The National Council for Crime Prevention
Sweden

Operation Identification

-a way to prevent burglaries?

Johannes Knutsson

Research Division
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Foreword

This evaluation of Operation Identification has been made at the request of the National Police Board. As the expense incurred has been partly borne by the National Council for Crime Prevention (BR,Å), it was considered appropriate that it should be published in the BRA series of reports.

Evaluation research is comparatively new in Sweden. There is as yet no real tradition in this field. It is important that a tradition takes root firstly in order that public authorities may have a better basis for their decisions, but also in order better to be able to handle the various problems that "negative" outcomes may give rise to.

It is my hope that this work may contribute to further development of this research tradition.

Since the project started in 1978, numerous persons have helped me in one way or another. I wish to thank them all.

In particular I wish to mention the students who, in highly varying weather conditions, from snow and severe cold to fine spring weather, helped in the observations.

Police staff have also aided me in various ways in the course of the work. Toomas Tael of the System Design Group produced the material for the Register of Stolen Property.

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Stockholm, March 1984

Johannes Knutsson

Summary

The idea underlying Operation Identification is, by marking objects desirable for theft, to prevent them from being stolen.

Operation Identification is directed especially against house burglaries but is also used, for example, by car-owners to prevent theft of their car radio or tape recorder. Recently, too, it has been directed to cycles, skis, etc. Only house burglaries, however, are discussed in the report.

The object of Operation Identification is briefly to get householders to mark property desirable for theft with a unique identification (the identity number of one of their members). This is done with an engraving pen or invisible-ink pen.

When the objects have been marked they shall be entered on a list showing also their identification numbers. Possessions with "natural" identification - e.g. production numbers of cameras, etc - shall likewise be entered on the list. By means of a sign set up at various entrances the householder shall then notify that he participates in Operation Identification.

The fundamental idea underlying Operation Identification is that it shall be unattractive for persons to commit burglary in households which participate in the Operation.

Receivers of stolen goods shall also be made unwilling to accept marked objects in view of the risks that they may be identified as such. Burglars shall be deterred from committing burglary owing to the difficulty of disposing of marked stolen goods and the increased risk of detection.

Other effects striven for are to facilitate police investigations and to be able to a greater extent to restore stolen goods to their rightful owners.

The object of the study has been to establish whether Operation Identification is effective in preventing crime or not.

One element in the study has been interviewing of burglars. Owing to problems of representativity and reliability of the answers the population of interviewed persons has been small.

To the questions relating to Operation Identification most persons replied that they had seen the warning sign. Nearly half of those interviewed, however, did not know what it actually meant. Most said that they would not refrain from burglary in households participating in Operation Identification.

From these particulars, however, no conclusions can be drawn as to whether Operation Identification has any crime prevention effect or not.

The evaluation concerned a residential area outside Stockholm. There are some 3 500 houses in the area. The trend of participation in Operation Identification and of house-breaking was followed over a period of four years. House-breaking was also studied four years back in time from the start of the project in 1979.

Which houses are protected by means of Operation Identification have been established by observations. Every house in the area was visited on three occasions at two-year intervals by an observer who noted whether the house displayed an Operation Identification label. Houses with an alarm system (displaying an alarm sign) were also recorded.

At the first observation about 13 % participated in Operation Identification, at the second just over 20 % and at the third nearly 30 %. For alarm systems the figures were about 4 %, 6 % and 10 %.

During the observation period burglaries *increased* slightly in the area, whereas they *decreased* in adjacent areas. This, however, has nothing to do with Operation Identification. For one thing the participation in the Operation was too low for effects on the crime trend to be expected in the *area*. Nor was the study organized in such a way that anything could be said about effects, if any, in the area.

The aim was, instead, to study whether the risk of burglary in the dwellings of those participating in the Operation is reduced in comparison with non-participants. The effect of alarm systems was also studied.

The results show that no crime prevention effect of Operation Identification can be found. The risk of burglary does not differ in relation to that for households without protection. Alarm systems, on the other hand, reduce the risk of burglary.

It should be pointed out that the crime prevention effect was studied only as regards single family houses. The study reveals nothing about the situation in multifamily houses.

The flow of stolen goods from dwellings afflicted by burglary has also been studied. It was found that what people are most loath to lose and which, besides, is most attractive to thieves - jewellery and silver - is

markable only to a small extent. Things which can easily be replaced, e.g. TV sets, stereo equipment, etc, on the other hand, are simple to mark.

Marking, however, provides no guarantee against loss since numerous things are stolen although they are marked. And the probability of recovering stolen marked objects is small.

Another effect striven for in Operation Identification is to improve the situation as regards clearing up of crimes. Burglaries committed in households participating in Operation Identification, however, are not cleared up to a greater extent than those in other households. Since only a small proportion of all objects stolen from households participating in Operation Identification are marked, this is not a surprising result. The conclusion from the study is that the actual theory underlying Operation Identification is reasonable but that reality turns out to be other than the theory assumes.

This "negative" result of the evaluation, however, must not preclude trial of other measures or strategies for crime prevention. In view of the alarming growth of crime it is, in fact, desirable to try new approaches and methods. They should also be implemented in such a way that their effect can be evaluated and an idea can be gained of their expediency.

1 Operation Identification in theory

1.1 Introduction

The idea of being able to protect one's possessions by means of unique distinctive marks is a very old one. Owners' signs and earmarking of cattle are examples. The principle has now been used for crime prevention in what is called Operation Identification. In this modern form the measure was first adopted at the beginning of the 1960s, originating in the USA. It came to Sweden in the mid-1970s, where in particular, the police in cooperation with the Theft-Prevention Association have made use of it. Insurance companies, too, have to some extent been engaged in this matter.

Apart from the USA and Sweden, Operation Identification is being put into effect in Norway, Holland, Great Britain and other countries.

The fundamental idea underlying Operation Identification is, by marking objects desirable for theft, to prevent them from being stolen. More or less extensive evaluations, of varying scientific quality, have been made in the USA. One of the most thorough and reliable ones is presumably that by Nelson B. Heller et al. (1975). It is published in three volumes and, among other items, contains a summary of different evaluations that have been made. This section of the report is partly based on that work.

Operation Identification is directed especially against house burglaries but is also used, for example, by car-owners to prevent theft of their car radio or tape recorder. Recently, too, it has been directed to cycles, skis, etc. Only house burglaries, however, will be discussed in this report.

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entrances the householder shall then notify that he participates in Operation Identification.

The fundamental idea underlying Operation Identification is that it shall be unattractive for persons to commit burglary in households which participate in the Operation. This shall be achieved by increasing the risk of detection and catching of thieves.

Receivers of stolen goods shall also be made unwilling to accept marked objects in view of the risk that they may be identified as such. Burglars shall thus be deterred from committing burglary owing to the difficulty of disposing of marked stolen goods and the increased risk of detection.

Other effects striven for are to facilitate police investigations and to be able to a greater extent to restore stolen goods to their rightful owners.

1.2 Objectives

The primary objective of Operation Identification is to prevent burglary. If this objective is more closely analysed, however, several goals and two levels of striving can be distinguished - the micro and the macro level. On the micro level the unit is households. On this level two effects are primarily aimed at:

1 a. Households participating in Operation Identification shall run less risk of burglary than those not participating.

2 a. If burglary occurs nevertheless, households participating in Operation Identification shall have greater chances of getting back their belongings.

The goal on macro level - the society level - may be summarized under two points:

1 b. The burglary rate shall be diminished.

2 b. The proportion of residential burglaries cleared up shall be increased.

It should be pointed out in this context that goal 1 a can be fulfilled without fulfilment of goal 1 b, i.e. even if households participating in Operation Identification are less exposed to burglary, this need not mean that the total number of burglaries diminishes. Burglaries can be committed in households not participating in the Operation. The term crime prevention may thus under certain circumstances be somewhat ambiguous.

1.3 The theory

In theory Operation Identification may affect the burglary process in many different stages. By burglary process is meant the stage from which a potential criminal considers committing a burglary to the stage when the stolen goods are disposed of. Operation Identification, however, is also thought to take effect after a receiver has taken over the objects or a new "owner" has them in his possession. To describe how Operation Identification is assumed to function and how the objectives shall be achieved, the Operation can be set in a time context.

