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Abigail Buckle & David P. Farrington

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## MEASURING SHOPLIFTING BY SYSTEMATIC OBSERVATION: A REPLICATION STUDY

ABIGAIL BUCKLE\* and DAVID P. FARRINGTON†

*\*St. Catherine's College, Cambridge CB2 1RL, UK*

*†Cambridge University, Institute of Criminology, 7 West Road,  
Cambridge CB3 9DT, UK*

A random sample of customers entering a small department store in Bedford were systematically observed from when they entered the store until when they left it. The results were compared with those obtained in a similar study in Peterborough. Nine out of 486 customers (1.9%) were observed to shoplift in Peterborough, and six out of 502 (1.2%) in Bedford. Males were more likely to shoplift than females. Most shoplifters purchased goods, possibly to allay suspicion. Generally, shoplifters stole small, low-cost items and looked around carefully to check that nobody was watching them before placing the items in pockets or bags. It is concluded that a great deal can be learned about offending through direct, systematic observation.

**Key words:** shoplifting, systematic observation, gender differences in offending.

The most usual methods of measuring offending are using official records of arrests or convictions, self-reports of offending, or victim reports. However, all these methods are indirect and biased. Official statistics depend on the behaviour of official agencies as well as on that of offenders, and self-report and victim surveys are affected by people's willingness to be interviewed, honesty in responding and failures in memory. More valid information about offending could be obtained if offences could be observed directly and recorded systematically as they occurred. Unfortunately, it is not easy to achieve this, because offences occur rather infrequently and unpredictably, and because offenders try to commit crimes without being observed. This is why some researchers have studied offending by deliberately providing opportunities for members of the public to steal (e.g. Farrington & Knight, 1980).

One of the few types of offending that has been studied by systematic observation is shoplifting. Several projects were carried out in the 1970s in which customers were followed through stores by security officers or store detectives (Mayhew, 1977). However, we carried out the first observational study of shoplifting by social scientists that was published in a scholarly journal (Buckle & Farrington, 1984). In our research, about 500 customers were followed through a department store, and 9 were observed to steal. The present paper reports the results we obtained in a later replication of that study, compares them with the original findings, and also presents some illustrative case histories of how people shoplift.

Recent research on shoplifting has used a variety of measurement techniques, but not systematic observation, as far as we can tell. The Home Office Standing Conference on Crime Prevention (1986) surveyed hundreds of retail organisations and found that they could provide very little information about their losses through shoplifting. Other victim surveys of

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† Author for correspondence.

store owners were carried out by Ekblom and Simon (1988) and Phillips and Cochrane (1988). Poyner and Woodall (1987) analysed police records of arrested shoplifters, while Ekblom (1986) used store detectives' records of apprehended shoplifters. Self-report surveys of juveniles (Cooper, 1989; Klemke, 1982) and adults (Ray, 1987; Ray & Briar, 1988) have also been conducted, as well as interviews with arrested shoplifters (Schlueter *et al.*, 1989). One of the most innovative techniques was to advertise in newspapers for shoplifters (Carroll & Weaver, 1986). However, as we have already pointed out, all these methods are indirect and biased.

## METHOD

The original project was carried out in a small department store in Peterborough, whereas the replication was conducted in a similar store in Bedford. Both stores were part of different national chains. Both projects were carried out in the summer (July–August). Customers were watched by two observers (Abigail and Philip Buckle) from when they entered the store until when they left it. Both observers were trained as psychologists and were skilled and experienced in observing children and adults. In order to be sure that someone had stolen an item, it was essential that the person's hand and arm movements could be seen at all times. This required at least two observers watching from two different directions. Even with careful watching, 8 observations in Peterborough and 9 in Bedford had to be abandoned because the observers lost sight of the subject's hands. There is no reason to suppose that any of these persons shoplifted.

The same method was used in both stores to select customers at random for observation. First of all, a list of random numbers was compiled by tossing a dice, and this list determined which customers were chosen as subjects. The observers took up their starting positions, signalled to each other that they were ready, and then followed the *N*th person (*N* between 1 and 6) through the store. However, children under 5 were not followed. The starting positions were systematically varied from door to door. The research was carried out on all days of the week and at all hours of the day during which the stores were open.

For each person followed, the observers recorded the date and day, the time of entry into and exit from the store, the total cost of all purchases made, and the sex, race and estimated age of the person and any companions. In addition, they made a detailed record of the behaviour of anyone who shoplifted. None of the shoplifters was apprehended by a store detective.

