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AUTHOR Coursen, David
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ABSTRACT

There are two basic types of vandalism, malicious and nonmalicious. Both types can be controlled, but the methods of control differ. Most of the literature deals with malicious vandalism. Perhaps because security appears to be the only way to control malicious vandalism, it is often made the focal point of antivandalism programs. The most important consideration is the relationship between the cost of a security system and its potential value to the school. A comprehensive antivandalism program using security devices as part of an overall plan is often suggested. Unfortunately, the literature is full of suggestions and assertations, but remarkably short on concrete facts documented by scientific research. There are two basic approaches to controlling malicious vandalism. Deterrent programs treat vandalism symptomatically, usually by emphasizing school security. The diagnostic approach attempts to prevent vandalism by attacking its causes. Thoughtful building design can greatly reduce nonmalicious vandalism. The well-designed building will be less vulnerable to all kinds of damage--malicious, nonmalicious, and even wear and tear. (Author/JG)

SCHOOL LEADERSHIP DIGEST

Vandalism Prevention

David Coursen

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FOREWORD

Both the National Association of Elementary School Principals and the ERIC Clearinghouse on Educational Management are pleased to continue the *School Leadership Digest,* with a second series of reports designed to offer school leaders essential information on a wide range of critical concerns in education.

The *School Leadership Digest* is a series of monthly reports on top priority issues in education. At a time when decisions in education must be made on the basis of increasingly complex information, the *Digest* provides school administrators with concise, readable analyses of the most important trends in schools today, as well as points up the practical implications of major research findings.

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The author of this report, David Coursen, is employed by the Clearinghouse as a research analyst and writer.

Paul L. Houts
Director of Publications
NAESP

Stuart C. Smith
Assistant Director and Editor
ERIC/CEM

INTRODUCTION: ASSESSING THE COSTS

> "Since colonial times, American schools have been plagued by vandalism."
>
> *Weiss*

Vandalism is actually even older than this statement suggests. The term originated with the Vandals, presumably the most destructive of the barbarian tribes that sacked the declining Roman Empire. Technically, the first incident of school vandalism occurred when these marauders turned their attentions to some unlucky school building. Fortunately, when the tribe disappeared, real vandalism became a lost art, and contemporary vandals are considerably less ambitious then their empire-sacking predecessors.

Today, though, educators must wonder if the ancient tribe is not returning. The current financial costs of school vandalism are staggering, and the speed of their increase is positively alarming. Around 1970, writers generally estimated the yearly vandalism toll at between one and two hundred million dollars. The most recent estimates place the cost at the half-billion-dollar mark. A report of the Subcommittee to Investigate Juvenile Delinquency, under the chairmanship of Senator Birch Bayh, explains what a staggering burden these losses place on the schools:

> This $500 million vandalism cost represents over $10 per year for every school student, and in fact equals the total amount expended on textbooks throughout the country in 1972.

But even this astronomical sum is "conservative." No precise figure is universally accepted, but whatever the actual amount, it is far too high; our school systems cannot afford to "give or take a few hundred million dollars."

School vandalism takes many forms. In 1971, the New York City School District suffered a quarter of a million broken windowpanes and spent one and a quarter million dollars replacing them. In other places, the most serious losses

are caused by arson-related fires. Another major part of the problem is the theft or destruction of school equipment.

This report defines *vandalism* comprehensively as any act that causes extraordinary physical damage to a school. There *is* a distinction to be made between malicious and accidental property destruction, but ultimately a window is just as broken (and as costly to replace) by an errant baseball as by a well-aimed rock.

There may be disagreements about the precise costs of vandalism, but the seriousness of the problem is beyond dispute. The number of dollars actually spent replacing damaged or stolen property is only part of the total price. Money spent replacing things is basically money diverted from other, more constructive uses, money that might be spent actively improving a school rather than merely attempting to restore it. And, as vandalism becomes more severe, increasing sums must be diverted from education to security; costly steps are taken to protect the schools, and more money is spent on mounting insurance premiums. Eventually, voters, too, may begin to reject vandalism-inflated budgets that demand higher taxes without offering any improvement in education.