For analysis of the possibilities of preventing residential burglaries by means of Operation Identification it can appropriately be divided into three phases in which different conditions must be fulfilled for crime to be prevented. The three phases are the information, the marking and the burglary-decision phases.

Three groups - police, households and potential burglars - must act and be influenceable for Operation Identification to function.

The first target group is householders. They must be notified of the existence of Operation Identification and be convinced that it offers effective protection against burglary. They must then join in the Operation, which they do by marking their possessions and displaying their participation by a sign at different entrances.

The second and, to be sure, important target group is the house-breakers. As far as they are concerned they must know of Operation Identification, what it involves, and must recognize the sign and what it means. The view must be conveyed to them that the possession of marked objects involves increased risks, that the objects are difficult or impossible to dispose of on the receiver market, and that burglary in households participating in Operation Identification is more risky than in other households.

The role of the police in this context is in different ways to inform about Operation Identification, how it is intended to function, how objects are to be marked and, finally, to furnish marking equipment. These actions are accordingly the information and marking phase.

The last phase, the burglary-decision phase, concerns the burglars. By reason of their knowledge of Operation Identification they shall refrain from committing burglary in households displaying the Operation sign. The reasoning is illustrated in the table below.

The objective of increasing the proportion of cleared-up residential burglaries applies when the burglary process has started and to already committed burglaries. The burglary reconnaissance phase and the time spent at the scene of the crime shall be prolonged in order to increase the risk of detection. The stage during which the burglar selects his goal will be prolonged if he avoids households

participating in Operation Identification and seeks others instead. The possibility of observing suspect persons and taking action against them is thus assumed to be greater.

Figure 1.1 Operation Identification process in relation to the objective of preventing residential burglary

	Police	Households	Potential burglars
Information phase	inform about the existence of Operation Identification	note the existence of Operation Identification	note the existence of Operation Identification
	explain the implications of Operation Identification	understand the implications of Operation Identification and accept that it provides effective protection	understand the implications of Operation Identification and accept that it involves increased risks and/or that marked objects will be difficult to dispose of
Marking phase	furnish marking equipment	loan marking equipment and mark it as indicated	
Burglary-decision phase		display Operation Identification sign	refrain from committing burglaries in Operation Identification households

If a household is burgled and the deterrent effect has thus failed, the time spent by the burglar at the scene of the crime will be extended as he must investigate which goods are marked. This means that the stage when the criminal can be seized in the act may be presumed to be longer. If he is not detected and avoids taking marked goods, he is no longer affected by Operation Identification. In this case, admittedly, the household has been burgled but has retained the objects that were marked.

If the thief decides to take marked goods and is apprehended during his flight from the scene of the crime, the police can identify them as suspected stolen goods and can thus bind him to the crime. If the receivers are unwilling to accept the marked stolen goods, the disposal phase is prolonged. As long as they remain in the burglar's possession he is vulnerable.

The division into the various events as regards the second objective will thus be the reconnaissance, burglary, flight and disposal phases. The criminal's choice of object for theft is assumed to be affected by Operation Identification. Even if unaffected he is assumed to avoid the choice of marked objects. If he is uninfluenced by the sign or does not avoid marked objects, he can be more easily bound to the crime if found with them.

As regards householders the assumption is, as before, that they have set up the sign and have marked their possessions. An important point is what objects attractive for theft can really be marked and to what extent the mark is indestructible.

For the police the search and investigation work, in particular, is of interest in this context: what methods are used, under what circumstances persons will be suspected and action taken against them and checks made of objects in their possession.

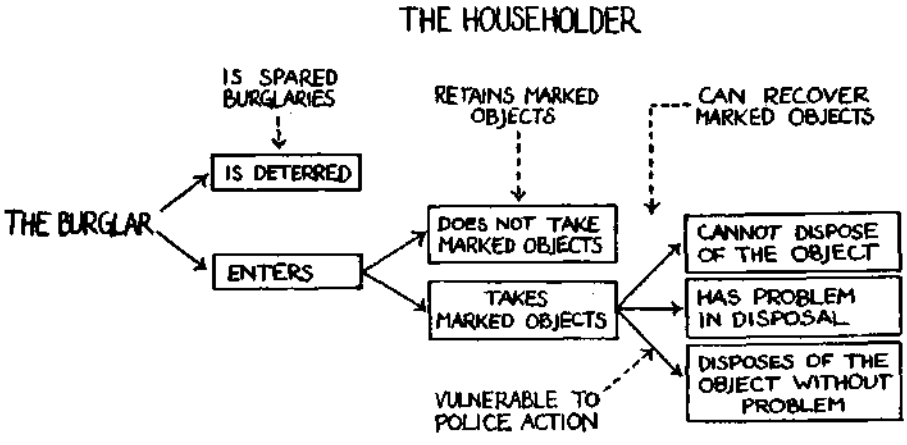
If it proves that the commitment of burglary in households participating in Operation Identification involves increased risks, this is assumed to lead to avoidance of such goals by the criminal clientele. The objective of preventing burglary is thus closely linked to that of increasing the proportion of cleared-up burglaries.

Figure 1.2 Operation Identification process in relation to the objective of increasing the proportion of cleared-up burglaries

	Households	Burglars	Police
Reconnais-sance	display by a sign that they partici-pate in Operation Identification	refrain from corn-ting burglary in participating households and concentrate on others	note suspect behaviour
Burglary phase	that they have really marked their objects	avoid marked objects	note burglaries being committed
Flight phase		are in posses-sion of marked objects	note and check suspect persons and the objects they have in their posses-sion
Disposal phase	that the mark is indestructible	possess marked objects and have problems in dis-posing of them	as above

Schematically the main points in the objective of increasing the proportion of cleared-up burglaries may be listed as follows.

How house-breakers may react is illustrated in the diagram below, which shows different reactions when a household participating in Operation Identification is encountered.



For Operation Identification to function, accordingly, the thieves must be given the notion that the prospects of committing burglary in participating households are poor. If the whole matter is viewed in more realistic terms, it is in the later stage of the process that Operation Identification enters into the picture. It is difficult to imagine that the actual search for suitable objects would be appreciably affected by Operation Identification.

In order that thieves may clearly understand that Operation Identification is not a mere empty threat, a number of burglaries must actually be committed in participating households and marked objects be taken. If the theory holds, the negative experience gained by these "pioneers" must then be spread to their colleagues.

This need not necessarily mean, however, that house-breakers are deterred from committing burglary in households participating in the Operation but simply that they refrain from taking marked objects. How well Operation Identification functions in practice I deal with in the following chapters.

2 From the criminal's viewpoint

2.1 Characteristics of criminals as group

Our knowledge of criminals is actually limited to those who are traced. (This applies at least to older criminals for whom the question of self-reported crime studies do not arise.) There are certain characteristics which entail a greater (or lesser) risk of a particular category of house-breakers getting caught. The most significant factor in this context would seem to be the level of criminal activity. The greater the intensity of criminal conduct, the greater the risk of being caught (Persson, 1976).

The possibilities house-breakers themselves have to influence the factors affecting the risk of getting caught must not be overestimated (Knutsson, 1979). Those who are assiduous in crime, therefore, will be overrepresented among known house-breakers.

An example of a factor which raises the crime level is drug abuse (McGlothlin, 1978; Knutsson & Kühlhorn, 1980). In relation to all house-breakers, therefore, criminals who are drug addicts will be overrepresented.

The representativity problem must, however, not be overemphasized. It is of the "typical" burglars that our knowledge is greatest. From the point of view of countermeasures, furthermore, it is the highly active criminals who are of the greatest interest.

Burglars are mostly young men. The majority of them are in their twenties. Crimes of this kind occur fairly late in the criminal career (Sarnecki, 1982). The female element is small but has slightly increased since the end of the 1960s (Knutsson, 1983a).

Among these criminals there are a considerable number of drug addicts. This proportion, too, has increased since the mid-sixties. Among those arrested on a suspicion of burglary in Stockholm the proportion of those practising drug injection was at that time about 10 %, rising to nearly 30 % at the beginning of the seventies (Be jerot, 1975). Persson (1976) estimated the proportion of drug addicts at about 50 % in a survey of the conditions in the Stockholm area in the mid-seventies. For the most active criminals the estimate was 75 %.

