horace Albright was the second Director of the National Park Service, and had been Stephen T. Mather's assistant as the Park Service was being formed. It was not Albright's idea to set aside historic sites, but he did play a major role in having many of these areas included in the National Park System. Albright was a history buff and was excited about the possibility of having places of historical value

administered as part of the National Park System (Everhart 1972).

Responsibility for historic monuments, memorials and a variety of sites was scattered among government agencies. Enthusiastic and nostalgic veterans had already encouraged the preservation of Civil War battlefields, but they were administered by the War Department (Everhart 1972). Troops from Fort Custer were the original custodians of the Little Bighorn area battlefields, until these battlefields were also placed under the supervision of the War Department (Bates 1985).

It took years of struggle by Horace Albright to have these areas placed under the supervision of the National Park System. In 1933, nearly 50 historical sites were transferred to the National Park Service from the several administering agencies; most of them from the Departments of War and Agriculture. Thus, the Park System was almost doubled in one year by the addition of historic sites (Everhart 1972).

More sites have been steadily added to the system, until today a majority of the units in the National Park System are historical or archeological parks (Smith 1979). In 1979, more than 200 of the 320 units in the Park System fell into this category (Holland 1979). The average American would probably be shocked to learn that the

majority of our National Park Service units are sites of historical or archeological significance and not natural and scenic areas like Yellowstone and the Grand Canyon that usually come to mind whenever national parks are mentioned (Holland 1979). Because the United States was conceived on the east coast and Americans were content there for generations before the westward expansion, the majority of the historic sites are located east of the Mississippi River (Bates 1985).

A genuine concern for the historic areas is demonstrated by the National Park Service through the variety of ways it aids other agencies in the management of these areas. With the increased interest in historic preservation within urban areas, the Park Service has been authorized to provide varied levels of assistance. The type of assistance provided ranges from professional and technical advice at some sites to complete operation of others (Holland 1979). In addition, the Park Service has also had a part in the administration of the Antiquities Act of 1906 (P.L. 59-209), and from the Historic Sites Act of 1935 (P.L. 74-292) the Park Service oversees the Historic American Buildings Survey and the National Historic Landmarks program. The Park Service has also been a forerunner in practicing the "new conservation archeology" that focuses on the conservation rather than the excavation of archeological sites. In order

to preserve the sites as original, remote sensing techniques are used to identify and study archeological sites rather than destruction or modification from excavating the site (Holland 1979).

Who is Interested in Historic Sites?

The National Park Service is certainly not the only agency interested in preserving our nation's historic areas. In fact, the majority of sites with historical significance, although they are the smaller, less well known sites, are under the operation of private organizations. One of the best known state-wide private organizations in the East is The Association for the Preservation for Virginia Antiquities (APVA). The APVA is a private, nonprofit organization founded in 1889, and primarily uses volunteers to operate the sites. They are responsible for over thirty sites being available for public enjoyment throughout Virginia. There are numerous other private organizations in the United States who have recognized the importance of historical sites and the need to preserve them for the future. These small nongovernmental organizations play a very important role in the preservation of artifacts, structures, and areas, and the heritage they represent.

State Park systems are also responsible for preserving, protecting, and sharing our history. Historic sites of more

local significance are often administered by a State Park rather than the National Park System. Citizens can find pride and individualism in setting aside areas that have played an important role in the growth and development of their state.

Fiscal Problems

The preservation and maintenance of historic sites requires millions of dollars each year. Unfortunately, budgets do not provide the amount of money necessary to adequately staff and finance all of these areas. A serious deterioration of public property will inevitably result and the very reason that these sites were established--to preserve history--will be short changed in the process. Necessary historical research will not have the financial backing it needs to be completed, and the importance of the site cannot be adequately interpreted to the public without money to go towards effective media (Smith 1979). In addition, it may be difficult to provide for public safety, which could compound the fiscal problems as a result of lawsuits.

An interesting idea is being implemented as an attempt to curb the problem of budgetary restrictions affecting the Park Service--renting the historic sites. On December 12, 1980, Congress approved a program that allows the National

Park Service to lease historic properties of secondary importance through an amendment to the National Historic Preservation Act of 1966 (P.L. 89-665). Leasing of Park Service land is not a new idea; that had been done before, but the proceeds went to the U.S. Treasury's general fund--unavailable for use by the parks that generated the funds. However, the 1980 legislation allows the money obtained by leasing these properties to be used on the site to maintain, repair, or otherwise preserve the structures' historic qualities (Maruca 1984).

A large part of the small amount of money the National Park Service has in it's budget for historic sites is used for restoration of structures. Although the restoration of homes in sites like Williamsburg, Virginia is very attractive and well done, some people believe ruins are more effective in bringing the past to life. Miller (1986:9), when addressing the idea of restored structures writes, "Ruins, on the other hand, acknowledge that real people have come and gone and left a faded outline of their footsteps." Whether it is better to leave buildings as original or not, much Park Service money could be saved by taking John Ruskin's advice to "take care of your monuments and you will not have to restore them" (Miller 1986:10).

Importance of Historic Sites

Why are these historic sites important to so many people and agencies? Because the American public realizes the importance and uniqueness of any historical area. Historic areas provide a vital link with the past that is essential for personal identity. Like the amnesiac who is unable to remember the past loses his self-identity, so a people would lose it's identity if the past were not available for inspection. Congress was alluding to this when they declared that historic sites should be preserved "in order to give a sense of orientation to the American people" (National Historic Preservation Act of 1966: P.L. 89-665). Awareness of the past is an essential element for feeling a sense of continuity and present identity for communities and nations as well as individuals. One way to achieve this awareness of a shared past is through the preservation and interpretation of historic resources (Walston 1983). Woodward (1985:20) writes that "interpretation of historical resources . . . must be recognized and performed," because of the significant contribution history makes to American's perceptions and understanding of the past. Historic preservation has it's basis in providing an understanding and enrichment of the present through an appreciation and awareness of the past (Walston 1983).

Aside from providing a link with the past that provides identity, historic areas have an even more important reason to deserve preservation--they are irreplaceable. If a single plant is destroyed, it is possible to grow another one to replace it; if a historic structure is lost, it is gone forever (Holland 1979). It is impossible to remake the original artifacts or build original structures that have played an important role in history. What we have now is all that remains, and must be preserved if we are to continue to have a tactile understanding of the past. Our understanding of the past becomes more clear through the preservation of these historical areas. An example is the Custer Battlefield in Montana where early protection and preservation of the site has allowed archeologists to discover new information about battle positions and ballistics that reshapes our knowledge of the two historic days of Custer's last stand (Bates 1985). In all cases of areas with historical significance, protection is crucial if we are to be able to unravel the many mysteries of the past (Michel 1981).

Threats to the Historic Sites

In spite of all they stand for, historic areas are being endangered in a variety of ways. There are pressures on the Park Service to open up many of the smaller

archeological and historical parks to greater recreational use and various kinds of commercial exploitation of their resources (Holland 1979). Historic areas also face dangers from the outside. Real estate development, air and water pollution, and acid precipitation can cause ancient artifacts to crumble and priceless documents to disintegrate (Smith 1979). Perhaps the most immediate and widespread threat to the nation's historic sites is the one focused on by this study--vandalism.

Research Needs

The areas of vandalism and interpretation have been extensively researched, but significant knowledge gaps remain (Szwak 1984). This is particularly true when addressing the question of how the two are related at historical sites. The effect of communication through different means of interpretation has been indicated to effect visitor actions (Roggenbuck and Berrier 1982, Fazio 1979). However, the effect of interpretation on the level of vandalism has not been studied, or at least no evidence of it was found during this literature review. A major research gap appears to be the evaluation of specific techniques. Few studies document the effectiveness of a particular method in controlling for vandalism.