As grave as these purely financial problems are, they may not be the most serious part of the vandalism threat. Untimely property destruction seriously disrupts a school's operation. For example, the disappearance of a teaching aid may interrupt a carefully planned instructional program. When classrooms are damaged or destroyed, the schedule of the entire school is disrupted; split-shifts or busing become necessary. And any school that has suffered extensive vandalism damage can hardly offer its students a good learning environment. In fact, a continuing vandalism problem may ultimately demoralize everyone connected with a school.

As if these problems were not serious enough, there is increasing evidence that coping with vandalism has distorted the judgment and reversed the priorities of some educators. Edwards,* for example, quotes one school official ecstatically

*Unless otherwise stated, references to Edwards are from "How to Reduce the Cost of Vandalism Losses."

proclaiming that a piece of security equipment "is absolutely fantastic. It's real 'Big Brother.' " The unasked question remains whether "Big Brother" has any place in the educational system in a free society.

Such comments are hardly unique. Consider, for example, the disregard for law apparent in Murphy's formula for dealing with vandalism:

> Too many people and some principals have taken the course that they are afraid to act because the law will not hold them. I think you have to act and worry about the law later because this is exactly what the outside groups are doing. They are not worrying about the law.

Understandably, school officials want to act decisively to counteract malicious acts of destruction against property the officials are responsible to protect; desperate times often call for desperate measures. But no situation is so serious that it cannot be further aggravated by policies that deliberately ignore the law and violate the principles of due process.

Other extreme responses to school vandalism may be equally devastating to the educational environment. Ellison warns that already "many of our schools resemble a prison or an armed fortress with barbed wire fences." In Gary, Indiana, he continues, this has reached the point where the school board actually voted to erect a 17-foot high fence around one school. It is true that a school protected by high walls, roving searchlights, armed guards, vicious dogs, and checkpoints at every entrance will probably be saved from vandalism, but at what cost to quality education?

WHO ARE THE VANDALS AND WHY DO THEY DO IT?

The first step in preventing vandalism is to identify the neobarbarians who attack schools and to determine why they do so. Naturally, there is no one "type" that engages in property destruction, nor a single reason for it. Still, it is possible to get a general idea of the nature and motivation of most vandals and, in doing so, begin to understand the problem and devise solutions for it.

Most vandals are young; Edwards cites reports that the majority are between the ages of 12 and 14, and FBI records show that 77 percent of those arrested for school vandalism were under 18. Acts of vandalism are not uncommon among adolescents; in a 1974 article, Juillerat cites a report finding that 31 percent of a sample group of adolescents had at some time damaged property maliciously. Most of the trouble, however, is caused by a few, and, as Ellison notes, "The school's potential 'wrecking crew' is usually small and easily identifiable."

More specifically, Ellison reports that vandals typically

- work in groups
- are male Caucasians between the ages of 11 and 16
- are not career delinquents
- have parents who are less mobile than those of other delinquents
- live near the schools they vandalize
- do not have serious mental disturbances
- are behaving "out of character" with previous behavior when they vandalize
- come from homes with significant parent-child discord

It is generally agreed that vandalism is a unique form of delinquent behavior. In addition, as Greenberg points out,

despite some claims to the contrary, there is no substantive evidence linking vandalism to social or economic status.

Discerning Intent

There are two basic types of vandalism, malicious and nonmalicious. Until quite recently, losses from the latter were generally accepted as inevitable. It is now clear that both types of destruction can be controlled, but the methods of control need to be considered separately. For example, motivation, crucial to most types of malicious vandalism, is completely irrelevant to nonmalicious vandalism, which is primarily a problem for architects and designers. As a result, a separate chapter is devoted to a discussion of some of the design variables that affect nonmalicious property damage.