It is only an extremely small proportion of the population who engage in this type of crime. In the Stockholm area it is probably of an order of a few per mille (Persson, 1976). Owing to their average high level of activity, however, their effect is considerable. It is accordingly against the activities of a small group that in different ways we attempt to protect ourselves.

2.2 Interviews with burglars

2.2.1 Procedure

To get an idea of how criminals look upon their lives I arranged for a number of interviews with burglars. These took place in conjunction with police investigations concerning residential burglaries in Stockholm. The interviews took place immediately after the suspects had admitted their crimes. When making preparations for these interviews I had found, in fact, that they then had a need to talk to someone.

The interviews were tape-recorded. The persons interviewed could switch off the tape recorder if they so desired and could also erase any portions of a delicate nature. None, however, made use of these possibilities.

I deliberately avoided asking too pointed questions on delicate subjects such as about receivers and drug peddlers. Most of those interviewed were frank in their remarks. Only on a few occasions was I refused interviews.

Altogether seventeen men and one woman were interviewed. This is, of course, far too small a number for a statistical analysis of the answers. The picture that emerges is thus rather impressionistic. The problem of the small population must, however, not be exaggerated. The situation in itself involves certain limitations. There are, for example, not so especially many ways to break into a dwelling or to get rid of stolen goods.

2.2.2 Comments on "qualitative" data

In the past years there has been a great interest in "qualitative" methods in criminology (see, for example, Åkerström, 1983). They can be of great value, increase our understanding and give insights into various "foreign" worlds.

There are, however, great problems attaching to the interview method. One of the main ones is the reliability of the answers. There is a great risk that those interviewed more or less consciously distort

the facts. The situation is especially delicate when the person's self-image is threatened (Phillips, 1971).

By way of example I may mention the burglar who told me that on moral grounds he did not steal more than he needed from the houses he broke into. None of the very experienced police officers with whom I discussed this case could recall any thief who, for example, left any 100 crown notes on the scene of a crime. If it were true, it would presumably be a *very* extreme exception.

In treatment and evaluation research the interview method has been used for measuring the effects of treatment. Reckless & Dinitz (1972) have shown that this may be very dubious. Young people taking part in a therapeutic programme at their school themselves stated that it was very effective, that they had improved and that it would be of great benefit to others of their school-fellows who had problems.

A check against records, however, showed that the improvement possibly existed in their imagination but not in reality. The researchers drew the conclusion that one must be cautious with data from interviews. In Sweden an evaluation has been made of drug addict rehabilitation with, in principle, the same results. The Swedish researchers, however, drew a different conclusion (Jenner etal., 1977). They considered that the result showed how unreliable *records* are.

Purely theoretically it would be possible, by means of interviews with burglars for example, to investigate whether Operation Identification has any effect (cf. chapter 1). Owing to the representativity problem and for the reasons stated above, however, I have refrained from this course. It is against this background, among other things, that the small population must be viewed.

Most questions I asked were of a more technical nature: how they selected their targets, what tools they used, what they preferred to steal, etc. The answers I received accorded closely with other information from, for example, investigations on scenes of crime and from reports of crime. On the other hand questions relating to moral considerations are more dubious.

To give the reader an idea of the kind of people involved and to permit a judgment of their statements, I am letting some of the burglars speak for themselves in response to some of the questions.

2.2.3 Results

The first question was how they had happened to land up in the hands of the police. Most stated that they had been caught in the act. Some

had been found with suspected stolen goods. These facts accord closely with a study of cleared-up residential burglaries (Knutsson, 1979).

How did you land up here?

"I had broken into houses, y'know, and stolen a few things, y'know. The police picked me up a kilometre from there through a witness. I had drunk a bottle or so, 'cause I'd been demobbed then (nine days before the arrest; author's note), and was out on the spree with my mates. And then, when I was to push off home, I wanted a little more drink, y' know, so I found my way into a house."

"Landed up here for house-breaking. I was properly drunk, it's as if it hadn't happened. Bloody silly, and don't I regret it! We'd drunk a hell of a lot (a 75 cl) and taken some pills (15 sobril - 'downers') we wanted to go in and warm ourselves in some place; then my mate started to break in a door, so there was no rhyme or reason in it, not money, nothing. They had rung and locked the door on us and caught us in the act, so to say. With one of my mates."

"For house-breaking and stealing a car. I had a work pass from a prison and had been drinking. Found a car in Stockholm with the keys in and picked up one of my mates. We decided to look up a dope peddler he had a grudge against. As he was not at home, we decided to break in. Someone saw us. Myself I took a stereo set and a collection of coins. Went back once again but then the police came. We were under the influence - don't how much we'd drunk. If we had been sober, we shouldn't have thought of stealing. At any rate we shouldn't have gone back a second time. That was why we got caught."

These were no specialized criminals. What crime is committed appears largely to depend on earlier experience and on the play of chance.

Do you engage solely in residential burglary?

"No, I have a trial waiting for cheque forgeries. I started with cellar burglaries."

"Started with other crimes - nursery homes, school recreation centres, and so on. Small things, allotment cottages. Don't know why, perhaps because it's quite simple. OK, a dirty trick too. One met people and learnt from them. It sounds like some bloody romantic thing, what, but that's how it is."

"Everything to do with money - except people. Safes, thefts, but no fraud, dope peddling, receiving. Receiving has not been an aim for me, but I have bought and sold. It was the lack of money that drove me to it - the committing of crime then depended on whether there was anything for the taking. Nothing worked out in advance."

All had experience of drug abuse. If they were still addicts they usually stated that they were just packing it in. With the odd exception they used or preferred central nervous system stimulants.

Almost all were under the influence at the time of the crime, mostly due to alcohol, which for some was a necessary preparation for crime. They wished to deaden their anxiety about getting caught or fear of imprisonment. One stated that he needed it to overcome his moral barriers.

Are you usually under the influence when you commit burglaries?

"Yes, usually spirits or drugs."

"Yes, spirits, but previously drugs. A quarter of a bottle and a few beers. When I'm drunk, it just is like that. The excitement and all."

"Spirits. Two or three snaps. It's easier to talk me into it then."

Why?

"You're less sensitive then. Usually I'm not sober. If I'm sober I wait till I get in that state. Spirits numb you. That's what drives you on when you're half way round the bend. Otherwise one says to hell with it."

"The fear you have disappears - of getting caught. It goes altogether."

"It deadens your anxiety. I don't know how to put it. You're afraid of getting caught, landing up in jug. You've thought of doing something - need to boost your courage. It's easier with a few snaps in you. Deadens your anxiety in case anything goes wrong - gives you a bit of a feeling of the devil take the hindmost."

The crimes were generally unplanned. The perpetrators were in acute need of money - usually due to drug addiction - and decided to commit crime. They then selected an area in which to operate. There they decided upon their target, a house or flat which, after checking up on the situation, they broke into. Some of them preferred detached houses, others went solely for flats.

Do you plan in advance?

"No, I just go out, have a look, and take what I can.I'm always with one of my mates, someone I got to know in jug. If he asks if you want to make a flat, you go along. Usually with the one who hit on the idea. I don't know whether I myself hit on the idea, for actually I don't like it. It's a way of making money - a necessary evil. Mostly it has been blocks of flats. Why I don't know, but there's so bloody much to choose from. Usually it's been those who can select a flat better than I - presumably because of a feeling that it looks empty. We ring at the door. As a rule it's not I who go first. Then we break up the door. That we do with a big chisel or tyre mounting tool."

"No - I go to an area, mostly on my own. At the start I sneaked off with one of my mates by night. After that I operated on my own. I only go for detached houses - why I don't know, presumably because that's what I started with. I first check whether it looks a fair do - that one sees from the windows, curtains and what not; if there is gold, where it is placed, and so on. If the houses are in rows with forest at the back, you're not

overlooked. I ring at the door or check the lock. If the door is locked there's no one at home. I then break in through a basement window with a large chisel."