McAvoy and Hamborg (1984) address the need for further research dealing with which interpretive methods are most effective, and the "need to research the direct link between user knowledge levels of appropriate behavior and actual behavior." Evaluation of just techniques and effectiveness may not be enough to provide an understanding of the relationship between vandalism and interpretation. The interaction of social, physical, and environmental variables at locations may produce different effects. What is needed, therefore, is an evaluation that also includes a description of factors--on and off site--that may influence the success or failure of a technique (Szwak 1984). The effectiveness of interpretation as a means of educating users about appropriate behavior must continually be assessed. Budget cuts within agencies will continue to take their toll on the interpretive programs that are so important to both the visitor and the agency if the importance of interpretation can not be documented.

CHAPTER 3

METHODOLOGY

Study Sites

Selection

The study sites used in the project were all within the Mid-Atlantic Region as defined by the National Park Service. The region is a five-state area that includes Pennsylvania, Virginia, West Virginia, Maryland and Delaware. The Mid-Atlantic region was chosen due to the abundance of historical sites found in the area and the time and monetary constraints of this research.

Limits of size and content were defined for each study site. A size limit of approximately 640 acres was used as an upper bound due to the nature of the data collection procedures as discussed later in this chapter. Each site was also chosen only if it contained a structure of actual historical significance (i.e., no replicas). This process allowed 24 study sites to be chosen from national, state, and privately administered historical sites within the Region. See Figure 4 for location of study sites.

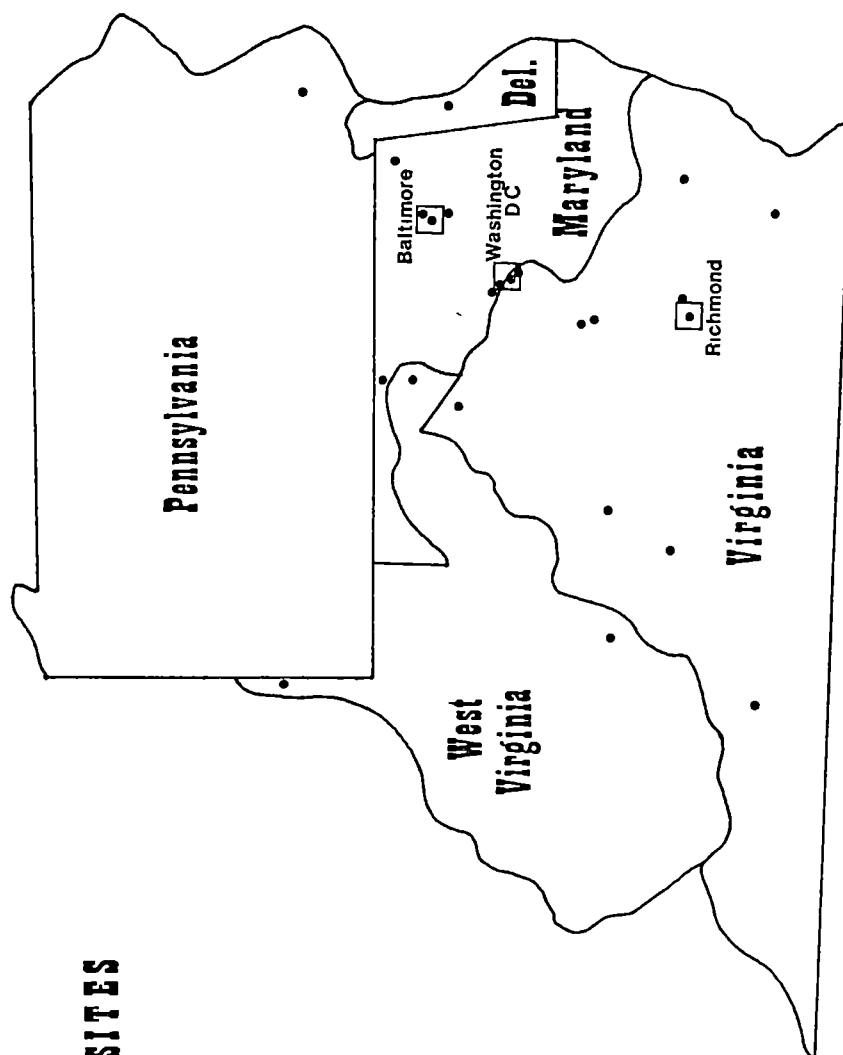


Figure 4. Map of Mid-Atlantic Region with study sites marked.

Description

Great diversity among the study sites brought a wide spectrum of conditions into this research. Large sites such as Fort McHenry National Historic Site and Fort Frederick State Park included large budgets, unique interpretive media, and a variety of types of vandalism experienced. However, even these two largest sites had characteristics which make them quite different. Fort McHenry is located in the large city of Baltimore, Maryland, and receives national attention, while Fort Frederick is in the small town of Big Pool, Maryland, and documents a lesser known part of history. These two sites are easily contrasted to some of the smaller historic sites involved in this study.

Some study sites such as Clara Barton National Historic Site (NHS) and Pearl S. Buck Birthplace do not have the resources to provide as wide a variety of interpretive techniques as the larger, more diversified historic sites. They continue to show diversity in surrounding community, Clara Barton NHS being in a suburb of Washington, DC and Pearl S. Buck Birthplace being in the remote town of Hillsboro, West Virginia. See Appendix A for description of locations of study sites.

The differences in characteristics for each study site allow them to be placed in general categories with areas of like characteristics. Groupings based on certain

characteristics include four national sites, five state sites, and 15 sites administered by private organizations. Nine of the study sites are located in areas generally classified as large metropolitan areas, ten sites are in small cities or towns, and five are located in rural areas. Only two sites reported an annual visitor count of greater than 100,000 visitors, six sites with visitor counts between 100,000 and 20,000, eight sites with between 20,000 and 10,000 visitors per year, and eight sites with less than 10,000 visitors in one year. Table 1 shows some of the important site characteristics.

Sampling Procedure

All field data were collected between July 6 and August 12, 1987. Meetings were arranged by phone with the site managers at least three weeks in advance of the date set for the interview. The interviews and inventories were conducted during regular operating hours. An attempt was made to have all meetings between one and two o'clock on a weekday, but conflicting schedules made it necessary for a few exceptions. The date and time of visitation to each study site was noted on the maintenance score sheet.

Each interview required from 30 minutes to one hour to complete depending on personalities and the number of

Table 1. Important characteristics of each site by administering agency.

site	visitors*	interp. budget*	acreage	vandalism	
				#	cost(\$)
National					
1	2.8	80.0	1	2	11
6	675.0	155.0	43	6	417
13	22.0	78.0	2	0	0
19	65.0	44.0	60	0	0
State					
3	19.0	1.4	100	0	0
11	17.5	4.5	400	4	170
16	17.0	4.4	<1	1	40
18	1.8	3.0	2	1	114
21	110.0	50.0	562	2	675
Private					
4	4.5	0.0	<1	1	100
5	26.0	0.1	<1	0	0
7	4.6	9.6	40	0	0
8	10.0	0.0	24	0	0
9	16.5	18.0	11	1	200
10	25.0	60.0	2	0	0
12	4.0	17.5	14	0	0
14	11.0	0.0	<1	0	0
15	9.0	70.0	1	0	0
17	16.9	0.0	<1	2	106
20	2.5	25.0	4	2	66
22	30.0	26.2	<1	0	0
24	22.6	0.1	<1	1	25
County					
2	10.0	1.0	90	1	150
City					
23	5.5	1.2	<1	0	0

* in thousands

incidents the manager described. Copies of the interview questions were mailed to the manager at least three weeks in advance of the actual interview. This was to allow an opportunity for the manager to locate information such as annual visitor count, total acreage, and budget figures before the researcher arrived. An identical interview sheet was filled out by the researcher during the on-site interview with the manager.