A total of 503 people were followed in Peterborough and 514 in Bedford. However, some of these entered the store and then walked directly to another exit, without looking at the merchandise. It was clear that they were merely using the store as a thoroughfare and were not potential customers or shoplifters. A few others spent all their time watching just inside the entrance of the store (e.g. holding a dog) while their companions were shopping. Again, they did not seem to be potential customers or shoplifters. Hence, persons who walked through or who waited were excluded from consideration. This left 486 customers and potential shoplifters in Peterborough and 502 in Bedford.

## RESULTS

Table 1 displays the results obtained. Nine people (1.9%) were observed to shoplift in Peterborough and 6 (1.2%) in Bedford. Interestingly, males were more likely to shoplift than females: twice as likely in Peterborough (2.9% as opposed to 1.4%) and three times as likely in Bedford (2.2% as opposed to 0.6%). Shoplifting is often regarded as a predominantly female crime, and indeed it is the most common crime for which females are convicted or cautioned in England and Wales. For example, in 1989 nearly half of all females convicted or cautioned for indictable offences were shoplifting offenders (35,371 out of 76,204, or 46%; Home Office, 1990). In fact, however, more males are convicted or cautioned for shoplifting than females (57,503 males as opposed to 35,371 females in 1989). One of the reasons why shoplifting is often committed by females is because the majority of shoppers are usually females, as indeed Table 1 shows. However, when opportunity is equated, as in our research, males are far more likely to shoplift than females.

Table 1. Results of shoplifting studies

	<i>Peterborough</i>	<i>Bedford</i>
<i>All</i>		
Number followed	486	502
% shoplifting	1.9	1.2
Average amount bought	£1.88	£1.49
% stolen by value	0.9	0.9
Average time in store (min)	7.0	10.4
Number of items stolen per 10 customer-hours	2.1	1.3
<i>Males</i>		
Number followed	137	183
% shoplifting	2.9	2.2
Average amount bought	£2.47	£1.70
% stolen by value	1.3	1.6
Average time in store (min)	5.8	10.0
Number of items stolen per 10 customer-hours	5.3	2.9
<i>Females</i>		
Number followed	349	319
% shoplifting	1.4	0.6
Average amount bought	£1.65	£1.37
% stolen by value	0.6	0.4
Average time in store (min)	7.5	10.7
Number of items stolen per 10 customer-hours	1.1	0.4

One of the most surprising results in our Peterborough study was that shoplifting was most prevalent among those estimated to be aged over 55 (since 5 out of 101 in this age group shoplifted). However, this finding was not replicated in Bedford (since only 1 out of 88 in this age group shoplifted). Shoplifting in Bedford was most prevalent among those esti-

mated to be aged 17–25 (since 3 out of 84 in this age group shoplifted). The same result was not obtained in Peterborough (since only 1 out of 80 in this age group shoplifted). The difference between the two stores probably reflects the types of goods sold in each, and the differential attraction of these goods to different age groups.

In view of the low prevalence of shoplifting, it may be that it is necessary to follow much larger numbers of people in order to obtain reliable estimates of the prevalence of shoplifting by different age groups. However, combining the results obtained in the two stores, shoplifting was most prevalent among those aged over 55 (6 out of 189, or 3.2%) and those aged 25 or less (5 out of 231, or 2.2%). It was least prevalent among those aged 16–55 (4 out of 568, or 0.7%). Hence, shoplifting may indeed be most common among relatively young and relatively old people, perhaps because these categories are the least likely to be prosecuted after apprehension.

In Peterborough, 12 items were stolen, with a total value of £7.86. In Bedford, 11 items were stolen, with a total value of £6.73. The average value of goods purchased by each customer entering the store was £1.88 in Peterborough and £1.49 in Bedford. Most customers (91% in Peterborough and 72% in Bedford) purchased something. When the total value of goods stolen was added to the total value of goods purchased, it was found that the value of goods stolen was 0.9% of the total value of goods taken out of the store (purchased or stolen) in both stores. Since the store's estimated stock loss figure was 5% in Peterborough and 3% in Bedford, this shows that only a minority of stock loss can be attributed to shoplifting. The rest of the stock loss must be caused by staff theft, incorrect deliveries, shop-soiled goods, etc.

Most shoplifters (8 out of 9 in Peterborough and 4 out of 6 in Bedford) also purchased goods, possibly to allay suspicion. The value of items purchased was greater than the value of items stolen in 7 out of 8 cases in Peterborough, but in only 2 out of 4 cases in Bedford.