"It sometimes happens that one looks at a place, walks past it a few times and checks for green light. I work preferably on my own - that's the best way. You feel safer, of course, if you're two, though if anything goes wrong you may be in a mess. I mostly go for blocks of flats - don't know why. I'm out around town, I suppose. There's mostly blocks of flats there. I choose those that show green light, empty and so on. Look whether there's any post, ring the bell and see whether the lights are on. If anyone answers, I ask for a friend. Preferably there should be little chance of being observed by neighbours. Sometimes I have a knife, but that's to work with. My tool is a screwdriver."

Their main interest was in money, gold and other valuables. If they have a car it is, of course, easier for them to get away with more bulky objects such as stereo equipment, etc.

When you have got in, what do you usually take?

"Things which are not too bulky. Things which can be packed into a suitcase. Cash, gold, diamonds and so on which can be sold. A radio, but nothing bulky."

"Cash and gold. If I don't find these, I take a stereo."

"Gold and money. Stamp collections, but *not* stereo or TV."

"That depends on whether one's on foot or not. Bonds and gold. If I've been lucky and had a car, I've taken TV and a little larger gadgets. I've read a little art history on the quiet, taken the opportunity when I've beenin prison, y'know. I've had orders for paintings. Come along with a Chagall and I'll buy - do you want cash?"

They have generally had difficulty in saying how much they got in payment. There are many different factors that enter into the picture. In the ultimate resort it is a matter of negotiation between thief and receiver. Some said that they had permanent channels, others were forced to deal through middlemen. The payment was then less. Some exchanged direct for drugs.

From the residential burglaries in Stockholm in 19771 have estimated the takings per burglary at between 1100 and 1 800 crowns (average). In view of the very skew distribution, in half of the cases the amount would presumably have been less than 600-900 crowns (median). Occasionally, on the other hand, their earnings were substantial. It would seem to be more profitable for those who concentrated on detached houses (Knutsson, 1980).

For those who used drugs the bulk of the earnings went to satisfaction of their wants. In general the money seems to have been used for maintaining a hedonistic life-style (Akerström, 1983). The income from criminal activities thus does not appear to have gone to the necessities of life (but cf. von Hofer, 1983).

What do you use the money for?

"Previously almost everything went on drugs. I spent 1 500 crowns in three or four days. Now it's taxis and restaurants. You go on the spree, y'know. If you've got a few thousand you take taxis everywhere, and then it's restaurants. A little hash too."

"Well, it's gone to living expenses, drugs, spirits, and food. I've been out for two to three months after every release in the past ten years. A grand round of drinks and drugs and then back to the lock-up."

"It all went on drugs."

"Heroin - previously it went on parties and drinks. You went to the pubs. Later, when heroin came, the number was stepped up - three to four burglaries a week to get money. Sometimes it was one every day."

Certain moral aspects of their criminal operations were also touched upon. Here there is a great probability of interview effects. These criminals naturally realize the moral reprehensibility of their actions and may have a need to try to diminish the opprobrium they feel - vis-a-vis both me and themselves (see Matza, 1964).

They often said that their victims had householders' insurance and therefore suffered no great loss. Some maintained that they concentrated on the rich, so implying that they were doing something to increase equality in society. Even if one were able to scale away these neutralizing and rationalizing arguments that they use towards others, I think nevertheless that some of them were ambivalent about their deeds.

Do you ever think of your victims? What are your thoughts about them?

"Well, I think, as it were, about different things I get nothing for. May be bloody fine things - gold, fine gold - but I leave what I can get nothing for. Take a little time to choose. Things like that one wants rather to get out of one's mind, not think of. Anyway there are so many bloody insurance companies, so if folks are a bit awake, to be sure, they can get compensation. It's not all, of course, who're insured, but you can't go into everything. I try not to vandalize. If I need a certain sum, I take only that amount. It's because I think of the victims - it's subconscious."

"Yes, I hope they've got a good insurance. When I've taken souvenirs, I've felt bad, felt sorry for them. You don't feel a bit tough. You blame it on the fact that youneed money."

"Yes, in fact I do. It must feel lousy when they come home. One sits and talks about it afterwards with one's mates. If anything with a sentimental value has been taken, a photo of a girl or such like. I myself have had it done to me. Bloody hell! I'm sorry for them - but not for those with a lot of loose cash at home. One of those high and mighty - then it's OK - no mixing in of politics, what. I feel more for working class families and the like. Not every time - it seems a bit of a shame all the same."

"My home is sacred -1 don't like it. To rush in and steal without a thought - it may be a poor person. I don't count myself a criminal, what. The worst I know is to commit crime. Those who do so, expose themselves to risks. On the first occasion one's very nervous - then the barriers fall. All people must feel the same - a home is sacred in some way. If I've got hold of something with personal value - then I've thought, that was a lousy thing to do. It's not so usual that house-breakers think in that way."

"At the beginning I had a bad conscience about stuff, memories of stuff without value but which I took off- it is an ugly thing to do of course. But that depends. If you come into a flat where they have the bare necessities, it feels lousy. You see whether there's affluence or poverty. If there's a lot, it doesn't feel so bad - it may even feel good at times when you see what there is - things in abundance, it's easy to see. You just peel off a little of what they don't need, morally that's how it feels. Afterwards one may think - they've certainly been rid of a lot - there's going to be a bloody show-down after this. I understand that people who are burgled get mad with the thieves, I would be too. But the fact is that in our society there's no devil who's considerate of others. They act nasty and then one acts nasty oneself. Well, I know there are young monkeys who have a go at flats and think it fun too. I don't think it fun, I do it sometimes 'cause I need money."

I have pointed out earlier that the population is altogether too small for the answers to be analysed statistically. Reppetto (1974), however, conducted a series of interviews with a corresponding group of American burglars (n = 97). One may obviously question the possibility of drawing a comparison with Swedish conditions. But in part his findings accord with Swedish experience and I therefore present some of them.

In his population three patterns could be distinguished which could be related to some simple background factors. It is a matter of tendencies rather than absolute differences.

Common to all of his subjects was that they didn't want to move too far away from their homes and that they were characterized as "semiskilled". They possessed no advanced technical knowledge. Their tools were generally large screwdrivers or crowbars with which they broke in. They aimed at targets which were empty and avoided dwellings with alarm system.

For the younger, accessibility was an important factor. They were also easier to frighten off with police and guards. All wanted preferably to get at cash, but the younger were also keen on stereo equipment and the like. They could dispose of this in their circle of acquaintances.

The older and those who were drug addicts tried for dwellings where there might be plenty of valuables in the form of jewellery and silver. These were converted into money or drugs by receivers they had made contact with. They were better able than the younger to find an

outlet for stolen goods. The money was not used for their sustenance but for drugs and alcohol and various consumer articles.

About half of them were drug addicts. These stated that, on average, they committed 5-6 burglaries a week as against 1-2 for non-drug addicts.

2.2.4 From the record of a preliminary investigation

Knowledge about the facts of burglars' lives can also be obtained from preliminary investigations. The following account is based on the record of a preliminary investigation which partly took place in the studied area in Stuvsta (see 3.2). There was a very sharp rise in the number of burglaries in that area in 1981. The police succeeded in getting hold of two persons who proved to account for a large number of them.

It all started when a police patrol became interested in two persons in a car. They found a number of objects in the car suspected to derive from a recent residential burglary. The persons were therefore apprehended. A large quantity of stolen goods was discovered in searches in their dwellings. Both were suspected of grand theft.

At the first interrogation both denied the charge. At the second interrogation, however, one of them, a 24-year-old man, chose to confess and to ease his conscience.

He related that a month or so after discharge from prison he had started again on residential burglaries. Since he was a drug addict he had landed up in a vicious circle of house-breaking, sale of stolen goods and purchase of drugs.

His dependence was so great that he needed to commit a burglary every day in order to get the necessary money for his drugs. He had himself lost count of the number of his burglaries but estimated them at about 100. According to his estimate he had stolen goods worth 100 000 crowns. The investigation established that he had at least committed 75 residential burglaries. This was done, among other means, by taking him to the scene of the crime and checking against crime reports. Some of the burglaries had been committed in other districts.

He had committed most of the burglaries at nighttime together with a comrade. They first checked whether there was any mail in the letterbox. They then tried to look into the bedrooms through a window. If all was clear they broke in. They were mainly interested in gold and silver and other easily portable valuables, e.g. cameras. They drove to and from the scenes of the crimes in a leased car. This method they had earlier learnt from a colleague.

