

## SHOPLIFTING PREVENTION: PROVIDING INFORMATION THROUGH SIGNS

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Shoplifting is one of the most frequent crimes in the United States, yet there is no agreement about effective prevention procedures. Since most prevention strategies are aimed at either increasing public awareness of the severity of the consequences or increasing the threat of detection, procedures that contain these elements were evaluated. Posting signs around a department of a department store pointing out that shoplifting is a crime, *etc.*, partially reduced shoplifting rates. When merchandise that was frequently taken was identified by signs and stars, shoplifting decreased to near zero. Publicity campaigns to inform the public of consequences for shoplifting may produce desirable results, but identifying likely shoplifting targets, which may increase the likelihood of detection, effectively reduces shoplifting rates.

DESCRIPTORS: shoplifting, prevention techniques, information systems, multiple baseline, community psychology, crime control, recording and measurement techniques

Applied behavior analysts have focused on a number of community problems, including litter control (Burgess, Clark, and Hendee, 1971; Chapman and Risley, 1974; Geller, Farris, and Post, 1973; Kohlenberg and Phillips, 1973; Powers, Osborne, and Anderson, 1973), bus ridership (Everett, Haywood, and Meyers, 1974), an urban recreation center's operations (Pierce and Risley, 1974), and training a community board to solve problems (Briscoe, Hoffman, and Bailey, 1975). In business-related problems, Hermann, Montes, Dominguez, Montes, and Hopkins (1973) found that bonuses effectively increased the punctuality of industrial workers. Jones and Azrin (1973) focused on the problem of job finding.

However, one of the most pervasive community and business problems has been virtually

ignored. Shoplifting has increased from \$2.5 billion in 1969 ("Holiday Shoplifting Heads for a Record", 1973) to an estimated \$4.8 billion or approximately \$13 million per day in 1974 ("To Catch a Thief", 1974). It has been said that if all incidents of shoplifting were reported, it would be the largest single crime in the United States (Weinstein, 1974). Even though shoplifting is the major profit-killer in retail stores (Humphries, 1975), every citizen in the community also suffers a loss. In 1973 it was estimated that each American family pays \$150 per year in hidden costs due to shoplifting ("Christmas is Coming", 1973).

While no empirically documented shoplifting-prevention procedures are apparent in the literature, at least two different methods have been used to control stealing. Azrin and Wesolowski (1974) reduced stealing by retarded persons with an over-correction procedure. Switzer, Real, and Bailey (*in press*) found that stealing in a second-grade classroom was reduced when a group contingency was applied. For an over-correction procedure to be an effective shoplifting prevention strategy, it would seem that shoplifters would have to be consistently detected. However, it is estimated that an extremely small

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number of individuals who take merchandise are detected. Additionally, the application of a direct group consequence is probably not feasible in normal businesses.

The most common current approaches to the shoplifting problem are usually aimed at either increasing the public's awareness of the consequences of shoplifting, or increasing the threat of detecting shoplifters. Campaigns designed to increase public awareness take a variety of forms, ranging from city-wide campaigns, such as Philadelphia's STEM (Shoplifters Take Everybody's Money) campaign ("Philadelphia's Way of Stopping the Shoplifter", 1972), to educational programs in schools, to posters in stores. Commonly used procedures to increase the likelihood of detection range from the use of store detectives to electronic devices that signal when merchandise has passed through the door without being deactivated by the cashier.

Although many procedures have been employed to prevent shoplifting, all have been limited by inadequate measurement systems, thus making it impossible to determine the effectiveness of the procedures (Curtis, 1969; "Holiday Shoplifting Heads for a Record", 1973). Infrequent stock inventories appear to be one reason for the difficulty in determining the effectiveness of prevention strategies. Changes in apprehension rates, another "measure" of shoplifting, have not been demonstrated to parallel changes in shoplifting rate.

Since most current shoplifting-prevention strategies are designed to increase either public awareness or the threat of detection, procedures containing these elements were evaluated. The first study evaluated the effects of general anti-shoplifting signs (stating that shoplifting is a crime and that it increases the cost of merchandise); the second study investigated the effect of signs and symbols that specifically identified merchandise found to be frequently missing. Thus, the two studies represent evaluations of not only a procedure that defines some of the consequences of shoplifting, but also a procedure that increases the threat of being detected.