Most of the literature deals with malicious vandalism, commonly dividing it into three categories: wanton, predatory, and vindictive. Wanton vandalism is deliberate but essentially irrational and unmotivated. The primary motivation for acts of predatory vandalism, as for burglary, is the desire for personal profit; the school's loss is incidental to the vandal's gain. Vindictive vandalism, by far the most prevalent of the three, is generally done in retaliation for some real or imagined offense by the school against the student. All three types are primarily behavioral problems, and the most common response to them is to increase security.

The Target

Often the real cause of property destruction does not lie with the vandal at all so much as with the school under attack. As Nielsen observes,

> The possible relationship of vandalism as an almost predictable result of an inconsiderate or a brutalizing attitude on the part of some school personnel toward youth should not be overlooked.

Both Ellison and Greenberg likewise emphasize the relationship between the quality of the school environment and the frequency of incidents of vandalism. The decisive factor

seems to be the extent of staff, student, and community involvement in the life of the school. As Greenberg notes, the highest rates of vandalism are generally found in schools with obsolete facilities and equipment, low staff morale, and high levels of dissatisfaction and boredom among the students.

Ellison describes the climate in many of the schools most troubled by vandalism:

> The school serves as a dehumanizing agent for many students and they have literally "declared war" on that institution. It does not meet their needs, it makes them "look bad," and is demeaning to their self-concept. They are simply turned off, and school is synonymous with failure.

Notice the vicious circle that results: as vandalism increases, the school becomes even more dehumanizing, and this makes it still more prone to vandalism, which, in turn, makes it still more dehumanizing.

Another factor that has contributed to the recent increase in vandalism is the social climate in contemporary society. As Goldmeier notes:

> Society's emphasis on violence and aggression, the renunciation of traditional values and the individual's sense of powerlessness to have an effect on his environment combine to create an attitude that accepts vandalism as an unexceptional part of life.

This attitude is the result not only of a general social ambience but also of specific contradictions in official attitudes toward property destruction. As Ellison observes, if you tear down a goalpost after a football game, you are an "enthusiastic fan," but if you do the same thing three days later, you are a vandal.

Perhaps because of such anomalies, the legal status of vandals is often uncertain. Goldmeier reports that young vandals are rarely charged with criminal damage to property and that most arrests "result in the juvenile being referred to their parents or some community social adjustment agency." In fact, as Ellison notes, "There is no descriptive terminology for vandalism under California law. It's a much discussed offense that is legally non-existent."

BUYING PROTECTION: WEAPONS IN THE ARSENAL

The basic approach an antivandalism program takes is primarily determined by the types of vandalism that are identified as the most serious and the most preventable. Perhaps because security appears to be the only way to combat predatory or wanton vandalism, it is often made the focal point of general antivandalism programs.

Alarm Systems

Anyone looking for weapons in the fight against vandalism will find an arsenal to choose from. Wells, writing in 1969, reported that there were more than 170 different alarm systems on the market, and it seems certain that the number has increased since then. With such a vast array of potential defense hardware, it is particularly important to understand the uses and limitations of various types of alarm systems.

Wells cites a report by the Small Business Association stressing the need to consider several factors in selecting an alarm system:

- confidence that any entry attempt will be detected
- false alarm rate
- cost
- reliability
- resistance to defeat
- limitations on effectiveness imposed by the operating environment

Not surprisingly, the literature is full of suggested systems. Some of the more frequently listed types are

- sound detection devices, triggered by changes in the noise level. In such systems, random noises may trigger false alarms.

- motion detectors, sending out wave patterns that are disrupted by an intruder.
- electrical or mechanical circuits or switches, activated by the opening of a door or window.
- photoelectric devices that send out beams of ultraviolet or infrared light. The presence of an intruder will interrupt the beams and activate the alarm. In general, the less expensive such a system is, the more limited and error prone; infrared are most expensive and effective.
- electronic sensing devices, using radar or radio waves; these are very expensive and accurate.

An effective system might also include cameras or ionization (smoke) detectors. Whatever system is installed, special care must be taken to make certain it is tamper proof.

It is seldom possible or desirable for a system to cover an entire school. Instead, the best approach seems to be to protect the entry points to the school and a few particularly vulnerable areas inside. If movable valuables are all stored in a secure central area, they will be twice protected. Even a vandal who does penetrate the school's perimeter defenses will be able to do only limited damage.