The average time spent in the store was 7.0 minutes in Peterborough and 10.4 minutes in Bedford, with females spending a little longer than males in both cases (Table 1). Shoplifters spent longer than average in each store (11.0 minutes in Peterborough and 13.8 minutes in Bedford). The average rate of shoplifting was 2.1 items (average value £1.38) per 10 customer-hours in Peterborough, and 1.3 items (average value £0.77) per 10 customer-hours in Bedford. Males had a much higher shoplifting rate in both cases (nearly 5 times higher in Peterborough and 7 times higher in Bedford).

This estimate of the shoplifting rate takes no account of the fact that people often enter the store with companions. Shoplifting acts can be committed by two people jointly, for example when one person takes an item from a shelf and places it in a bag held open by another. It would be reasonable to count this as one act committed by two people. Companions were taken into account in trying to estimate the total number of items stolen from each store in each week. The total number of persons followed, including those walking through or waiting, had to be used in this calculation.

In Peterborough, the 503 subjects (persons followed) were accompanied by 222 companions, making a total of 725 people possibly at risk of shoplifting. In Bedford, the 514 persons were accompanied by 331 companions. Unlike the subjects, the companions were not continuously under surveillance, and so shoplifting acts which they committed and which did not involve the subjects might have escaped the attention of the observers. However, com-

binning the subjects and their companions yields a conservative estimate of the prevalence of shoplifting in each store (12 items by 725 people entering the store in Peterborough and 11 items by 845 people in Bedford).

Counts taken at the entrance of each store showed that the number of people entering per hour was about 600 in Peterborough and about 800 in Bedford. Hence the number of items stolen per hour was about 10 in both stores. Since both stores were open for 52 hours each week, it can be estimated that over 500 items were being stolen from each store in each week. This is, of course, a rough estimate, but it does give some idea of the order of magnitude of shoplifting in these stores. Hence the number of shoplifters in one store (over 26,000 per year) is far in excess of the annual number of shoplifters recorded by the police in the whole of Cambridgeshire and the whole of Bedfordshire together (about 7,000 in total in the mid-1980s). This is why Buckle and Farrington (1984) estimated that the police only recorded between 1 in 100 and 1 in 1000 shoplifting incidents.

### ILLUSTRATIVE EXAMPLES OF SHOPLIFTING

The observers' detailed notes show exactly how people stole items from the stores. The observers used a map of each store on which every display stand and till was coded, to assist in tracking each subject's route through the store. Generally shoplifters spent quite a lot of time looking round the store to see if anyone was watching them. They typically picked up the item to be stolen and walked around holding it in their hand. When they thought that nobody was watching them, they swiftly transferred the item into a pocket or handbag. The following case histories (which have been shortened from the original ones) show typical shoplifting behaviour.

*Case 1 (Peterborough, Tuesday, at 3.31 p.m.)* The subject, a man estimated to be aged 56–65, entered the store alone. He went directly to Wall Display Area W8 and walked slowly alongside it. He stopped, momentarily, to pick up a packet of envelopes with his left hand. (The item was identified by Followers A and P.) Next, the subject moved slowly along this stand. From this position it is possible to look at the goods on display, and it is also possible to look up the store. Certainly he looked up the store at least once, because Follower P had to avoid making eye contact with him. After standing at the display of soaps for about 40 seconds, he picked up a packet of soap. He held it in his right hand for about 5 seconds before replacing it on the shelf. After a short time lapse (about 20 seconds) he picked up another bar of soap. Similarly he held this soap in his right hand for about 5 seconds, before replacing it on the shelf.

Then he turned his head and glanced down the store. There was no customer in the immediate vicinity. At once the subject turned his head back to its former position. Then he immediately picked up another packet of soap with his right hand. Simultaneously, as he picked up the soap, he put the envelopes into his left trouser pocket (observed by Follower A). The subject held the soap in his hand for about 5 seconds. He turned his head and glanced down the store once more, and then replaced the soap on the shelf. Finally the subject walked to Stand Q. Here he stopped momentarily to pick up a tin of denture powder. He purchased this item from Till 12. Immediately afterwards he walked out of the store through the rear

exit. He stayed 7 minutes in the store, had purchased a tin of denture powder for 62p, and had stolen a packet of envelopes costing 47p.