## STUDY I

### METHOD

#### *Setting*

The study was conducted in a department store in Murfreesboro, Tennessee (population 25,000). The manager of the department store indicated that he had a shoplifting problem, particularly in the young women's clothing department. This department was shielded from view from the remaining portions of the store except for two entrances. The department contained three dressing rooms, and was located some 18 m from the nearest cash register. Typically, except during busy periods, sales personnel were not assigned specifically to this area. In all cases, merchandise was displayed on hanging racks about 1.8 m long and at eye, chest, and waist levels. Throughout the study, a uniformed security guard moved about the store; no other shoplifting-prevention procedures were in use.

#### *Measurement System*

Before the study commenced, approximately 25 items from each type of merchandise in the department were randomly selected as "key" items. A yellow tag was then stapled to the back of the portion of the price tag that the cashier removed and kept for restocking purposes. A code letter was marked on each yellow tag to identify the type of merchandise (*i.e.*, "B" indicated jeans). Cashiers were instructed to remove the yellow tag when the restocking tag was removed and place it in a box below the cash register.

To determine the number of missing items, an observer made inventory checks in the department each morning before the store opened. All tagged merchandise was counted and recorded according to the code letters. The manager of the store then supplied the observer with the tags from merchandise that had been sold. Thus, to calculate the number of missing items in each category, the number of items counted in stock for that category was added to the number sold for the category and this sum was subtracted from the number of originally tagged items. For

example, suppose 10 pairs of jeans were coded "B" on Day 1. On Day 2, the observer would count the number of coded jeans remaining in stock, say seven. Then the observer would count the number of "B" tags that had been removed from merchandise that had been sold; for example, two. Thus, the number of missing items would be  $10 - (7 + 2) = 1$ .

Each day, the observer tagged new items of each type of merchandise to replace those items that had been sold or taken. In this way, the total number of items tagged each day for each type of merchandise remained constant.

The sampling procedure allowed a quick determination of the types of merchandise that were frequently missing; in this department, pants and youth tops were frequently missing. These items were thus selected as dependent measures for this investigation. The cost of the target merchandise ranged from \$3.98 (one type of top) to \$16.95 (a two-piece top combination). No systematic price reduction occurred for the target merchandise during the study.

The same basic procedure used to identify the merchandise that was frequently missing was used in the formal investigation. Before baseline, all tags were removed from the merchandise, then 100 of the most frequently taken tops and 100 pants were randomly selected, tagged, and coded. This represented approximately 10% of all pants and tops in the department. The recordings were done as described previously.

On 76% of the days, a second recorder made independent counts with the primary observer. "First-count" reliability was calculated by dividing the higher of the two totals into the lower for each category. Overall reliability averaged over 0.99.

When both observers had finished the count, the primary observer compared the two sets of records. If there was not total agreement, without giving specific feedback, the primary observer instructed the secondary observer to recount the merchandise. The primary observer also recounted the same merchandise. This procedure was followed until total agreement was

reached. Total agreement data are presented in this study.

To reduce the probability of overlooking tags in the cashier's box, an individual who sorted the tags for restocking purposes later in the day put the yellow tags aside and returned them to the observer the following morning. On the two occasions that tags were overlooked, the data were corrected for the error. To ensure that the cashiers were taking the yellow tag from purchased merchandise, individuals who were not known to be associated with the project "bought" coded merchandise and took it through the checkout procedure. On the three occasions per experimental phase that the checks were made, the cashier always removed the coded tag.

To deal with the problem of merchandise being taken from the department and placed in other parts of the store by customers or store personnel, the employees were asked to remove any yellow tags from stock that they were moving to other parts of the store. Similarly, employees were asked to remove tags from any coded items that were seen outside the target department and to return them to a special box, which was checked daily by the observer.

### *Baseline I*

The number of items sold and missing were measured for 26 days. Due to different (and shorter) store hours, no observations were made on Sunday. Therefore, Saturday, and Sunday appear as one data point, which results in 23 instead of 26 baseline data points. During this period, the store continued the same activities as before measurement was begun.

### *Departmental Antishopping Signs*

Before opening for business on observation day 24, five antishopping signs containing four messages were placed in the department. The signs were 30 by 47 cm and had 2.5-cm high letters. The signs included the points: (1) Shoplifting is stealing; (2) Shoplifting is a crime; (3) Shoplifting is not uplifting; (4) Shoplifting is stealing; and (5) Shoplifting helps inflation.