The type of alarm system used is also important. The fundamental choice is between onsite alarms, relying on noise, and silent alarms, transmitting signals to some central monitoring point. One problem with audible alarms is that they depend on neighbors to notify the appropriate authorities of any intrusion. In addition, while the noise may frighten inexperienced vandals, it too often simply tells professionals they "have time" to complete their operation before anyone is likely to arrive. In addition, if the noise itself is sufficiently irritating, triggering the alarm might become an end in itself; creating a disturbance with the alarm might be more "fun" than actually entering the school.

The alternative is a silent alarm that alerts some central monitor, generally by special phone lines. A school system may maintain its own monitoring station, or the alarm may

go directly to the local police department. In either case, there should be some type of verification procedure. Greenberg cites a recent survey showing that small business alarm systems in Los Angeles had a false alarm rate of nearly 95 percent. Like boys crying wolf, systems turning in false alarms are soon ignored, in this case by the police assigning a low priority to answering their calls.

One advantage of a silent system is that, with proper publicity, it may have a devastating psychological impact. The vandal, aware of the system, enters the school, uncertain whether the intrusion has even been detected; his fear of the unknown heightens the effect of the unseen, unheard alarm. Some writers, including Weiss, argue that publicity about an alarm system may have a greater effect than the system itself.

The most important consideration, with alarms as with all security systems, is cost-effectiveness, the relationship between the price of the equipment and its potential value to the school. Systems vary widely in cost. In some cases, similar systems may have different prices. For example, Strumpf mentions Donald Trumbull who recommends do-it-yourself installation as a cost-cutting method, contending that "alarm systems are neither sophisticated nor hazardous, they are merely basic electricity."

Miller and Beer describe a comprehensive system installed in the schools of Fort Wayne, Indiana. It includes preamps to detect and transmit noises, magnetic door switches activated when doors are opened, devices to signal temperature changes, and smoke detectors. The alarm signals are transmitted to a central monitoring station that alerts the appropriate authorities.

The system, the best of several tested, was first installed in seven problem schools in the district. The results were so encouraging that the district now hopes to install similar systems in every school. Costs are moderate. For the seven trial schools there was a one-time installation fee of $3,700, with phone line and lease charges of $2,480 per year. Vandalism losses were reduced measurably, with the most dramatic decline in after-school losses. Savings are estimated as high

as $20,000 a year in overtime and repairs, with possible insurance premium reductions and, of course, the intangible benefits of reduced vandalism.

Lights, Locks, and Fences

Lighting can also be used to improve school security. Floodlighting a school and its grounds inhibits vandals by forcing them to move in the light rather than under the cover of darkness. In addition, it can beautify the buildings and increase the safety of after-hours use of school facilities. High intensity discharge lamps may be desirable in some places, but the mercury vapor lamp, with its low maintenance and operating costs, is generally the most useful type of light available.

Among the most frequently recommended additional security equipment are fences, heavy-duty door and window locks, and similar hardware. In addition, many experts suggest employing a security force to guard the schools and even using guard dogs, though this step may cause problems.

The Difficulty of Fire Prevention

Another aspect of school vandalism, and one that is rapidly becoming more serious, is the fire problem. According to a journal article, "A Counterattack on Vandalism," the percentage of total fire losses directly attributable to vandalism rose from only 12.6 percent in 1957 to nearly 60 percent in 1965. Another article, "Vandalism. Fire. Theft. What Can You Do?" cites National Fire Protection Association estimates that between 1968 and 1971 the number of school fires increased from 10,600 to 15,700 with losses rising from over $45 million to over $72 million.

Fire losses are unique in several ways. With most types of vandalism, there is some correlation between the seriousness of the vandal's intent and the actual destructiveness of the incident. A single rock through a window can do only a limited amount of damage. But once a fire is started, it almost immediately passes beyond the control of the arsonist. For

example, Juillerat, in his 1972 article, recounts the stories of two boys. One set $1.5 million worth of fires in a series of attempts to destroy records of his failing grades. The other set a half-million-dollar fire as a protest against being forced to get a haircut. And in his speech Edwards recalled a 17-year-old boy who set a $200,000 fire because he felt his part in a school play was too small.