As regards the stolen goods he gave two versions. He first maintained that he had sold direct to established jewellers, mainly in Stockholm. He later stated that he and his mate had not sold direct but to receivers. He had given the first version as he was afraid that the receivers would injure his children if they were shown up. He had been paid by them in cash and drugs.

The purchase of drugs had thrown him into debt. And to pay his debts he had to commit new crimes. If he failed to pay he would get a call from "gorillas". He visited the receivers roughly every other day. He estimated that the sum he received was never less than 3 000 crowns on any occasion. The whole of his earnings went on drugs.

His comrade, too, a 17-year-old boy, confessed at the second interrogation. Together they had committed about 50 burglaries. The latter was not a drug addict but committed burglaries in order to settle private debts. He estimated his total earnings at 30 000 crowns. He had sold the goods to receivers. He, too, was unwilling to name them as he was afraid of being injured. On some occasions he had himself sold to jewellers without having to prove his identity on any occasion.

Through what had appeared in the interrogations and house-visitations other persons came under suspicion. In parentheses it may be mentioned that the records of seizures comprise some 1 500 objects, mostly jewellery.

Five of the other suspects were women. They were sweethearts or former sweethearts of the men. Through stolen goods found on them (jewellery) or in their possession they were suspected of receiving. One of them, who had been especially active in the sale of stolen goods to jewellers, confessed when faced with receipts from jewellers bearing her name.

She was the first-mentioned burglar's (the 24-year-old's) young lady, but she had undertaken the sales mainly for another. This had occurred on some 30 occasions. In payment she received 200 to 300 crowns on each occasion or a dose of amphetamine.

The criminal for whom she sold had also been identified by the 24-year-old as accessory to some of the burglaries. He was, however, unwilling to cooperate with the police, stating that everything he had told the police on previous occasions had been to his disadvantage. He therefore preferred to say nothing at all.

2.2.5 Points of view on anti-burglary devices

With fifteen of the persons I interviewed I discussed the possibility of protection against burglary. I asked them what they thought of safety locks and to recommend any measure they thought might be

effective. I also brought up with them the question of Operation Identification.

Judging from their answers they seem to hold the view that safety locks do not provide assured protection. They are, however, more difficult to break through. Burglars therefore tend to avoid doors with such locks. All answers are presented below.

What do you think of safety locks?

"Well, it's a good thing that they're there, for if they are, then there's things to be taken. In flats they're good (from the protective aspect, my note), but in detached houses they're pointless."

"They're not so good, they're more stable. But they don't help either if one wants to get in."

"They don't frighten thieves."

"For those who work on flats it's not so good. In these new flats they make no difference - they're too frail."

"I'd rather not have those locks - they're more difficult to pick. But I have dealt with them."

"They're good for those who live in the flat. I've had a go at them - but they're extra troublesome."

"A tougher job. But if you're determined you get by."

"It takes a longer time."

"Good for those who have them. But they can be neutralized with a hinge lever."

"No problem. I rather take a flat with safety lock, for they have stuff they want to protect. Though it takes a longer time."

"It's good for the owners. But it makes no difference to the thieves. Only it takes a longer time."

"Possibly if the flat has seven safety locks. It is simpler to get in without, but not much more difficult with them. One wrenches and one breaks."

"It's no definite protection. If you've got a car and can get away quickly, it makes no difference if it's noticed. Though it's more trouble."

"I don't care a damn for safety locks. The door-frame is the critical point. They're so frail."

"More effective against spontaneous burglars. But if you've decided, you don't care a damn. I avoid them if I can."

When they were asked themselves to recommend some form of protection, most mentioned an alarm system. For flats some thought that efficient locks might increase the protection, but it was more difficult with houses. All answers are presented below.

If you yourself were to recommend someone how to protect themselves against burglary, what would you tell them to do?

"If I owned a house, for instance, I'd put iron bars on the basement windows and get locks. Have an alarm system and so on."

"Take out householder's insurance. No more is needed. Then one's safeguarded - and, of course, take care of souvenirs and the like, try to hide them away."

. "I might if I had any patent recipe. Acoustic alarm. Hullaballoo and all that, that I believe in both for houses and flats, and signs. Some proper locks. But doors nowadays are mere cardboard."

"Put in safety locks. Put in an alarm system. But safety locks suffice. And keep a watch on your keys."

"Safety locks, they're a sound idea, that they are. Burglar alarm."

"Screeching alarm on all windows and doors. Two loudspeakers which howl at two points, that's the best way. A big savage dog, that's not so bad either."

"Safety lock, alarm."

"Safety lock, alarm or such like."

"More locks. Three locks on every door. Takes a long time, makes a noise. That's the best way in houses. A dog's also a good idea."

"Make sure the letter-boxes are empty - especially at holiday-times. A lamp that lights."

"Stay at home. Can't think of anything else."

"Double doors - safety lock on both doors. Alarm system."

"Have a private prison, guards and all. Technology is not the preserve of a single group. We have a need for it. If I lived in a flat, I'd nail up the door and have two safety locks. If I lived in a house, I'd move away."

"Lock the inner door. Change the inner-door lock. Have a police lock."

"An alarm which signals when broken. A dog."

These tips are remarkably similar to those given by American colleagues (Reppetto, 1974:84-86).

In the course of the interview I showed them an Operation Identification label and asked them if they'd ever seen one. If they had, I asked what it signified. The decisive question, however, was how they'd react if they came upon a dwelling displaying the sign. Would it deter them from entering or not? The crime prevention aspect of Operation Identification stands or falls with their answers to this question.

Their answers concerning Operation Identification are tabulated below.

	Yes	No	Possibly
Seen the sign	11	3	1
Know its signification	8	7	-
Refrain from entering	2	9	4

In the first place I wish again to emphasize that the material consists of extremely few persons. The answers can, however, give some intimation of what may be expected. Most of them had seen the sign, but its signification was unclear to some of them. The majority said that they would take no notice of it but break in nevertheless. The answers are presented below.

If you see such a sign would it influence you if you were thinking of entering the dwelling?

"I don't believe in that. I don't think it's so organized and specialized, so I think it's more of a fairytale. I think it would spur me on to get in, for then there are things to be had there."

"No, I don't go in. The stuff is difficult to place. I've burgled a marked dwelling. The least little thing was marked. I got caught on my fingerprints."

"Yes, to hell, it's one of those night watchman things. I've seen it masses of times." (After I had explained.) "Yes, to be sure, they've marked their stuff. That I wouldn't bother about if I'd made up my mind."

"No, I go in anyway. No, no."

"A little, you can't get away from it. It's not so good an assignment."

"Perhaps."

"Not at all, I'd go in anyhow."

"Devil if I'd go in. It'd be difficult to get rid of the stuff."

(Thinks it's a burglar alarm.) "I wouldn't go in." (After explanation of its signification.) "I'd go in. They're advertising there are things to be had."

"That depends on the state one's in. If I'm sober, I back out. If I'm drunk, I go in."

"Not especially, I've been in. One gets the idea there are things to take, but they're difficult to get rid of."

"No, not in the least. It makes no odds whatever. That business, what, it's a bloody practical joke the police and insurance companies have hit upon. A sucker just out of his swaddling-clothes perhaps get's taken in by it."

"The sign has a significance. Not outside, but when I'm in there. Which things I take and so on. Money can't be marked. Gold is difficult. It's apparatus that can be marked."

"Depends where it's placed. If it's on the windows of a house and I've had a lot to drink, I look for a window without the sign." (According to my notes this person did not understand what Operation Identification signified. Not even after my explanation.)

"It makes no difference. I go in anyway. Everything can be sold."

These results accord closely with American experience. Of 69 burglars in a study from Illinois only 7 % considered Operation Identification had any deterrent effect. The majority (80 %) thought it ineffective, even if half of them said it would affect the way they acted on the scene of the crime. A third of them thought Operation Identification a waste of time (Heller et al., 1975).

From these statements one cannot conclude whether Operation Identification is effective in preventing residential burglaries or not. This question I discuss in the following chapter.

3 Evaluation of the crime prevention effect

3.1 Introduction

This chapter presents an effect-measurement study of the crime prevention aspect of Operation Identification. It is divided essentially into four parts.