The signs remained in the department for 20 days (17 observation days).

*Baseline II*

During this phase, the signs were taken down for five observation days.

RESULTS

Placing of antishoplifting signs appeared to reduce, but not eliminate shoplifting. Figure 1 shows the cumulative shoplifting and sales rates before the signs were placed in the department, while the signs were there, and after the signs were removed.

The mean number of items missing per day during Baseline I is 1.30, and sales averaged 1.04. During the intervention, the number of missing items per day fell to 0.88; sales remained at approximately the same level (1.00). When the signs were removed, the number of missing items rose to 1.4 per day and sales to 2.0 per day.

Thus, it appears that the placement of anti-shoplifting signs in the department may have produced a decrease in shoplifting without affecting sales rates. If similar changes were present with a larger sample the procedure would probably be recommended as being both inexpensive and useful.

STUDY II

METHOD

*Setting*

The setting was identical to that in Study I. No new shoplifting-prevention procedure was begun during this investigation.

*Measurement System*

The data-recording procedure employed in this study was similar to that for Study I. However, the following changes were made: (a) Colored instead of letter-coded tags were used to distinguish types of merchandise; (b) small

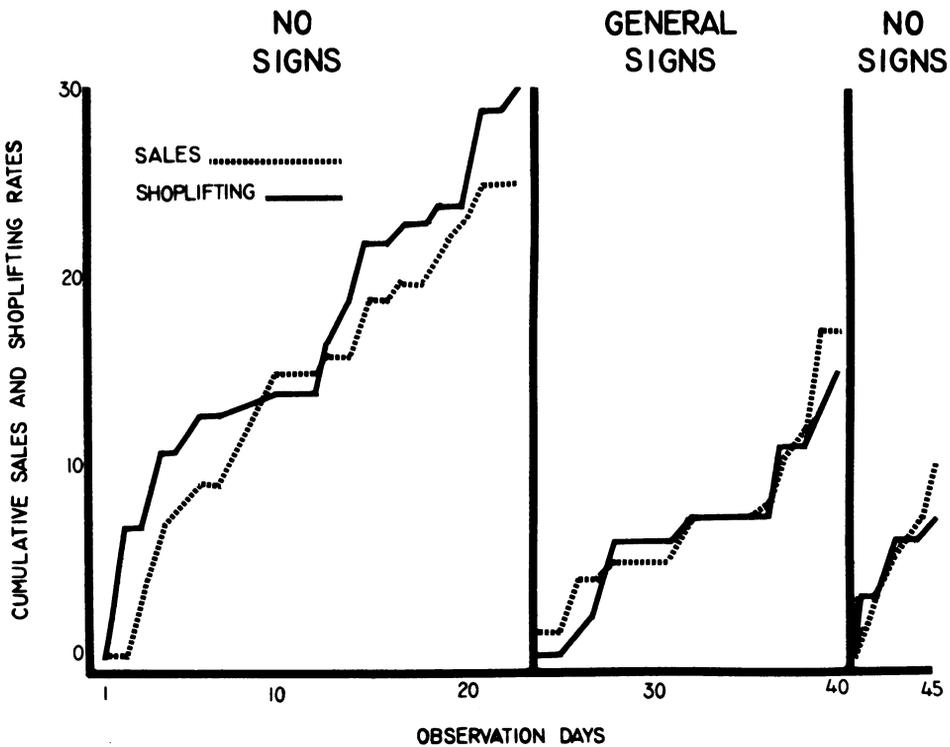


Fig. 1. Cumulative rates of sales (broken line) and shoplifting (solid line) before, during, and after general antishoplifting signs were placed in the department.

pieces of yellow tape were wrapped around the top of clothes hangers to allow easier tracking of target merchandise (the cashier removed the tape when a target item was sold); (c) three groups of merchandise were targeted instead of two (the same two groups as in Study I, with the addition of 100 items that had not been identified as frequently stolen during the original sampling procedure). Reliability was recorded for over 76% of the days in a fashion identical to that in Study I.

### *Baseline*

The number of items sold and missing each day (Saturday and Sunday were counted as one day) were measured for each of three groups of merchandise: one group of young ladies' tops, one group of young ladies' pants, and one group that consisted of a random selection of other merchandise in the same department. The baseline condition lasted for 33 observation days for the pants and 47 observation days for the tops, thus constituting a multiple baseline across two groups of merchandise. For the other group of merchandise, the baseline conditions were begun on observation day 15 and remained in effect for the duration of the study.