The on-site inventory of facilities and services by the researcher and photographing important aspects of the site and any acts of vandalism reported required one to two hours. A total of two to three hours was required at each study site to collect the necessary data.

Variables Recorded

Interpretation

The interpretation available to the public was recorded according to categories and placement of the interpretation. Categories of interpretation included guided tours, stationed interpreters, self-guiding signs, displays, general information signs, brochures, and audio-visuals. The availability of guided tours was recorded as a yes or no due to the large variability within each site on the number of tours offered each day, all other interpretive techniques

were tallied cumulatively for each site. Self-guiding signs were defined as any sign that a visitor could read and come away understanding something about the site and why it is preserved as a historic site. Figure 5 is an example of a self-guiding sign. General information signs were defined as signs providing the visitor with information not related to the significance of the historic site. See Figure 6 for an illustration of general information signs. These signs included the posted operating hours and directional signs. A description of the material used to make each sign and the placement relative to other features of the site were recorded. Location of all available interpretation was recorded as either being in or around the visitors center, in or around the historic structure, or on the site's grounds. See Appendix B for an example of the interpretation inventory sheet.

Site Characteristics

Standardized questions were asked of the site manager to determine the site characteristics. Facts such as the total acreage, annual visitor count, number of employees were asked, as well as open-ended questions about what was being done at the site to prevent vandalism, who the vandals are believed to be, and the community support of the historic site. Appendix C is an example of the interview sheet.

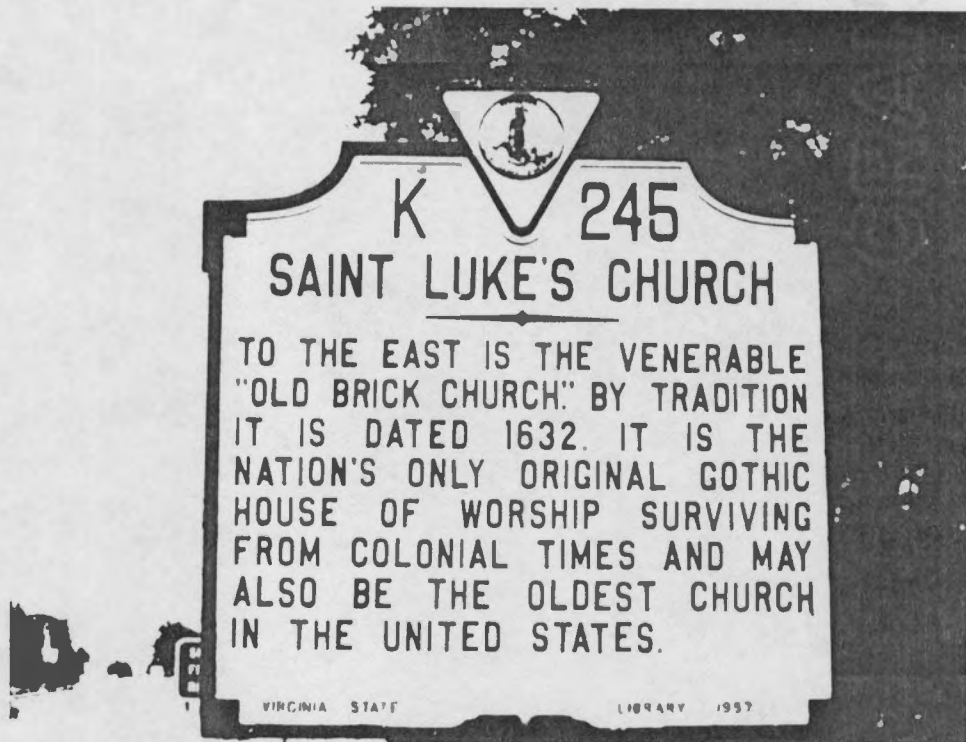


Figure 5. A self-guiding sign.



Figure 6. A general information sign.

Maintenance Score. Apparent maintenance of the site was determined through a cumulative point system and determined by the researcher while on site. Managers were not made aware of the fact that information regarding maintenance was to be recorded to prevent any special attention that might be given to the grounds before the researcher arrived for the scheduled interview. The cumulative score was attained by allowing between zero and two points for each of the following categories with two points indicating good maintenance.

1. Manicured. The site's grounds must have appeared to have been manicured within the past two weeks. Most sites received the full two points for this category unless there was an obvious lack of up-keep evidenced by something like a bad weed problem. Figure 7 shows well manicured grounds.

2. Noticeable Damage. Noticeable damage on either the historic structure or the interpretive media was regarded as poor maintenance. The amount of damage was used to determine the number of points given to the site. Figure 8 is an example of damage to the historic structure, and Figure 9 shows damage to the interpretive media.

3. Visibility. The visibility of interpretive signs was also used as a basis for providing points. A site would lose at least one point if a sign was covered by vegetation. The sign in Figure 10 had reduced visibility due to vegetation.



Figure 7. Well manicured grounds received two points towards a total maintenance score.



Figure 8. Noticeable damage to the historic structure.

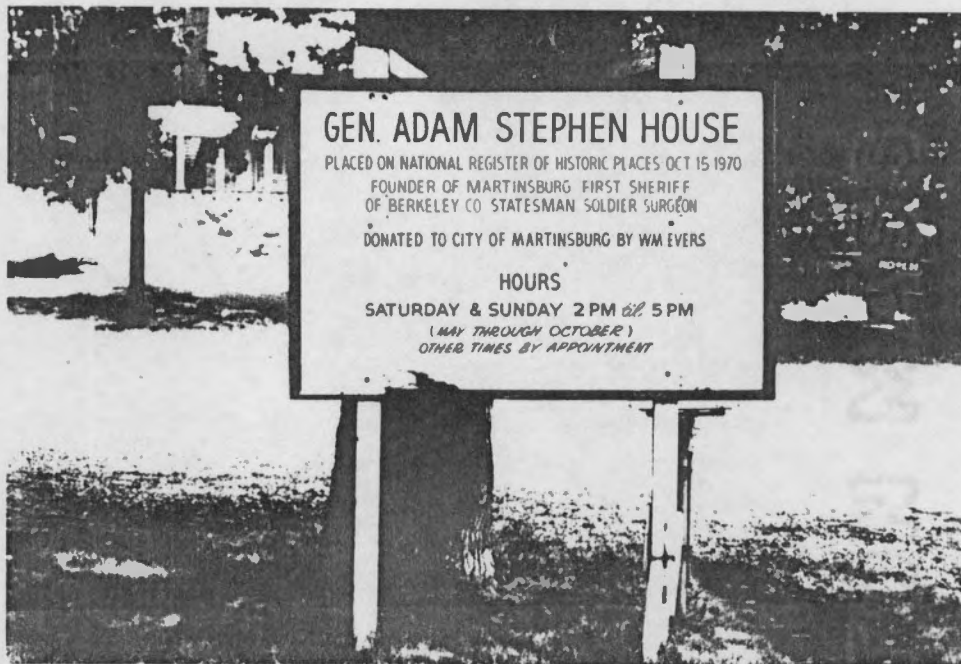


Figure 9. Noticeable damage on the interpretive media, in this case a self-guiding sign.