The project of which the evaluation was made, the area studied and the organization of the study are first presented.

An account is then given of the result of the measurements concerning the level of participation in Operation Identification.

The third part consists of an account of the crime trend in the area. And finally an account is given of the outcome of the study as regards the crime prevention effect of Operation Identification.

3.2 Presentation of the project and the area studied

In 1978 the Folksam insurance company initiated a discussion with representatives of, among others, the Swedish Association of Owners of One- and Two-Family Houses and the National Council for Crime Prevention concerning the possibility of arranging a project aimed at preventing losses. The ultimate objective was to reduce insurance costs, both for policy-holders and the insurance company.

The National Council for Crime Prevention was invited to take part in the discussions in view of the desire to have the results evaluated. The evaluation, however, was ultimately made within the scope of the National Police Board's internal research.

It was not only losses incurred through crime - chiefly burglary - that it was desired to prevent, but also through water and fire damage. Residential burglaries were, however, an important point. The intention was that they should be reduced by inducing householders to participate in Operation Identification, but also through improved locks.

Implementation of the project required an area with certain characteristics. It should, for instance, have an active association of houseowners, the loss level should not be too low, and the risk of burglary should be relatively great.

After some investigation a residential area in the municipality of Huddinge - Stuvsta - was found to fulfil the specified conditions.

The area is situated about 20 minutes by road from Stockholm City. It contains some 3 500 one-family houses. It is intersected by the southern main railway line and by Huddinge Road which make a natural division of the area into two parts (figure 3.1).

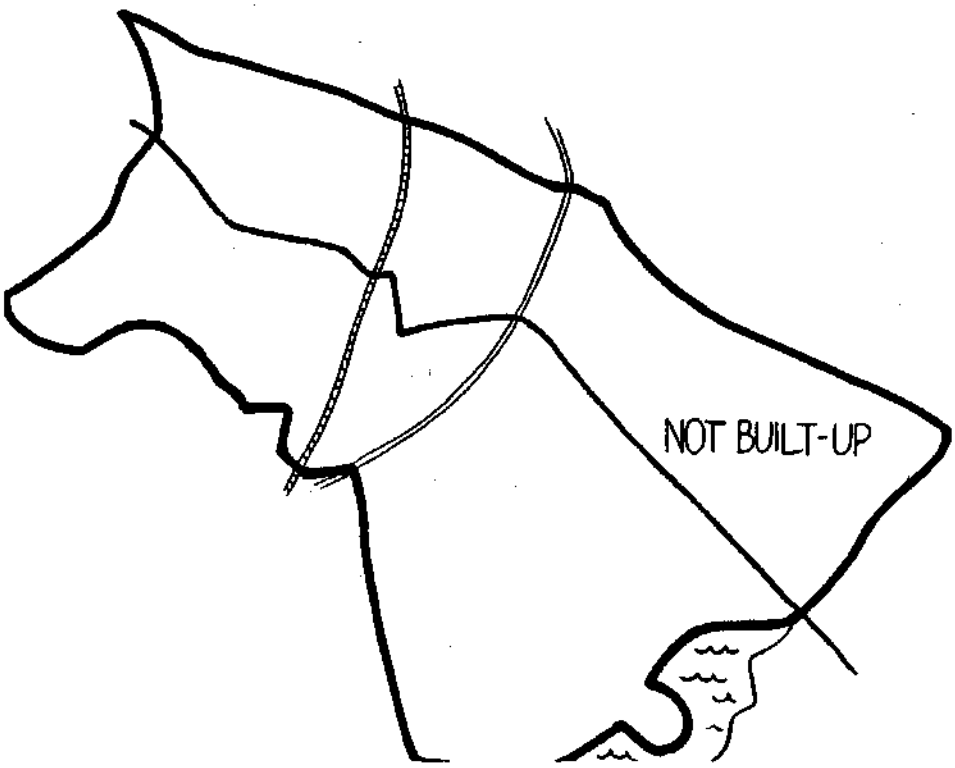


Figure 3.1 The area studied

The housing consists mostly of detached houses, but there are also some terrace-house areas and a small number of multifamily houses. The houses are of both older and recent date. In some parts of the area more than half of the houses were built before 1940, while other parts were built up later. In its structure the area may be said to represent a typical Swedish residential area.

In cooperation between the Stuvsta Houseowners' and Horticultural Association, the Huddinge police and Folksam the project was started under the name "The Stuvsta project - Protect Your Home" in the autumn of 1978. At the end of that year the inhabitants of the

area were informed about the project and its object in a brochure that was distributed to all households.

The first activities proper started in the spring of 1979. Additional information leaflets were distributed. These were accompanied by various advantageous offers, e.g. rebates on locks and their installation or reduced prices for smoke detectors. Sets of marking equipment were made available and distributed by the homeowners' association.

During one week a caravan was used for spreading information. It was set up at different places in the area so that the residents could easily get to it. It had informational material and knowledgeable people who could answer various questions.

One Saturday afternoon in the spring of 1979 a security exhibition was arranged in a school in cooperation with, among others, the police, fire brigade and a representative of the Theft-Prevention Association.

A door-to-door canvassing campaign was conducted during a few weeks in the spring and early summer of 1981. People were offered marking equipment on loan and asked about protective measures they had taken. Of the rather more than 100 households visited 40 % loaned equipment, 24 % had already marked their things, and 37 % were uninterested (Record 7 Oct. 1981). The project terminated in the autumn of 1982.

3.3 Organization of the study

In a project of this kind the researcher may have a number of desires as to how things should be organized in order to obtain as certain as possible a basis for his conclusions. In the present study, accordingly, it was desirable that the households participating in Operation Identification should be distributed as randomly as possible in the population and that the researcher could decide also how many should take part. Preferably, therefore, the study should be organized as an experiment.

The social reality, on the other hand, is of such a nature that this is not usually feasible. The researcher must accept the fact and adapt his methods accordingly. In the present case I had to proceed from the level of participation in Operation Identification that existed in the area and see how it thereafter developed.

The study has therefore had a combination of *prospective* (forward-looking) and *retrospective* (backward-looking) design. I have followed the development both of participation in Operation Identification and of residential burglaries from 1979 and during the four subsequent years (observation period). For certain necessary checks

I also investigated residential burglaries from 1979 and four years prior thereto (the prior period).

3.4 The level of participation in Operation Identification

3.4.1 Comments on the method

The extent to which the residents in the area participated in Operation Identification was determined by the direct observation method (Persson, 1980).

On three occasions (Jan. 1979, Dec. 1980, April 1983) every house was visited by an observer who checked whether an Operation Identification label was displayed. All displaying the sign were recorded in an address list. But it should be borne in mind that people may very well set up a notice without having marked their possessions. Alarm and dog warning signs and the like were also noted.

This method has several advantages over, for example, a survey method. It is relatively cheap. With five observers it took about 3 days (i.e. 15 man-days) on each occasion to go through the area and check the roughly 3 500 houses.

The drop-out is also small. It consists of houses where dogs made observation impossible and those missed owing to uncertainties. One may, for example, think that a house has been checked previously when one enters the street from the other end or the instructions concerning boundaries may be unclear.

The drop-out due to dogs was less than five on every occasion.

How many houses were missed is difficult to decide. The total drop-out is estimated not to have been more than a few per cent. This is on the assumption that the observers really followed their instructions and carried out the observations. The checks I made do not indicate that this was not so.

It is a non-reactive method, i.e. the outcome is not affected by the method (Webb et al., 1966). In the case of interviews or questionnaires the social desirability factor may otherwise cause some people to say that they are taking part in Operation Identification although they are not (Phillips, 1971). Questions relating to protection against crime may also be delicate. In some telephone conversations with victims I was met with great suspicion.

Another advantage is that one gets a feeling for the milieu and can note different aspects relating to the phenomenon studied.

The observers' behaviour, which to an onlooker might appear very suspicious, resulted in our being occasionally checked upon by residents in the area.

All observers had been furnished with certificates by the National Police Board and been instructed, on enquiry, to give proof of their identity and tell about the project and its object.

On every occasion when observers were on their rounds the Huddinge police were rung up and told that persons were behaving suspiciously in the area. (The police had been notified of the project and warned that anxious people might report to them.)