### *Merchandise Identifications*

During this phase, signs (17.5 by 27.5 cm) were placed on clothing racks and walls in the department. The signs stated:

#### ATTENTION SHOPPERS & SHOPLIFTERS

The items you see marked with a red star are items that shoplifters frequently take

Red stars, approximately 12.5 cm from point to point, were cut from cardboard and covered with red aluminum foil. The stars were attached to stiff wire and mounted on racks that contained target merchandise. The six red stars and signs were put in the department before observation day 34 and were directed only at pants. Before observation day 48, six more stars were added in the department to designate frequently

taken tops. This condition remained in effect for the duration of the study.

### RESULTS

Figure 2 reflects the cumulative rates of missing merchandise and sales before the merchandise was publicly identified as being frequently taken, and after signs and stars were used to identify each type of merchandise.

There was a dramatic reduction in missing target merchandise when the merchandise was specified as being frequently taken by shoplifters (baseline  $x = 0.66$  versus intervention mean = 0.06 tops taken per day; and baseline  $x = 0.50$  versus intervention  $x = 0.03$  pants taken per day). There was no systematic change in sales after identifying the merchandise.

Cumulative shoplifting rates for comparison merchandise are presented in Figure 3. Points at which pants and tops were publicly identified as being frequently taken are denoted by arrows. There appears to be no change in shoplifting rates for the comparison merchandise, thus reducing the probability that shoplifters merely switched from the target merchandise to non-targeted merchandise.

### DISCUSSION

In both studies, shoplifting was decreased through the use of signs. The use of general anti-shoplifting signs reduced shoplifting without affecting sales. However, when merchandise was publicly identified as being frequently taken by shoplifters, shoplifting was virtually eliminated. The success of more specific signs is consistent with Geller's (1975) findings that specific prompts were more successful in producing appropriate waste disposals than general prompts.

In a more general context, there are several possible explanations for the present findings. It is possible that employees were taking the merchandise and realized the increased threat of apprehension when merchandise that they had been taking was identified. Alternatively, it is possible that potential shoplifters were deterred by the increased threat of apprehension.