Greenberg points out that most fires are set during school hours, and only one out of five is a serious attempt to destroy property (rather than a trash-can-type fire). But nearly one-third of these serious attempts actually succeed in causing more than a thousand dollars worth of damage. As Edwards observes, "From an insurance standpoint, we know it is possible to control vandalism and malicious mischief, whereas it is virtually impossible to control arson losses." And yet these losses now make up nearly half the total cost of vandalism.

Juillerat's 1972 article suggests certain design considerations that may affect fire losses. In addition, he notes that delayed detection is a key factor in major fire losses and recommends installing some type of automatic fire-detecting equipment. But, he continues, sprinkler systems probably offer the best protection of all:

> Of the fires reported to the National Fire Protection Association over a ten-year period, no fire in a school fully protected by an automatic sprinkler system kept in proper operating condition, required more than three sprinkler heads to open in order to control or extinguish the fire.

Automatic fire doors can also reduce the risk of serious fire losses.

Juillerat also blames inadequate building codes which may allow a school to be legally but not actually safe for increasing fire hazards. In addition, unsafe schools built before the adoption of a code are often exempted from it by "grandfather clauses."

The Insurance Crisis

Mounting school vandalism losses have drastically altered the relationship of schools to insurance companies. When

losses were small, school districts were among the industry's most prized customers. But now many districts find coverage increasingly expensive and even difficult to obtain. In his journal article Edwards reports that, in New Brunswick, New Jersey, the situation became so serious that "the schools had to close down until insurance was available."

The dilemma of the insurance companies is typical of the complexity of the problem. On the one hand, while some districts are refused any private coverage, the industry consistently opposes the idea of government insurance. In addition, as Wells notes, "About half those (districts) responding to the *Education U.S.A.* survey reported an increase in rates, although they had no increase in vandalism." On the other hand, companies find that, while claims payments have risen, sometimes dramatically in recent years, premiums are often limited by statute. In such circumstances, refusals or cancellations may be the only prudent course.

One way to alleviate the problem is to write policies with deductible amounts. Freese offers some advice for districts considering this step. The amount of the deductible should be based on the size of a district's previous claims and its ability to absorb one or a series of losses of the deductible amount. In addition, the premium reduction should be significant enough to justify accepting the deductible feature; in general, a thousand dollars of deductible should mean a rate reduction of from 15 to 18 percent. With any policy, but particularly with a deductible clause, it is essential to have accurate valuations of the insured property, both to assure proper coverage and to reduce the risk of losses resulting from a difference between the insured value of an item and its actual replacement cost.

Ideally, a district should accept a deductible feature only under the circumstances Freese outlines. Unfortunately, deductible policies are too often a matter of necessity, not choice. A summary report by the Fresno City Unified School District, surveying California school districts, notes that increasingly "Insurance is almost beyond the financial reach of many districts, so much so that only protection from

catastrophic occurrences is maintained by some districts."

There are several other suggested solutions to the insurance problem. Perhaps the most widely advocated is for government, at either the state or federal level, to enter the school insurance business. However, Edwards notes that several state ventures into insurance underwriting have been less than successful. Among other potential alternatives are cooperative insurance-buying by several districts or purchasing coverage on the basis of competitive bids. And finally, as Weiss notes, many big-city districts, including New York, Chicago, and Los Angeles, are already largely self-insured. This may not be feasible for many smaller districts, though, since losses from a single major fire could be devastating.

A PROGRAM FOR PREVENTION: IDENTIFYING THE PROBLEM

Few writers argue that hardware alone is the solution to the problem. A comprehensive program using security devices as part of an overall plan of attack is often suggested. Ellison lists some of the most common components of such a program:

- improved interior and exterior lighting
- intrusion alarm systems
- improved school community relations
- extended and staggered maintenance hours so that there is always someone at the school
- security guards
- fences
- key control programs
- increased after-hours use of school facilities
- increased emphasis on locking doors and windows
- community vandalism education programs
- student vandalism education programs
- programs requiring vandals or their parents to make restitution for damages
- unbreakable glass
- parent patrols

But Will It Work?