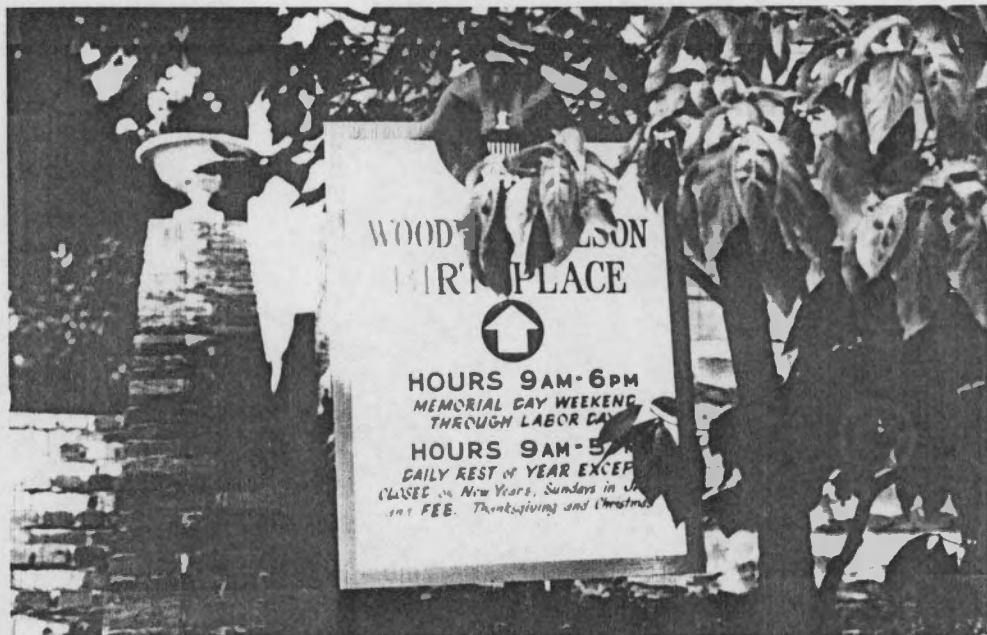


Figure 10. Maintenance points lost due to poor visibility of interpretive media.

4. Stocked. If the site's facilities were not stocked, i.e., brochures at distribution points, the site would lose maintenance points.

Litter was also recorded as an indication of the site's maintenance. The researcher used pacing to determine the distance from the entry point to the visitor center (where applicable) to the historic structure along the main route of travel by visitors. Individual pieces of litter (defined as any unnatural object of at least one inch square) visible from this route of travel were counted and recorded. Appendix D is an example of data sheets used to determine the site's maintenance score.

Community

General impressions of the surroundings were noted by the researcher while on site. Impressions of how urban or rural the setting for the site was and the social class most prominent in the surrounding community were noted according to the researcher's perception. The manager's view of the surrounding community and the community's feelings toward the historic site were also recorded. Less subjective data about the community surrounding each study site were collected from the 1980 U.S. Census after the field work had been completed. The size of the area used to define the "surrounding community" varied from the county level for

less dense homogenous areas to tracts within major cities to reflect the local community and not the city as a whole.

The information collected from the census data included the percent of families below the national poverty level, the percent of the population who were unemployed, the percent of high school graduates in the population, the median family income for the area, and the percent of the community within the age groups of 10-14, 15-19, and 20-24. These characteristics of the community were thought to be adequate indicators of the type of community in which the study site was located and factors which could have an influence on the vandalism occurring within the community.

All of these variables describing the site characteristics, available interpretation, vandalism experienced, and the surrounding community were coded and analyzed in a manner conducive to indicating which factors were most closely associated with vandalism.

Vandalism

A separate facts sheet was completed for each incident of vandalism the site had experienced within the past fiscal year. The incident was categorized according to M.L. Christiansen's typology in Vandalism Control Management for Parks and Recreation Areas (Christiansen 1983) with slight modifications. For example, a theft category was added to

accommodate the vandalism experienced by the study sites. Appendix E provides definitions for each category of vandalism used in this study. Details of exactly what was vandalized and how it was done were recorded as described by the manager. Notes were taken on the characteristics of the vandal if the vandal were known, otherwise characteristics of whom the manager believed to be responsible were used. The repair or replacement cost, including labor, of the incident was provided by the manager. The details of when and where the incident occurred were also recorded. Appendix F is an example of the information sheet filled out for each incident of vandalism that was reported.

Data Analysis

All variables were recorded as actual numbers with a few exceptions. The agency responsible for administration of the site was recorded as a one for national sites, two for state sites, and three for sites under the administration of a private organization. The five variables used to determine the maintenance score were recorded as a cumulative total for each site. The number of pieces of litter and the paced distance from entry point to historic structure were divided to provide the litter per square feet.

Statistical Analysis System (SAS) package programs were used to conduct all computer analysis, and significance levels of .01 and .05 were used. Standard descriptive statistics were conducted to determine frequency and central tendency measures of variables.

Two regression methods of analysis were used in the multivariate analysis. In regression analysis, both forward and backward stepwise regression were applied to the data set to determine the relative importance of the independent variables to each of the three dependent variables. The dependent variables were: 1. total cost of the vandalism at each of the 24 study sites, 2. average cost of an act of vandalism at each site, and 3. total number of incidents of vandalism each site experienced within the past fiscal year. Pearson's correlation coefficients were also obtained for each variable's relationship to each of the other variables to aid in the understanding of the interrelationships of variables.

A second regression analysis method was used to determine which of the variables were most influential in discriminating between sites that experienced vandalism and sites that did not experience any vandalism. All vandalized sites were coded as a positive one and nonvandalized sites were coded as a negative one in order to run this regression analysis.

The results of these analytic procedures are discussed in the chapter 5.

CHAPTER 4

RESULTS AND DISCUSSION:

VARIABLE RELATIONSHIPS

Relationships Suggested by Correlation Coefficients

As might be expected, larger sites have more buildings, more employees, larger interpretive budgets, and more interpretation. Sites providing tours are likely to charge an entry fee and have fewer incidents of vandalism. The vandalism these sites do experience is generally of low cost.

The number of incidents a site experiences was negatively related to charging an entry fee. This may be due to the tours since tours and entry fees are related. The number of buildings on the site, the budget for interpretation and the number of displays and self-guiding signs were all positively related to the number of incidents. The larger the site, the more available to be vandalized, and the more likely an act of vandalism will occur. Vandalism was also very positively (.78) related to the number of visitors. The actual correlation coefficients are provided in Table 2.

Interpretation

Agency

The study sites averaged five different categories of interpretation at each site. The most common category available was brochures, with 23 of 24 sites having at least one brochure available. Many study locations provided brochures about other places of interest as well as that specific historic site. This was particularly common among state operated areas. State areas provide an average of four brochures, the actual numbers ranging from one to eight. National historic sites had conspicuously few brochure promoting other attractions administered by the federal government. Government operated sites, both national and state, generally had a larger variety of forms of interpretation than privately operated historic areas.

Study sites that utilized interpreter-led tours were more likely to charge entry fees than areas that did not offer tours. Few government sites provided tours or collected a fee. When a fee was collected, it was generally less than fees charged by private areas.

The categories and amounts of interpretation offered are related to the administering agency. The results of the inventory indicate a tendency for government sites to provide a larger variety and amount of interpretation. If

tours were not provided, there tended to be more signs and displays available. Thus, government sites provided the interpretation, but it is the responsibility of the visitors to familiarize themselves with the site.

Site Characteristics

A site with small acreage had few general information signs, but used displays as a common form of interpreting the area. Locations receiving a large number of visitors were less likely to provide interpreter-led tours. Sites that provided only stationed interpreters did not provide tours, and only one site did not provide either type of personal interpretation.

The budget for interpretation influenced the type of interpretation the site used. If more money was available for interpretation, it was almost always used to increase the number of displays, general information signs and audio-visu-als. This trend indicates that these three forms of interpretation are viewed as supplemental and enhancement to be added only when adequate funding is available.

The availability of a large number of brochures did not affect the amount of litter present at the site or the maintenance score. It was hypothesized that if the site offered more "disposable" interpretation, the more often

litter would be discovered on the grounds. This relationship was not supported by this research.