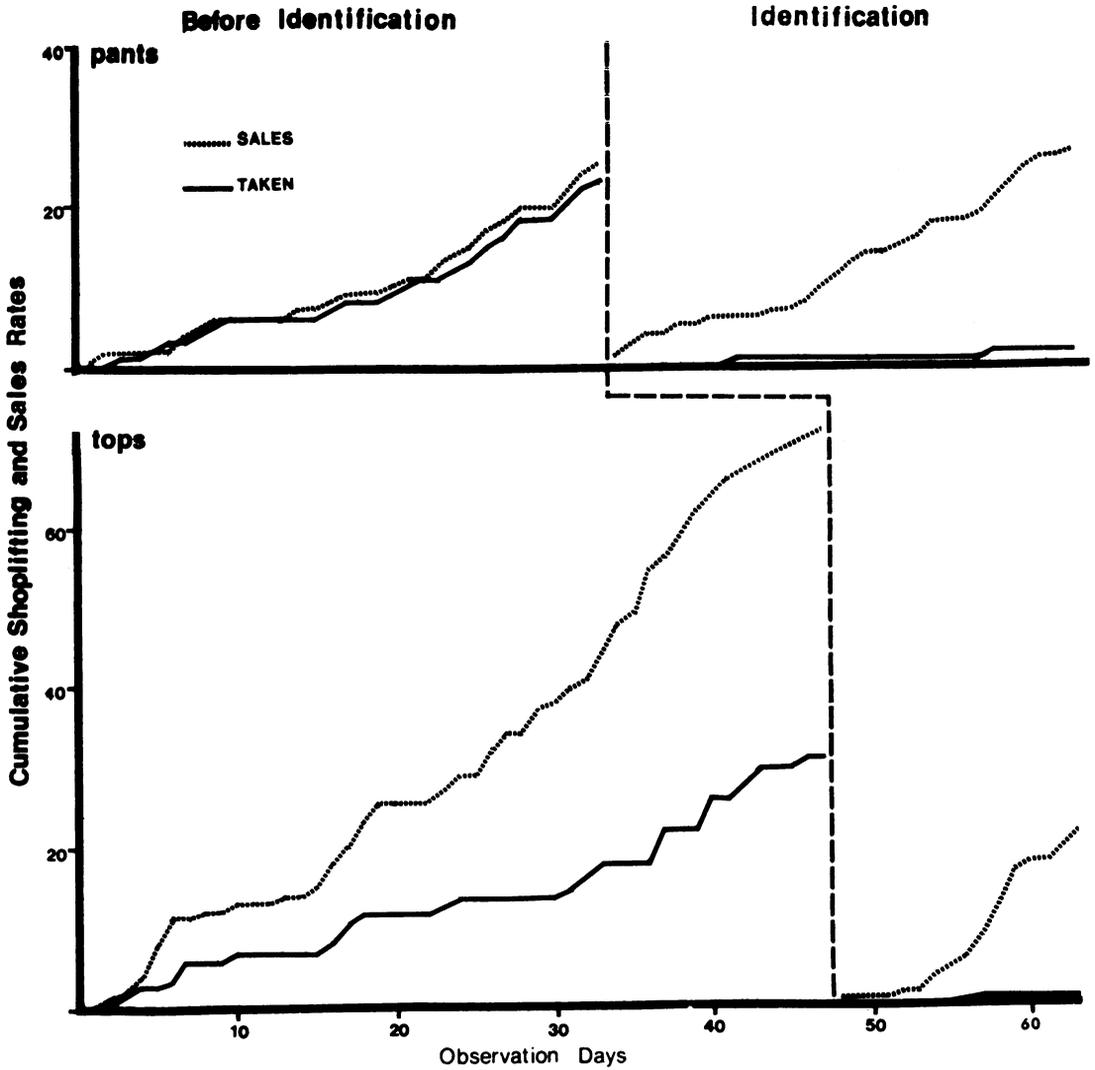


Fig. 2. Cumulative rates of sales (broken line) and shoplifting (solid line) for pants (top panel) and tops (lower panel) before and while frequently taken merchandise was publicly identified.

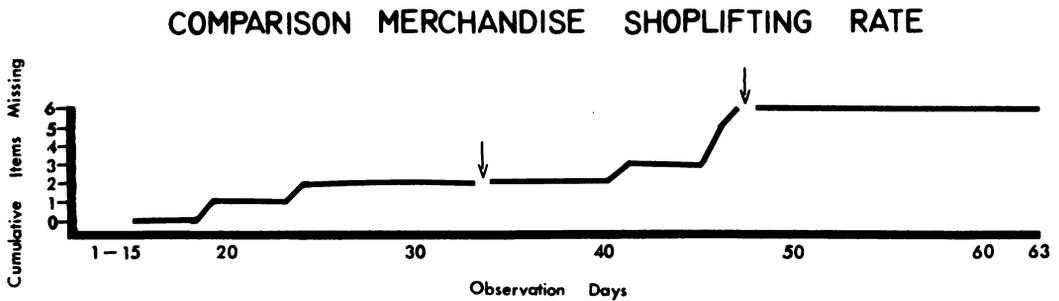


Fig. 3. Beginning on observation day 15, cumulative shoplifting rate for comparison merchandise. Arrows indicate points at which pants and tops were publicly identified as being frequently taken.

Ideally, shoplifting-prevention strategies should serve a teaching function. However, an "educational process" is built on two primary conditions, one of which is difficult, if not impossible to obtain. The behavioral approach to teaching appropriate behavior generally involves identifying the target behavior and providing consequences. Because of the difficulty both in detecting shoplifting and in applying consequences (*i.e.*, inconsistent court prosecutions and the threat of lawsuits), teaching appropriate behavior may be extremely difficult.

If truly "educational" systems cannot be arranged, it would appear that at least two basic humane options remain. One option would be to prevent the behavior from occurring by arranging the business environment in a manner that increases the difficulty of taking merchandise. Since detection of any particular shoplifter is unlikely, it would appear that merchants might also increase the *threat* of detection in an attempt to prevent the behavior.

Thus, while general antishoplifting signs describe the consequences of shoplifting, publicly identifying the specific merchandise that shoplifters most often take increases the threat of detection and apprehension. This does not imply that general shoplifting signs should not be used. The economics of the procedure would make it a viable strategy if subsequent evaluations confirmed the findings of this study. However, these data suggest that publicly targeting merchandise that is frequently taken produced immediate and dramatic decreases in shoplifting. It remains the task of future research to address the issues of comparative effectiveness and generality of the procedures described here.

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