What is actually surprising is that we drew attention so seldom. This means that people with evil intentions have very great possibilities of moving about unhindered.

All observers (including myself) sometimes experienced very strong feelings of unease. This was so especially when we had to go far into a site towards the back of the house to make our checks. One felt like an intruder and at people's mercy (see Newman, 1972, concerning the term "defensible space"). The feelings diminished in strength somewhat after a time.

After this experience I now better understand the burglars who have told me that they usually fortify themselves with alcohol before committing their burglaries, precisely in order to alleviate their feelings of unease and fear.

The possibility of observing the signs varied very greatly. Sometimes they could be observed directly from the road, while at others one had to go far into the site. Some had placed the sign a bit away from the main entrance. In some cases the labels were torn or corroded by weather and wind. There were also examples of signs which were wholly or partly painted over. These elements of uncertainty naturally affect the reliability of the measurements.

3.4.2 Reliability of the measurements

To start with I would point out that the observed phenomenon - the presence or absence of labels and signs - is of a very simple kind. Their object is visually to impart information to presumptive criminals.

The possibility of observing these objects depends, among other things, on the purely physical circumstances relating to the study. The first measurement was made on some very cold and, at times, snowy days in January 1979, the second on not quite so cold days in December 1980, and the last in April 1983 in partly fine spring weather.

The choice of seasons was due to the fact that I wished to avoid luxuriant growth forming an obstacle to our observations. The cold made the winter observations, in particular, a physical strain. The effective period of observation per day was also dependent on the length of daylight.

The reliability of the measurements is determined by the number of wrong classifications. These may be of two kinds - false positive and false negative.

The *false positive* consist of houses classified as taking part in Operation Identification although they do not do so. This may occur through confusion with another sign, faulty observation (no sign in fact exists) or faulty recording.

False negative consist of houses with sign but which are not recorded. This may occur because for various reasons the signs are not detected, through drop-out or faulty recording.

The first error results in overreporting, the second in underreporting. The form of the sign should mean that confusion is not especially common. On the other hand the risk of false negatives is considerably greater. Signs, in particular, which for various reasons are difficult to detect run the risk of not being observed and recorded.

At the third and last observation remeasurements were made for check of the reliability. Three partial observations were checked. Two consisted of first-day observations - one which had been made by an unaccustomed observer and one by an accustomed (myself). The third was a second-day observation.

For the first-day observation the unaccustomed observer recorded 74 % of the number of houses with labels (53 of 72) recorded on the two occasions. For the accustomed observer the figure was 88 % (50 of 57) and for the second-day observation 86 % (70 of 81). See Tables I and II in the Annex.

The number of check observations is small, but the difference between the unaccustomed and the accustomed observer is what may be expected. The reliability becomes greater with greater experience.

We may thus expect underreporting in the interval 15-20 %. This is, of course, not altogether satisfactory. On the other hand it points to a problem in Operation Identification. The missed cases probably consist chiefly of houses with difficultly detected signs. If these are not detected by observers whose sole task it is to look for them, how great is the probability of their being noticed by burglars? The latter naturally have many other things to think about when engaged in committing their burglaries.

3.4.3 The outcome

The observations were carried out in order to establish which households attempt to protect themselves against burglary by means of Operation Identification and to determine the level of participation and the development in the area. The level of participation is tabulated below.

	Operation Identification		Alarm system		Alarm system and OI	
	n	% of house-holds	n	% of house-holds	n	% of house-holds
Jan. 1979	463	13	124	4	34	1
Dec. 1980	717	20	179	5	56	2
April 1983	863	24	274	8	112	3

From initially 13 % the proportion of households displaying Operation Identification signs (without alarm) rose to 24 %. Between the first two observations the increase was greater than between the second and third. The rate of increase in the first two years was thus about 130 per annum against about 70 in the next two years. This should be interpreted in the light of two factors.

The active part of the campaign took place chiefly in 1979, so that the pressure to join in at that time was stronger.

The second factor is that the proportion of susceptible households diminishes with time. We may assume that anxiety, orderliness and other factors which affect people's prepareduess to take measures of this kind vary in the population. Once the highly motivated have been enrolled it is increasingly difficult to enrol others.

As regards alarm system and the combination of alarm system and 01 sign the levels are considerably lower. The development over time also differs. The rate of increase is greater in the later than in the initial period.

At the last observation roughly every tenth house had an alarm system (displayed an alarm sign).

The reliability of the measurements was discussed in the foregoing section. It was estimated that false negative classifications would be more common than false positive. The real level, accordingly, would be rather higher than shown in the table above. (This "drop-out", however, is comparatively uninteresting, in that the object of Operation Identification disappears if the signs are difficult to detect.)

If the measurements pick up 80-85 % of all who actually display the sign, the level would be 2-4 % higher. Attention must also be paid to the false positives. The "true" level would therefore be likely to lie within the intervals shown in the table below.

	Operation Identification % of households
January 1979	13—16
December 1980	20—24
April 1983	24—28

The level at the last measurement must be considered high. Nearly 30 % of households were participating in Operation Identification. In the USA there are examples which show that, despite intense canvassing, not more than 20 % joined in similar operations (Heller *etal.*, 1975).

It should be pointed out that neighbouring or other areas were not investigated. We do not know, accordingly, whether the level in Stuvsta differs from that in other areas where no corresponding campaign occurred.

3.5 The crime trend in the area

3.5.1 Data and method

The data of residential burglaries have been obtained from lists drawn up by the National Police Board of reported crimes in the Huddinge Police District. The lists show the criminal journal number and area code for each crime. From these data the residential burglaries in detached or terrace houses in the area were then recorded in an address register. The information was taken from the reports. The data relate to the years 1975-1982.

Various problems are associated with these data. As always when working with crimes brought to the notice of the police the dark figure enters into the picture. Precisely in respect of residential burglaries, however, a small dark figure is counted upon. Loss in combination with insurance conditions makes it assumable that these crimes are almost unexceptionally reported to the police (Persson, 1977).

Another problem is that no distinction can be made between attempted and completed crimes. Owing to the difficulty of proof of intention to steal, furthermore, some attempts at crime in which there has been a suspect offender are reclassified as damage. The number

of attempted crimes, however, is not very great. It is estimated at 10 % of all crimes.

Another difficulty is the occurrence of double counts. This happens, for instance, when, at an interval of a day or two, a couple of persons independently of one another report the same crime to the police and the fact is not observed in the record of reports.

Such instances are few in number. Double-counted crimes in the area studied have been excluded.

Even if there are certain points of doubt about these data, accordingly, various investigations have shown that they are of such quality as to be usable in studies of this kind (Persson, 1980; Knutsson, 1983a).

3.5.2 The crime trend 1975-1982

Figure 3.2 shows that between 1975 and 1978 rather more than two crimes per 100 households were reported annually in the studied area. The figure was rather higher than for the remainder of Huddinge. The levels are not comparable, however, as in Stuvsta they relate to detached and terrace houses, whereas for the rest of Huddinge they include flats as well. It is very possible that the risk of burglary is greater in detached/terrace houses than in flats. In absolute figures there were some 70 burglaries per annum against about 400 in the rest of Huddinge (see Table III in the Annex).

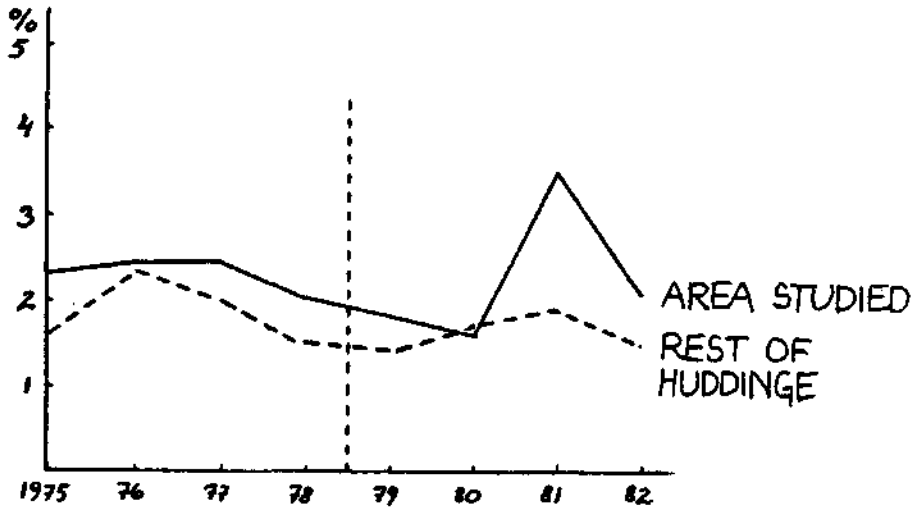


Figure 3.2 Reported residential burglaries per 100 dwellings in the area studied and in the rest of Huddinge 1975–1982

The trend in the rest of Huddinge declined slightly over the whole period. During the first period altogether 1 684 crimes were reported against 1 516 in the second, a reduction of 10 %.