Community. There were only two noticeable trends in the relationship between the size of the surrounding community and the interpretation provided. Historic sites located in remote areas relied heavily upon signs and displays. Also, the more unique forms of interpretation, i.e., audio devices, newsletters, and self-guided walks, were generally found on sites with a small surrounding community.

Vandalism

Determining the role of interpretation in reducing vandalism was the primary reason for conducting this research. Observation of the abundance of various types of interpretation and the vandalism a site experienced provide some informative conclusions. For example, seven of the nine incidents of theft reported were committed on sites that did not provide interpreter-led tours. This may support the supposition that the presence of an employee will discourage theft, however, the presence of stationed interpreters did not reduce the occurrence of theft.

As might be expected, sites with a large number of signs, particularly when located on the grounds, experienced the greatest number of acts of vandalism that included disassembly or removal.

Perhaps the most important finding was that study sites with more than the average amount of interpretation received less than the average number of acts of vandalism. This trend was overridden in two cases. The two sites with high vandalism rates were also the two sites with the greatest number of visitors. This can be interpreted to indicate that interpretation may be a useful tool in reducing vandalism.

The analytical relationships between interpretation and vandalism will also be discussed in Chapter 5.

Site Characteristics

Community

Site characteristics remained independent of the surrounding community. One unexpected finding was that the population density of the community had no influence on the number of visitors the site received. The maintenance score for a site was inversely proportional to the number of people per square mile (p/sm). Population density of the surrounding community averaged 2,860 p/sm for all 24 study sites, and the average maintenance score for all study sites was 8.7. Sites located in a community with a higher population density than average received a maintenance score averaging only 8.0. The increase of the average maintenance

score to 9.1 among sites in communities with a population density lower than the average further illustrates the point.

The acreage associated with each historic site was inversely related to the population density of the surrounding community. Smaller study sites were most commonly located in areas with a large number of people per square mile, and larger sites in less densely populated communities. This relationship was also associated with the administering agency. Government operated sites were more often located in less dense areas and included a larger amount of land than private sites.

Vandalism

Previous literature has related unrepaired vandalism or damage to future vandalism. The adage that "vandalism begets vandalism" has even been supported by research studies. The results of this research, however, did not produce any evidence to support the theory. This could be due to the method used to attain a maintenance score or the variables upon which the score was based.

Incidents of vandalism which had occurred within the past fiscal year were the only ones recorded and used in the data analysis. The researcher noted similarities in site characteristics when managers related any vandalism they

knew the site had experienced in the past. Large sites with unlimited access to the grounds had experienced more vandalism over the years than sites with secure restriction on access to area grounds.

The budget for interpretation is directly related to the number of incidents of vandalism. Sites with larger amounts of money allocated for interpretation tended to have more acts of vandalism. This may be attributed to the fact that larger budgets mean more objects will likely be available on the site. More objects available means more opportunity for vandalism.

Charging an entry fee may be a deterrent to vandalism. The majority of study sites that utilize an entry fee did not experience any vandalism. Fourteen of the historic sites charged a fee (range: \$1.00-\$3.00) and only five of these sites experienced any vandalism. The sites that charged a minimal fee were the target of a larger proportion of the acts of vandalism than sites that charged a greater entry fee (Table 3). The relationship between vandalism and an entry fee supports the idea that people are less likely to vandalize something they have paid money to experience.

The most significant relationship between site characteristics and vandalism involves the annual visitor count: the more visitors, the more vandalism. As the reference by Miller in the literature review chapter noted,

Table 3. The relationships among the entry fee, number of incidents of vandalism, and average cost of an incident at sites charging an entry fee.

Site	Entry Fee (\$)	Incidents	Average Cost (\$)
3	2.50	0	.
5	2.00	0	.
6	1.00	6	202.29
7	3.00	0	.
10	3.00	0	.
11	1.00	4	42.50
12	3.00	0	.
14	2.00	0	.
15	1.50	0	.
16	2.00	1	40.00
18	2.00	1	114.00
22	2.50	0	.
23	1.50	0	.
24	2.00	1	25.00

essentially everyone is a potential vandal. The law of averages can be applied here to say the more potential vandals (visitors) the site is exposed to, the more likely it is the site will experience vandalism. The influence of the number of visitors on different aspects of vandalism will be discussed further in Chapter 5.

Community

Vandalism

The influence of the surrounding community on the vandalism a site experienced was not as expected. The study was designed to include community characteristics because it was believed that the area in which a site was located would affect the vandalism the site experienced. The data showed nothing conclusive about the influence of the community. The more expensive incidents of vandalism (> \$100) all occurred at sites in communities with less than 1,358 people per square mile. Since many of the acts of vandalism recorded were committed by visitors, the affect of the surrounding community may not be very important because local people do not patronize the historic site on a regular basis. The relationships between characteristics of the surrounding community and vandalism need to be determined by a more in depth study of these factors.

Vandalism

Twelve of the 24 study sites reported experiencing some vandalism within the 1986 fiscal year. These sites reported a total of 24 incidents of vandalism with a total cost of \$2,074. The number of incidents of vandalism and the total cost for the vandalism that these 24 study sites experienced are minimal compared to the vandalism ordinarily reported by park and recreation areas across the country. The small size of the study sites and the selective audience historic sites attract certainly influenced the findings of this study.

The year the study was conducted may have also contributed to the low rate of vandalism reported. As managers related past vandalism, a common phrase was "about three or four years ago." There seems to have been a rash of vandalism between 1981 and 1984. Many of the managers indicated these years as being when they experienced a great deal of vandalism. This trend may be related to the high level of unemployment the nation faced during these years, but the possibility was not explored as part of this research project.

The most common form of vandalism was theft with nine of the 24 incidents being in that category. There were five cases of breakage, five incidents of disassembly or removal,

two of disfigurement, one of breakage and theft, one of surface graffiti, and one case of burning. Figure 11 is a photograph of one of the cases of disfigurement. A brief description of each act of vandalism is provided in Appendix G.



Figure 11. These carvings are an example of the disfigurement category.

The reasons for some of these acts are obvious; some other reasons were offered by the managers during their description of the incident. The reasons offered coincide with the previous research reported in the literature review chapter of this thesis. The theft of flags was believed to

be by young adults motivated by peer pressure and tradition. The fire in the trash can was prompted by someone trying to keep warm on a cold winter day. Retaliation is suspected to be the cause of the rocks being thrown through the window. The manager identified the children responsible as the same group he had previously evicted from the property on numerous occasions. Financial gain was obviously the reason for the money being taken from the giftshop and the breaking of the window to remove the items inside the shop. Protest would be responsible for the "Free South Africa" spray painted message found in a predominantly black section of town. Identification is responsible for the names and symbols carved into the wooden stairs and window sills. The theft of the musket lock and snow boots, picnic tables, the "Closed Monday" sign, figurines, and possibly the flags was more for personal gain than financial gain since they are fairly uncommon items that require a specific need or interest on the part of the possessor. The lock that was broken on the outside of the building may also have been for personal gain since the building was under renovation and a number of tools were inside. The removal of the railroad ties and cable was done to gain access to a river area by the trail the park was attempting to keep closed off. The remainder of the acts of vandalism appear to be malicious acts performed for entertainment.

Contrary to popular belief, vandals do not always lurk in the dark. There were no more incidents reported to have happened after operating hours than occurred during the site's operating hours. These findings may be influenced by the fact that so many of the incidents were thefts. Most of the cases of theft required the vandal to be inside the building where the money or objects were kept.

Proportionally more acts of vandalism occurred in large cities and very small towns (Table 4). The old adage that vandalism is a crime of anonymity offers an explanation. One can feel very alone and isolated in a large crowd or in a remote, private place. Identity is often lost when the individual becomes one of many, thus the vandal need not be as concerned about being noticed when in a large city just as a remote area makes it less likely that someone will pass by and notice the wrongdoing.