Unfortunately, Ellison continues, "Most of the suggestions are not made on the basis of any research that indicates probable success in reduction of incidents of school vandalism but because someone believes it is a 'good idea.' " In fact, this is the most distressing part of the literature on school vandalism; it is full of suggestions and assertions but remarkably

short on concrete facts documented by scientific research.

One example of the way this "common sense" approach ceases to make sense is with the idea of security forces. Probably because it "seemed like a good idea," the Los Angeles school system hired numerous security guards to protect its schools. As a result, writers supporting the idea point with satisfaction to the fact that Los Angeles uses guards, as if the very adoption of a policy validates it. But, as Ellison reports, "There is no statistical data to show that their security force has reduced significantly their incidence of school vandalism." In fact, he cites some evidence suggesting the reverse.

There is similar uncertainty about the effectiveness of restitution programs and of taking strong legal actions against vandals. In his speech, Edwards claims that

> Whatever system you adopt, its effectiveness will depend to a great extent, on the prompt apprehension and aggressive prosecution of the vandals and/or their parents. We realize this is a tender area. But if vandalism losses are to be controlled we must be "hard nosed" about prosecution of vandals and restitution of losses.

Greenberg flatly disagrees: "A system of vandal prevention based upon apprehension of the vandal is generally ineffective."

Even security equipment, the subject of so much of the literature on vandalism, is not universally approved. For example, Ellison comments:

> I believe that mechanical gadgetry in itself is not a good strategy for the prevention of school vandalism, and the only way to solve the problem with some degree of permanency is to get the community and its many resources involved and to allow the people to become the major instrument of social control. I believe that the strategy of installing more hardware will likely serve to further alienate the community from the school and serve to bring it under further attack.

The one conclusion to be drawn from these arguments is that the precise nature of school vandalism is not generally or systematically understood. This report itself has avoided listing precise vandalism losses, primarily because the

available figures so frequently disagree. Ellison reports that, in one county "there were 35 different ways of reporting and recording incidents of school vandalism, with equal inconsistencies in what was reported." Under the circumstances, what is actually surprising is that the disagreements are not more frequent.

Greenberg particularly emphasizes the problems of attempting to devise or evaluate antivandalism programs on the basis of vague or inconsistent records. For example, without records of previous losses, there is no way of measuring the changes produced by any new program. In addition, he states, "The literature describing the measures various school districts have undertaken are seriously deficient in describing the environment or the conditions that have caused certain measures to succeed or fail." As a result, even a successful program may not advance anyone's theoretical understanding of vandalism control.

Greenberg describes the results of this information shortage:

> The disturbing discovery is that the available information indicates that the effects of vandalism are being treated *symptomatically*—i.e., insurance companies are raising insurance premiums and loss deductible exclusions and school districts are instituting elaborate security procedures. But the results appear to be short of expectations.

What happens is that, as losses increase, districts feel compelled to do *something* to meet the problem—to act, even if in ignorance. Measures adopted in such circumstances are generally based on "common sense" or on the tried but not true methods of the past, which have the sanction, if not of success at least of general acceptance. Greenberg cites one report suggesting that insurance companies do the same thing when they recommend certain protective measures with no real knowledge of their effectiveness.

Deterrence or Prevention

The same writer points to three basic questions about vandalism that his researchers found were not being considered

either "in the literature or in our discussions with individuals." The first two concern the level of deterrence a school system wants and the portion of the total budget that can be spent to reach that level. The third raises the possibility, in view of rising security system costs, of accepting some losses as a "normal" expense.