*Case 2 (Peterborough, Saturday, at 10.43 a.m.)* The subject, a woman estimated to be aged 56–65, and her male companion entered the store. They walked to Stands G and H and stopped to look at a display of tins of instant milk. After 10 seconds, the subject picked up a tin of instant milk, and held it under her right arm. (The item was identified by both Followers A and P.) Then both she and her companion turned and walked directly to Stand YZ. Eventually they stopped at a display of rubber gloves. Immediately she transferred the tin of instant milk to a position under her left arm. Then she began to rummage through the rubber gloves. Meanwhile, her companion was looking down the store at the customers. The subject chatted to her companion. She also continued to rummage for about 30 seconds. Her next sequence of actions was to hold a pair of rubber gloves in her right hand and stare up the store. She stared up the store for about 30 seconds and gazed at the customers in the immediate vicinity. However, she did not look at Follower P. As she stared up the store, she continued to chat to her companion. Finally she placed the rubber gloves, which she was holding, on top of an adjacent display of goods before looking up the store once again for about 5 seconds.

Next her companion opened a large plastic shopping bag, which he was holding in his right hand. The subject put the tin of instant milk in this bag (observed by Follower P). At the moment of concealment of the instant milk both the subject and her companion were gazing down at the bag. After concealing the instant milk the companion continued to hold the shopping bag in his right hand. He also resumed looking down the store. The subject started to rummage through the rubber gloves again, and after about 30 seconds selected another pair. Next she picked up the first pair of rubber gloves from where she had placed them earlier on the top of an adjacent display. Then she walked down the store in order to pay for both pairs of rubber gloves at Till 10. After purchasing two pairs of rubber gloves she returned to her companion. He opened the shopping bag once again to allow her to put her purchases in the bag. Finally the couple walked slowly out of the store by the rear exit. The subject had stayed 7 minutes in the store, had purchased 2 pairs of rubber gloves for 72p, and had stolen a tin of instant milk costing 57p.

*Case 3 (Bedford, Monday, at 12.43 p.m.)* The subject, a woman estimated to be aged 17–25, and her female companion entered the store chatting animatedly to each other. Both young women were empty-handed, but had shoulder-bags. They walked at an average pace up Side Aisle 1. As they walked they continued to chat and laugh together, apparently completely engrossed in their conversation. Eventually they came to a standstill opposite Shopping Aisle N2/04. After a brief conversation of only a few seconds the companion turned to walk into this aisle, while the subject set off to walk further up the store. She walked slowly and closely alongside Stand V2, glancing at the assorted displays of electric flexes and fuses. Then she started to walk in a similar manner alongside Stand X4. However, after walking only a few paces, she stopped and turned to face a display of electric plugs. Here the subject bent down and with her left hand picked up a white plug from the bottom shelf. She glanced at it and then replaced it. Still bending, she moved a little further to the right and quickly rummaged among a selection of rubber plugs. Then she stood up and scanned the items displayed on higher shelves.

As she was doing this her companion returned. Since entering the store the companion had acquired a plastic container of washing-up liquid. A few seconds later the subject bent down and rummaged once again in a rack containing rubber plugs. Almost immediately (after 3 seconds) she picked up a dark-coloured plug with her left hand. Then she stood erect and walked with her companion into the central shopping aisle. Approximately five minutes later the two women walked directly to Cash and Wrap Area 1. Here they joined an unusually long queue of 6 people. The two women had been standing in the queue for about 13 seconds when Follower A saw the subject put both hands simultaneously into two different side-pockets of her full-gathered skirt. She placed her clenched left hand, in which she held the plug, into a left side-pocket. Then she kept her hand in this pocket for about 5 seconds before withdrawing both hands from her pockets. Next she moved her left hand down by her left side. Follower A could see that this hand was now extended and empty. Shortly afterwards (after 5 seconds) the companion gave the subject the container of washing-up liquid. The subject grasped it with her right hand and immediately deposited it on the counter.

During the time that the subject was in the queue she was very vigilant. Frequently she made short, searching glances (of approximately two seconds duration) all around the central aisle, wagging her head about as she did so. She also often looked intently at two customers who were standing directly opposite to her, looking at the merchandise on Stand Y2. Furthermore, in contrast to their earlier animated conversation, the subject and her companion hardly spoke to each other while they were waiting. Indeed, although the subject stood in a relaxed posture, she was relatively earnest and non-smiling as she looked searchingly around. The subject then paid for the washing-up liquid and both women left the store. The subject had stayed 10 minutes in the store, had purchased a container of washing-up liquid for 39p, and had stolen an electric plug costing 89p.