Managers were asked what they were currently doing to prevent vandalism, and which measure they believed to be the most effective at deterring vandalism. The most common response regarding the most effective deterrent was having people around. Whether the site had someone living on-site, or was located in a heavily used area, the managers believed the constant presence of people was a great help in deterring vandalism. Keeping the area well lighted was also commonly referred to as a deterrent.

Table 4. Comparison of sites by source of community data and number of incidents of vandalism.

Site	Size	Number of Incidents
1	L	2
2	M	1
3	M*	0
4	M	1
5	M	0
6	L	6
7	L	0
8	S	0
9	M	1
10	M	0
11	S	4
12	S	0
13	L	0
14	L	0
15	L	0
16	L	1
17	L	2
18	S	1
19	L	0
20	M	2
21	S*	2
22	M	0
23	M	0
24	M	1

L = collected from a tract within a city

M = collected from a place or town of 2,500 or more

S = collected from county data

* = taken from city tracts, but listed as being in the size category best describing them

CHAPTER 5

RESULTS AND DISCUSSION:

ANALYTICAL ANALYSIS OF VARIABLES

What Regression Analysis Revealed

A method of data analysis was needed that would provide the answers to the questions reported as objectives of this study. What variables were important in predicting the different measures of vandalism? Regression analysis was the most effective method of obtaining these answers given the variables and how the variables were recorded.

Forward and backward stepwise regressions were run on each of three dependent variables--total cost of vandalism at a site, average cost of an act of vandalism at each site experiencing vandalism, and the number of incidents each site experienced. Most of the factors indicated to be important in predicting each of the dependent variables were taken from the results of forward stepwise and then cross referenced with the backward stepwise.

Total Cost of Vandalism

The most important variable in predicting total cost was the number of self-guiding signs available. This one

variable accounted for almost 93% of the variance in the dependent variable. Tours led by interpreters were also noticed to negatively influence the total cost of vandalism at a site. When an employee is in the vicinity, vandalism would have to be limited to small objects that are less likely to be noticed or acts of vandalism that can be performed quickly. This eliminates the theft of larger, more expensive items and acts such as completely destroying an object since it requires more time. The number of annual visitors was also a significant variable in relation to total cost. This is a logical conclusion since the more visitors, the more chances of vandalism and as the number of acts of vandalism increases so does the total cost. Together these three variables--self-guiding signs, tours, and visitors--accounted for 98% of the variance in the dependent variable total cost (Table 5).

Table 5. Independent variables predicting the total cost of vandalism at historic sites.

Dependent variable	Factor	R ²	
		Partial	Model
Total Cost	self-guiding signs	.9287	.9287
	tours	.0300	.9586
	visitors	.0226	.9812
R ² > .01			

Average Cost of Vandalism

Self-guiding signs were indicated to be the most important variable predicting the average cost of an act of vandalism at sites experiencing vandalism. The presence of self-guiding signs accounted for 66% of the variance in the average cost of an act of vandalism. Self-guided walks entered the model as the second most important variable in predicting the average cost of an act of vandalism. This is due to the fact that the only site that offered walks as a form of interpretation also experienced the two incidents of vandalism with the highest cost of all incidents recorded in this study. Again tours was an important variable, but were brought into this model as the third most influential. Tours are important to predicting average cost for the same reason tours were important in the total cost model--limits on size and time. The number of brochures available entered the model as the fourth most important predictor of the average cost, but explained only 5% of the variance. Together, the variables mentioned above explained a total of 94% of the variance in the dependent variable reflecting the average cost of an act of vandalism at sites experiencing vandalism (Table 6).

Table 6. Independent variables predicting a site's average cost per act of vandalism.

Dependent Variable	Factor	R ²	
		Partial	Model
Average Cost	self-guiding signs	.6619	.6619
	walks	.1428	.8047
	tours	.0856	.8902
	brochures	.0501	.9403
R ² > .05			

Number of Incidents. Two major factors were identified by stepwise regression as being important predictors of the number of incidents of vandalism a site experienced--annual visitor count and the availability of interpreter-led tours. The fact that the number of incidents of vandalism increases as the number of visitors increases is logical. As mentioned in Chapter 4, the law of averages suggests that this increased exposure might lead to an increase in vandalism. Interpreter-led tours again has an affect on the number of acts of vandalism because it puts limitations on the amount of material susceptible to vandalism. The percentage of the surrounding community in the age group of 15 to 19 also entered as being a significant predictor.

This may be an indication that this age group is responsible for the vandalism experienced by these study sites. An orientation talk was also identified as having an influence on the number of incidents of vandalism a site experienced. However, this variable was not included in the discriminate analysis model and its influence is not fully understood. These four variables--visitors, tours, percent of the community in the age group 15 to 19, and orientation talks--explain 89% of the variance found in the number of incidents of vandalism (Table 7).

Table 7. Independent variables predicting the amount of vandalism (defined as the number of incidents) a site experienced.

Dependent Variable	Factor	R ²	
		Partial	Model
Number of Incidents	visitors	.6055	.6055
	tours	.1338	.7393
	age 15 to 19	.0951	.8343
	orientation	.0604	.8947
R ² >.05			

Variables Discriminating Between Vandalized and Nonvandalized Sites

Discriminate function analysis provided the following information on which variables are indicators that a site was or was not vandalized.

Indicators That a Site Will Not Be Vandalized

Interpreter led tours at a site is the best indicator that the site will not be vandalized. The presence of other people and particularly an employee is a primary deterrent to vandalism. Having audio-visuals available was the second most important indicator. This provides support to the earlier references of the effectiveness of various forms of interpretation. Moving messages that can be heard tend to hold the attention of the visitor better than a message that must be read. If visitors are more attentive to audio-visuals then perhaps they are receiving more of the message. This produces a greater understanding on the part of the visitor, and perhaps instills more respect for the historic site, reducing the desire to vandalize the resource.

The maintenance score of a site was also shown to be a variable related to sites that did not experience vandalism. As mentioned previously, no direct evidence of a relationship between the site maintenance score and vandalism was

found by this research. The maintenance score variable may have become important in discriminating between vandalized and nonvandalized sites due to complex interrelationships among variables or some factor not recognized by this study.

General information signs (not self-guiding interpretive signs) were part of the model indicating a site would not be vandalized. They may be a psychological deterrent to vandalism. Numerous general information signs, as defined by this study, show that the site has a helpful, caring attitude towards the visitor since the signs are to make traveling and planning easier for the visitor. The site may become endeared to the visitor because of this friendly gesture.

Indicators That a Site Will Be Vandalized

The model showed that having a newsletter in the visitor center was an important factor in differentiating between sites that experienced vandalism and sites that did not. Only two study sites had newsletters, both were located in small towns, but had a large area associated with the site. Only one of them reported any vandalism within the past fiscal year. The researcher can offer no reasoning for the importance of this variable.

Brochures and self-guiding signs are indicators of a site's susceptibility to vandalism. Both of these forms of

interpretation must be read by the visitor, and holding a visitor's attention with the written word can often prove difficult. If these materials are not read, or read with very little attention, the visitor is missing the message the materials were to have provided. The message provided by interpretive material is often the basis of respect and awe the visitor has for a historic site, and if there is respect for a site then it is not as prone to vandalism. Also, if a site has a number of brochures and self-guiding signs available, it is generally a large site. Large sites provide vandals with places where they are out of sight of the visitor center or other concentrations of employees. Figure 12 displays the model equation used to distinguish between vandalized sites (those with a negative final value) and nonvandalized sites (those with a positive final value). The equation was derived by using a SAS regression analysis and the dependent variable "vandalism" as a discriminant function.

(-2.20)--self-guiding signs (-0.25)--brochures (-0.62)--
newsletters (-0.69) + tours (1.50) + general information signs
(0.10) + audio-visuals (1.80) + maintenance score (0.18)

R²=0.8376

Figure 12. Variable influence on discriminating between
vandalized sites (negative final value) and
nonvandalized sites (positive final values).