The most effective long-range solutions—programs with more than a random chance of success—can be found only by asking such questions, by using a diagnostic approach to analyze the roots of the problem. Specifically, Greenberg recommends careful study of a series of controlled trial programs in selected schools and districts. These should provide school officials with some of the specific information they need to understand and meet the vandalism problem. But the effort needs to be as comprehensive as it is meticulous, since, as Greenberg notes, "Our research . . . failed to uncover any one set of antivandalism techniques that could be universally applied to school districts."

There are, then, two basic approaches to vandalism. Currently, as the literature indicates, most programs try to *deter* vandalism by taking defensive measures that make schools less vulnerable to the ravages of destructive intruders. Deterrent programs treat vandalism *symptomatically*, usually by emphasizing improved school security. Greenberg feels that such measures, by their very nature, can have only limited success.

The alternative approach is to treat vandalism *diagnostically*, attempting to *prevent* it by attacking its causes. The key to such a program is to involve people in the life of the school, to combat the sense of alienation and indifference that seems to be the cause of most vandalism. For example, Greenberg mentions one program in which a school district eliminated vandalism by singling out potential troublemakers and giving them active roles in prevention programs.

Example of a Successful Prevention Program

Haney describes a vandalism prevention approach used by the South San Francisco School District. Vandalism was

becoming increasingly serious, and some method of enlisting students to help reduce it seemed necessary. The solution was to set aside $1 per student in a fund that could be used for student projects if it was not needed to pay for vandalism losses at the school. The idea was to give students a tangible sense of the meaning of vandalism losses and an active interest in preventing them.

Early indications are that this approach is successful, because in the first semester of the program's operation damages dropped significantly. It is hoped that as the students see what money from the fund can buy, they will become less tolerant of those whose actions deplete it. The approach itself is particularly desirable because it offers a positive approach to prevention and because it is nonauthoritarian, relying for its success on students rather than on guards. Existing alarm systems and other security devices remain in use. In addition, any restitution made for vandalism losses is repaid to the fund.

Even the explanations of this plan are short of specific information. The decline in vandalism was significant, however, and probably due primarily or entirely to the new program. In the absence of factual data and in view of the undesirable costs and limited long-range effects of deterrent security measures, such new approaches need to be tried. Until careful research has been done, effective solutions to vandalism will be largely the result of the ingenuity of school officials able to devise ways to make vandalism control a school project rather than a security problem.

DESIGN SOLUTIONS

Most discussions of vandalism tacitly assume that only malicious property destruction can be significantly reduced. There is, however, an alternative approach, which is to concentrate on reducing the nonmalicious vandalism that plagues many schools. Not only is such destruction controllable, but it may account for a substantial portion of the losses attributed to "vandalism." As Juillerat notes in his 1974 article, "The unconscious vandalism, according to Zeisel, accounts for 50 to 80 percent of the total damage done to school property."

The Work of John Zeisel

Zeisel is, in fact, the leading advocate of architectural solutions to many so-called vandalism problems. He starts from the premise that many school facilities are unconsciously designed to encourage property destruction. As he notes, "In law, facilities that invite destructive or dangerous misuse - such as unattended swimming pools- are termed 'attractive nuisances.' " Unfortunately, such invitations to property damage are all too common in many schools.

Zeisel lists and briefly discusses the various types of property destruction commonly classed as vandalism.

- malicious vandalism. This is not primarily a design problem.
- misnamed vandalism. This is really accidental, for example, when a window next to a basketball backboard is broken by an errant shot.
- nonmalicious property damage. The destruction is an unintended by-product of some activity, for example, when boys playing street hockey paint a goal on a school wall.

- hidden maintenance damage, caused by careless planning. This might happen if a strip of bushes between a pathway and a building is worn down.

Zeisel identifies five places where property damage is often related to building design. These include roofs, building entrances, rough play areas, walls and floors, and school grounds. In each case he suggests specific design solutions to the problems that may develop. In addition, many of these design changes may also make the school less vulnerable to malicious vandalism.

The key to successful design responses to vandalism is thoughtful planning. The architect should anticipate all possible uses for an area, not merely those the school officially sanctions. For example, plants thoughtlessly placed where students congregate informally may soon be surrounded by cigarette butts and draped with litter. Similarly, the hardware on doors should be designed to do more than open and close; it should also be able to withstand rough or even abusive use. Glass entrances may make a school appear inviting, not merely to daytime students but to nocturnal intruders. The successful designer foresees such problems before they can develop.