*Case 4 (Bedford, Saturday, at 3.22 p.m.)* The subject, a man estimated to be aged 17–25, walked briskly into the store. He was alone and empty-handed apart from a crash-helmet, which was strapped over his left wrist. He went by a direct route to his first destination, which was a display of suitcases (Wall Display 8) situated near the front entrance. After examining the suitcases, he walked to a nearby display of cushions (Stand UU3). He paused momentarily to look at this merchandise and then walked briskly to Stand B4. He walked slowly and closely alongside it looking at the miscellaneous display of toilet requisites. When he reached a point about two-thirds of the way along, he began to retrace his steps slowly. On the way he stopped, bent down slightly and picked up a packet of shaving cream with his right hand. After quickly inspecting it he replaced it on the shelf. Then he moved a little further forwards, again bent down slightly and with his right hand picked up a green, plastic bottle of aftershave lotion. He looked closely at the bottle (for about two seconds), stood erect and then walked briskly back to the display of cushions (Stand UU3). He did not appear to be particularly attentive to anything on the way.

When the subject reached the end of the display of cushions he stopped and stood facing it. He was holding the aftershave in his right hand, which was down by his right side. Almost at once (after 7 seconds) he turned his body around, slightly towards the right. In this position his potential field of vision included part of Side Aisle 2. It also included a group of three female customers. Since each member of the group was facing the goods displayed on Stand 114, all of them had their backs to the subject. About 5 seconds later the subject turned his



head, as if looking fleetingly to the left. Then, once again, he turned his head to the right in a similar manner. He extended this movement by turning his body slightly, so that he was completely facing the display of cushions. Simultaneously he used his right hand to place the aftershave in his crash-helmet. The crash-helmet was still strapped over his left wrist and could be used like a shopping basket. At the time when the aftershave was concealed the subject was holding the crash-helmet close to his left hip. This act of concealment was clearly observed by Follower P and partially observed from a rear position by Follower A.

After concealing the aftershave the subject started to examine several cushions closely. About 8 seconds later both Followers watched him use his right hand to take out a wallet from the right back-pocket of his trousers. Then, still holding the wallet, he picked up a cushion. The subject then walked to Cash and Wrap Area 4 where he joined a queue of two people. As soon as he arrived he placed the cushion on top of the counter. Then he took some money from his wallet with his left hand, before using his right hand to replace the wallet in the right back-pocket of his trousers. He then paid for the cushion. During the time that he was in the queue nobody else came to join it. Meanwhile he appeared to be quite composed. He stood near the counter, looking in the direction of the cashier who served him. For most of the time that he was waiting the subject held the crash-helmet close to and in front of his body at hip height. In this position it was below the level of the counter. Consequently its contents would not be conspicuous to the cashier. After purchasing the cushion he walked briskly up the store, clutching both the crash-helmet and the cushion to his chest. Finally he walked briskly down Side Aisle 2 and out of Front Exit E2.3, past another Cash and Wrap area. The subject had stayed 12 minutes in the store, had purchased a cushion for £2.99, and had stolen a bottle of aftershave lotion costing £1.99.

## CONCLUSIONS

A great deal can be learned about offending through direct, systematic observation. This paper shows that the results of our earlier study in Peterborough (discussed in Buckle & Farrington, 1984) have been substantially replicated in a different store in Bedford. The proportion of customers who shoplift is of the order of 1 or 2%. Males are more likely to shoplift than females. About 1% by value of the items taken out of the store are stolen. Most shoplifters purchase goods as well as stealing them. Generally, shoplifters steal small, low-cost items and look around carefully to check that nobody is watching them before placing the items in pockets or bags. Interestingly, Ekblom (1986) found that the main reason why store detectives apprehended shoplifters was because their suspicions were aroused when the shoplifters looked round the store a lot. The rate of shoplifting was about 1 or 2 items per customer-hour in each store, leading to the estimate that over 500 items per week were stolen from each store; far more than the total number of shoplifting offences recorded by the police in either county.

The most important result of our Peterborough study that was not replicated was the high prevalence of shoplifting by older people (aged over 55). In fact, in Bedford the highest prevalence of shoplifting was by younger people (aged 25 or less). Further research in which larger numbers of people are followed through stores is probably needed to establish the true

relationship between age and shoplifting. It may be that shoplifting is more prevalent among relatively young or relatively old people and least prevalent among the middle-aged.

The methodological problems of this research have been fully discussed by Buckle and Farrington (1984). They largely stem from the limited funds available. Ideally, it would be desirable to follow customers in a random sample of stores, in a random sample of places, at random times of the year, and so on. It might even be desirable to follow the same customers successively as they pass through several stores. The shops themselves can measure the amount of stock loss but not how much of this is caused by shoplifting. Hence, shops themselves might find it useful to use the method of systematic observation to measure shoplifting.

Systematic observation carried out on a large scale could provide the most accurate, unbiased and direct measure of the incidence of types of offending such as shoplifting. If such large-scale observation could be repeated at regular intervals, this could yield the most reliable available index of changes in the incidence of offending over time.

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