CHAPTER 6

SUMMARY AND MANAGEMENT IMPLICATIONS

Interpretation

Brochures were the most widely used form of interpretation. At least one brochure was available at every study site except one. Interpreter-led tours were more common at sites under private administration, and are associated with an entry fee being charged. If a tour is offered, then stationed interpreters will not be used.

Displays are often used by sites with a small landholding, but these sites had few general information signs. Both of these forms of interpretation, along with audio-visuals, are most likely to be introduced or enhanced when funding is available.

The affects of interpretation on vandalism indicated by this research are supportive of personal interpretation. Providing interpreter-led tours is an effective means of reducing vandalism and theft in particular. Signs have the opposite effect on vandalism. They seem to attract vandalism that includes disassembly or removal.

The influence of audio-visuals on vandalism reduction may be due to the effectiveness of this type of

interpretation. Since they capture attention, the visitor has a better opportunity to learn something about the site. Hopefully, they are less prone to damaging a site once they realize it's importance.

The only forms of interpretation that appear to be positively associated with vandalism are brochures and self-guiding signs. A site large enough to necessitate multiple brochures and the erection of numerous self-guiding signs will be subject to the negative aspects associated with a "large site" in relation to vandalism.

If a small site of historical significance is having a problem with theft, the manager may want to consider offering interpreter-led tours. Cost may not be as large an obstacle as suspected. Volunteers were used extensively in the tour guide capacity at the historic sites in this study.

The cost of either replacing or repairing signs on the grounds in some cases may make the use of audio-visuals a wise financial investment. The initial cost of starting an audio-visual program is usually greater than that of producing signs, but in certain situations may prove the more cost-effective means of interpretation. Available facilities and other site specific variables would all need to be considered before any changes in interpretive techniques are made.

Site Characteristics

Visitors

The number of visitors a site received on an annual basis was found to be one of the most important factors in determining vandalism. Each visitor has the potential to be a vandal, and the more visitors a site receives, the more likely it is that someone in the group will realize that potential. The feeling of anonymity in a large crowd may also be a factor if the site receives large groups of visitors at particular times. As many of the managers interviewed during this research noted, vandals are very seldom alone and almost always are in groups of two or more.

Size

The physical size of the site may also contribute to it being vandalized. Large land holdings allow the vandal more places to be out of sight of the employees or other visitors. Most vandalism occurs in secretive places or ways, and large areas and the confusion of crowds provides the perfect opportunity for secrecy.

Large sites are also faced with the mixed blessing of having a variety of buildings, and interpretation (especially signs). Although we generally think of more as

better, the more opportunities vandals see, the more likely they are to take advantage of one of the opportunities.

Maintenance Score

The maintenance score for a site was inversely proportional to the population density of the surrounding community. Sites located in a community with a higher population density than average had lower maintenance scores.

Vandalism was found to be independent of maintenance score within the scope of this research. This was a result that may contradict previous literature on the subject of disrepair leading to further destruction of the property. The historic areas included in this study received high maintenance scores to reflect the well maintained sites. The uniformly high maintenance scores may be unique to historical sites, i.e., vandalism must be quickly repaired to maintain the integrity of the site in the eyes of the manager.

Entry Fee

Charging an entry fee at the sites was found to be a deterrent to vandalism. Study sites using a fee system received less vandalism than sites allowing free admission. As the entry fee increased, the vandalism decreased. This

suggests people appreciate something they have an investment in more than something that is "free."

Even if the site characteristics that indicate a site is highly susceptible to vandalism could be changed, the loss may outweigh the gain. The purpose of setting aside areas of historical significance is to preserve them for people to experience. Attempting to decrease the number of visitors or size of the site to reduce vandalism would be contrary to the purpose of historic sites.

Community

The surrounding community did not have any significant influence on the vandalism as recorded in this research. This may be attributed to the fact that much of the vandalism recorded was committed by visitors, and the surrounding community may not be regular visitors to the site. General classifications of the community such as a big city, a medium size town or a rural community did not make a difference in the vandalism the local site experienced. However, the number of people per square mile was associated with vandalism. Less densely populated areas contained the majority of acts of vandalism. Especially notable is the fact that the average cost of vandalism for a site was very closely related to the number of people per

square mile. All sites with an average cost per incident of vandalism of more than one hundred dollars were in areas with 1,358 people per square mile or less. This provides more support for the idea that the less likely it is that someone else is around, the more likely it is that vandalism will occur.

Research Needs

This research merely scratched the surface of the work that needs to be done in the area of how interpretation and vandalism are related. A study that directly measures the effects of different forms of interpretation on vandalism is needed to provide more definite conclusions. This study may be used as a base for future studies to build upon. By identifying some factors that are important in determining vandalism, some that are not necessarily important, and some that need more detailed research to determine their importance, this research can be used to give direction to future studies. The more information researchers can provide managers about how vandalism relates to the characteristics of their site, including interpretation and surrounding community, the better managers will be able to bring vandalism to a controllable level.

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APPENDIXES

APPENDIX A

BRIEF DESCRIPTION OF EACH STUDY SITE

SITE	DESCRIPTION
1.	Located in downtown Richmond, VA in a black section of town. Site includes everything up to two blocks away. Only opened in July, 1985. Had alot of costly vandalism before it opened.
2.	Located off some backroads out in the country. Only had three incidents in past 12 years.
3.	Located on the edge of a small town. Site includes the visitor center on the mainland and a shuttle boat that goes to the island where the historic structure is located. Majority of visitors go to ticket window then to island, few go into visitor center.
4.	Located on the edge of a small town in a residential area. Many people come to look at the water from here. Visitor center is a portable table that is set up in yard on weekends.
5.	Located in Fredricksburg Historic District in a residential area. One of a group on city tour. Daytime vandalism is all that has ever occurred.
6.	Located in the shipyard area of Baltimore, MD out on a peninsula. A large site with a variety of interpretive materials. Used on anniversary of almost any historical event.
7.	Located out in the country off a side road of a very small town. Buildings on site are in close proximity and kept locked between tours.
8.	Located outside a very small town. Researcher noticed heavy use by locals.
9.	Located in a small town. Across the street is a trailer park. Have an interpreter stationed in the church during operating hours. Still used for special occasions
10.	Located in a medium sized town. A well kept home in an upper class residential section.
11.	Located outside a small town, but just off interstate. A new site that just opened in 1986. Primarily problems with locals who resent the changes caused by the opening of the park. Site includes a 57 mile right of way along a river

SITE	DESCRIPTION
12.	Located on the edge of a very small town that is known for being a depressed area. Community is opposed to the site
13.	Located in a "newly rich" suburb of Washington, D.C. Good involvement from area
14.	Located in a medium sized town just outside Washington, D.C. on the corner of a busy street. One of a group of sites on a city tour.
15.	Located in downtown area of Baltimore, MD. Low income "projects" across street. On corner of busy street.
16.	Located in a medium sized town just outside Washington, D.C. One of a group of sites on a city tour. Have had damage to grounds in the past.
17.	Located in business section of a medium sized town just outside Washington, D.C. No grounds, just a shop adjacent to other shops. One of a group of sites on a city tour.
18.	Located on the edge of a small town just north of Wheeling, WV. The visitor center is in town about two miles from the historic site
19.	Located on the edge of Baltimore, MD in a upper class residential area. Have a very nice restaurant inside the historic structure
20.	Located on the edge of a medium sized town in the "bad neighborhood." Railroad tracks just behind the site. Has always had a problem with vandalism
21.	Located outside a very small town. Have a campground on site. A large site with buildings and facilities spread out
22.	Located in a medium sized town. Nuisance vandalism has been common
23.	Located in the business section of a medium sized town. One of a group of sites on a city tour
24.	Located in a medium sized town. One of a group of sites on a city tour.