Zeisel's treatment of graffiti is typical of the pragmatic, intelligent approach he takes to vandalism problems. For him, the first step in controlling graffiti is to recognize that there are different types of wall markings and that some of them have legitimate functions. For example, the best way to treat lines made for games is to help the students draw them as neatly as possible.

Generally, the best approach to graffiti is to attempt to control *where* it appears rather than futilely trying to eliminate it entirely. This can be done, for example, by placing the light, flat walls with easily marked surfaces that attract graffiti in places where it is most likely to appear anyway. Since most types of decorative or expressive graffiti are not really destructive, only abusive markings need to be removed from these walls during cleaning. The crucial thing in graffiti

control is for the school to recognize that many forms of graffiti need be problems only if the school insists on regarding them as such.

Thoughtful selection of building materials can also reduce nonmalicious vandalism. Wall and floor surfaces should be easy to clean and repair. Easily replaceable materials should be used wherever possible; touchup paint and spare panels can often diminish the impact of damage that does occur. There is substantial evidence that damages left unrepaired invite further destruction, while prompt repairs have the reverse effect. The truly well-designed building will be less vulnerable to all kinds of damage malicious, nonmalicious, and even normal "wear and tear."

Other Design Considerations

There are other ways that design planning can reduce property damage. Juillerat in his 1972 article describes several ways thoughtful design can control fire losses. For example, stairways should be enclosed in partitions, fire doors and adequate room exits built, fire retardant finishes used on walls, ceilings, and floors, and provision made for the safe storage of combustible materials. And, as Baughman points out, fire resistance and damageability are not the same; the structural nature of a building may have a greater effect on its vulnerability to fire than the "combustibility ratings" of the materials from which it is constructed.

Another significant innovation in construction material is the discovery of new transparent unbreakable glass substitutes. Wells lists some of them, with a hopeful introductory assertion.

> The solution for broken windows, a major cost of vandalism, is apparently on the way. Numerous school districts say they are replacing "glass" window panes with the various new types of tempered glass, acrylic and polycarbonate sheets now on the market.

Such products are expensive to purchase and install, but could ultimately produce great savings if they can eliminate the continuing expense of replacing broken windows.

Wells reports several ways suggested for designers of new buildings or renovators of existing ones to reduce vulnerability to vandalism. For example, new schools should be designed with as few exterior windows as possible and with plastic domes instead of skylights to reduce access from the roof into the school. Older schools might consider bricking up openings in storage areas that have had frequent entry problems.

Many of these suggestions are, it must be conceded, too new to be more than "common sense" hypotheses, unverified by formal research. Still, promising if untested innovations will certainly be more useful than discredited or undesirable approaches. It has become clear that the architect will play an increasingly significant role in future efforts to control school vandalism.

CONCLUSION

The problem of school vandalism control is as complex as it is serious. The very concept of vandalism prevention seems to conjure up images of almost military security, the only sure way to protect a school being to treat it as an armed fortress under siege. There is something reassuring about the idea of taking forceful, dramatic, even martial steps to protect our schools from unwelcome invaders. So as long as vandals persist in attacking schools, there will be continuing efforts to win the "war on vandalism."

The problem with militaristic rhetoric and tactics is twofold. First of all, it threatens to poison the educational environment by changing the function of the schools from educating children to winning a war. More to the point, the approach is deplorable simply because it does not work. In terms of cost-effectiveness, security for deterrence has not been proved to be a fruitful way to control school vandalism.

Unfortunately, while security methods are as widely publicized as they are ultimately ineffective, alternative approaches remain nebulous, inadequately studied, or completely ignored. As a result, there is no obvious "solution" to school vandalism, though design innovations and student participation programs do show promise. The entire problem may well prove surprisingly easy to solve once as much resourcefulness, energy, and determination go into controlling vandalism as into perpetrating it.

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