APPENDIX B

EXAMPLE OF INTERPRETATION DATA SHEET

INTERPRETATION DATA SHEET
(tally one point for each article provided in that category)

<u>Material Provided</u>	<u>Tally</u>	<u>Where Provided</u>
orientation talk only	_____	visitor center
	_____	historic structure
	_____	grounds
is it mandatory? _____ description: _____		
interpreter led tours	_____	
stationed interpreters	_____	visitor center
	_____	historic structure
	_____	grounds
self guiding signs	_____	visitor center
	_____	historic structure
	_____	grounds
description of material and placement: _____		
display	_____	visitor center
	_____	historic structure
	_____	grounds
description of material and placement: _____		
general information signs	_____	visitor center
	_____	historic structure
	_____	grounds
description of material and content: _____		
brochures (portable written material)	_____	visitor center
	_____	historic structure
	_____	grounds
audiovisuals	_____	visitor center
	_____	historic structure
	_____	grounds
other (specify)	_____	visitor center
	_____	historic structure
	_____	grounds

APPENDIX C

EXAMPLE OF INTERVIEW DATA SHEETS

INTERVIEW

Site Characteristics:

acreage or square footage (as applies): _____

number of buildings: _____

number of entry points: _____

operating season (based on 001-365):

weekdays: _____

weekends: _____

operating hours (based on 24 hr. clock): _____

entry fee: _____

annual visitor count: _____

number of permanent employees: _____

number of seasonal employees: _____

budget for interpretation: _____

Surrounding Community

what type of community involvement is there? (annual events, community picnics, etc) _____

volunteers? _____ number of people? _____

associations? _____

Vandalism

are you required to report vandalism? _____

how do you report it? forms? _____

who pays for the repairs? _____

estimated annual repair cost? _____

have any cases been prosecuted? _____

who is the typical vandal? _____

what are you doing to prevent vandalism? _____

which is most effective? _____

APPENDIX D

EXAMPLE OF MAINTENANCE LEVEL DATA SHEETS

MAINTENANCE LEVEL DATA SHEET

(score is the% of possible points for the site)

Cumulative

- 2 pts. grounds appear manicured within two weeks
- 2 pts. facilities stocked (t.p., brochures, etc.)
- 2 pts. written messages are clearly visible* (clear of vegetation, not faded)
- 2 pts. no physical damage visible on interpretive media
- 2 pts. no physical damage visible on structures

Total Points

Number of articles of litter** visible from trail access point to visitor center to historic structure.

Comments:

* does not include brochures

** litter is any unnatural object over one square inch

APPENDIX E

DEFINITIONS FOR VANDALISM SECTION

Vandalism--any act committed intentionally, although known to be illegal or detrimental, that contributes to the destruction or defacing of a cultural or natural resource. Any act that alters the appearance of the historic structure or in any way decreases its value as an original object.

Vandal--a person who without lawful excuse destroys or damages any property belonging to another intending to destroy or damage any such property or being reckless as to whether such property would be destroyed or damaged.

Breakage--fracturing, shattering, smashing, or crushing apparatus, equipment or facilities, or parts thereof.

Disfigurement--scratching, cutting, denting, carving, gouging, or penetrating through the surface, either exposing the undersurface or making a hole completely through the item.

Burns--combustion, charring, scorching, or singeing of flammable materials.

Vegetative Damage or Loss--breaking, chopping, burning, nailing, making ruts or removing trees, shrubbery, flowers, turf or groundcover.

Surface Graffiti or Marking--superficial writing or drawing on, or discoloring the surface of a wall, door, partition, panel, sign or other facility or apparatus.

Disassembly or Removal--unfastening screws, bolts, nuts, nails, or hinges to take apart a piece of equipment, apparatus or facility.

Theft--secretly removing an object or money without the consent of the owner.

Theft and Breakage--using breakage, as defined above, to gain access to materials for the purpose of removing them without consent of the owner.

APPENDIX F

EXAMPLE OF VANDALISM DATA SHEETS

VANDALISM

(one incidence per sheet)

category:

- ☐ breakage
- ☐ disfigurement
- ☐ burns
- ☐ vegetative loss or damage
- ☐ surface graffiti or marking
- ☐ dissembly or removal
- ☐ theft
- ☐ theft and breakage

describe the material vandalized and how it was done: _____

characteristics of vandal (if known): _____

repair cost (include labor): _____

time of year: ☐ open season
☐ off season

time of day: ☐ during operating hours
☐ during nonoperating hours, but park still open
☐ after hours
☐ don't know

where: ☐ in or around visitor center
☐ in or around historic structure
☐ on park grounds

APPENDIX G

DESCRIPTION OF EACH ACT OF VANDALISM (BY SITE)

SITE	DESCRIPTION
1.	Breakage; a lock on the outside of the building was broken; replacement cost \$5.
	Surface graffiti or marking; spray painted message on wall erected for renovation purposes; repair cost \$6.
2.	Disassembly or removal; knocked over three wooden signs and pulled up a wooden gate post; repair cost \$150.
4.	Breakage; windows broken by gun shots; repair cost \$100.
6.	Disassembly or removal; attempted to open plexyglass and lock on a display case; repair cost \$20.
	Disfigurement; backed car into front gate; repair cost \$87.
	Burns; built a fire in the parking lot trash can; replacement cost \$200.
	Breakage; attempted to break into exhibit building; repair cost \$50.
	Theft; figurines stolen from diorama display; replacement cost \$20.
	Theft; flag was stolen; replacement cost \$40.
9.	Breakage and theft; broke window of gift shop with a brick from the water fountain, then stole items in the window; repair/replacement cost \$200.
11.	Disfigurement; carvings on wooden stairs and window sills; repair cost \$20.
	Disassembly or removal; railroad ties planted in the ground and the cable stretched between them were pulled up and moved aside; repair cost \$65.
	Disassembly or removal; pulled telephone line from the side of the building; repair cost \$5.
	Theft; stole flags; replacement cost \$80
16.	Theft; sign stolen from front lawn; replacement cost \$40

SITE	DESCRIPTION
17.	Theft; stole pewter from gift shop; replacement cost \$100.
	Theft; stole money from contribution jar; replacement cost \$6
18.	Theft; two picnic tables were stolen; replacement cost \$114.
20.	Breakage; rock thrown at window; repair cost \$33.
	Breakage; rock thrown at window; repair cost \$33.
21.	Theft; musket lock and snow boots stolen; replacement cost \$375.
	Disassembly or removal; wooden rail fence at entry gate was broken and removed; repair cost \$300.
24.	Theft; broken clay pipe was stolen; replacement cost \$25.

VITA

Sara Frances Main was born in Austin, Texas, on August 30, 1964. Her family later moved to Sugar Land, Texas, where she attended John Foster Dulles High School. She competed in varsity track and basketball and was inducted into the National Honor Society before graduating in 1982. The field of natural resources attracted Frances to Stephen F. Austin State University in Nacogdoches, Texas, where she enrolled in the School of Forestry. She received a four year academic scholarship, was an officer in numerous forestry organizations, and edited the School of Forestry newsletter and yearbook. Frances completed the requirements for a Bachelor of Science in Forestry in May of 1986. Outdoor recreation was stressed in her curriculum and she became very interested in interpretation and its use.

Frances began attending graduate school at West Virginia University in 1986 on a research assistantship to study the relationships among interpretation, site characteristics, community characteristics, and vandalism at historic sites. Circumstances led Frances to the University of Tennessee, Knoxville, in September of 1987 to complete her Master of Science program.

Frances will be using her education as an interpretive naturalist with the South Carolina Department of Parks, Recreation and Tourism, starting May 1988.