The campaign started in the autumn of 1978. If it had had any effect on criminality a more favourable trend should have been expected thereafter in the area studied than in the rest of Huddinge.

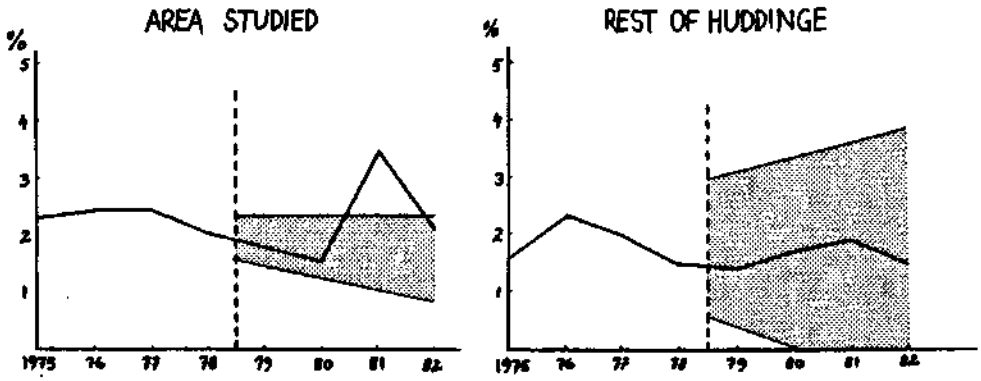
In actual fact there was an increase, especially marked in 1981. Compared with the prior period the increase was 4 % (305 against 318).

If one is to draw any conclusion about the effect of the campaign on criminality in the area, it appears in fact to have been stimulated. *Such a conclusion, however, will not be drawn at all,* for three reasons.

In the first place the study was not organized in such a way that the crime prevention effect of the campaign in *that area* can be evaluated. It is not known whether people protect themselves to a lesser extent in the rest of Huddinge.

Secondly the reduction of residential burglaries in the rest of Huddinge lies within the limits of the random variation. It will be seen from the following diagram that the variations may be great without therefore being significant. But it should be pointed out that this outcome is largely due to the so small figures on which the forecast is based.

In the area studied, on the other hand, the trend is broken by the 1981 figure. Behind this rise probably lies a "historical" event in the form of a couple of particularly active burglars (see *2.2A).*



N.B. The shaded area indicates the confidence intervals (95 % confidence level) for a forecast based on linear development.

Figure 3.3 Reported residential burglaries per 100 dwellings in the area studied and the rest of Huddinge 1975–1982

In the third place, finally, with the level of participation achieved, one cannot reasonably expect an effect in the form of diminished criminality in the area. (Heller et al., 1975, maintain that 90 % level of participation must be achieved if criminality is to be diminished.)

Using a simple statistical model based on probabilities it can be shown that the conditions required for a reduction to occur were hardly fulfilled.

The area contains some 3 500 detached and terrace houses. During the period 1979-1982 barely 300 burglaries were reported. The average level of participation is of the order of 25 %.

If we assume that the objects (houses) to be protected by Operation Identification are evenly distributed in the area, that there are a number of criminals who in a given period need to commit a number of crimes, and that there are criminals who are deterred by Operation Identification, we can estimate the number of burglaries prevented under different conditions.

We thus assume that there are 3 500 houses, that 25 % (i.e. 875) of them participate in Operation Identification and that the "crime need" is 300 burglaries. Under random conditions, therefore, the thieves will on 75 occasions encounter marked dwellings. If *all* thieves respect Operation Identification, i.e. refrain from committing burglary in houses displaying the sign, and if they give up after only one attempt, instead of 300 burglaries 225 will be committed - a reduction of 25 %.

But it is not reasonable to imagine that they would so lightly give up. Burglars encountering marked dwellings make a new attempt. On 17 occasions, then, they will again come up against Operation Identification. If they give up after two attempts, criminality will diminish by 5.7 % compared with the figure if the Operation had not been instituted.

But, unfortunately, there is no reason to suppose that they would be discouraged after only two attempts. If they give up after the third attempt, 3.8 crimes would have been prevented, a reduction of 1.3 %.

Nor is it realistic to assume that *all* burglars would respect Operation Identification. The table below shows the percentual reduction in number of crimes occurring if different proportions of the burglars are discouraged by the Operation and after which attempt they give up.

Table 3.1 Percentual reduction in number of burglaries for different proportions of burglars who respect Operation Identification and give up after different numbers of attemps. 25 % marking level

Respect	Number of attempts		
	1	2	3
100 %	25	5.7	1.3
75 %	18.8	4.4	1.0
50 %	12.5	3.0	0.7
25 %	6.3	1.5	0.4

It can be directly seen that the reduction is insignificant after the third attempt. The reality is, in fact, considerably more complicated than this little model indicates. The model may be said to *be favourable* to Operation Identification. At realistic *respect* and *persistence* levels the effect is in fact minimal.

It should thus be clear that reductions of criminality should not be expected at all with this level of participation. It should be pointed out that, even with higher levels of participation, the result is meagre (Knutsson, 1981).

On the other hand a displacement may occur, the risk being diminished for households participating in the Operation but, by transfer, increasing for the unprotected. Such an effect is attained if there are criminals who refrain from burglary in dwellings protected by Operation Identification. This issue - which is decisive for the question whether Operation Identification has any crime prevention effect at all -1 deal with in the next section.

3.6 The crime prevention effect

3.6.1 Comments on the design of the study

From preceding sections it has been apparent that the evaluation does not permit any effects in the area to be established, since the statistical unit in the study is house and not area. One of the reasons for this is the following.

The aim of the evaluation is to decide whether Operation Identification is effective in preventing crime or not. If I had chosen area as unit, the implementation of the Operation would have been unsatisfactory as test of the theory owing to the level of participation and to realistic offender reactions. It would not then be possible to decide whether the theory is correct or false (Weiss, 1972). The outcome would be as A in the table below.

Implementation of Operation Identification	Theory of Operation Identification	
	Correct	False
Satisfactory	B1	B2
Unsatisfactory	A1	A2

If the unit consists of houses, however, the implementation is satisfactory. The outcome will be as B and one can decide whether the theory is correct or not (B1 or B2). In the sequel, therefore, I employ individual data. The statistical unit (the individual) is houses.

The fundamental problem is to discover whether the risk of burglary is less for houses displaying a sign that they participate in Operation Identification than for those displaying an alarm sign or no sign at all. The effect of alarm systems has therefore also been studied. Before going into this question, however, some problems must be considered.

3.6.2 Existence of "houses at risk"

Different investigations have shown that there are manifest differences in the risk of being subjected to burglary between different residential areas, households and types of house.

The risk rises with rising income (SCB report 1981:24). Such patterns have been found also in foreign studies (Waller & Okihiro, 1978; Reppetto, 1974). In the latter it has also been found that the vicinity of blocks of flats increases the probability of burglary in one-family houses. According to Reppetto the risk of burglary rises with the number of possible entrance routes. The location of the house also has a significance. Houses on corner sites are more exposed.

Precisely the possibility of approaching houses in concealment appears to be an important factor. Protective measures (locks etc) have, on the other hand, not proved significant. The explanation appears to be that single-family houses generally offer several alternative entrance routes, all of which cannot be protected (Winchester & Jackson, 1982). According to the latter study (and several others) the amount of time spent in the home is an important factor. Houses which are often empty are more vulnerable.

The houses in the studied area that were afflicted by burglaries in 1982 have been plotted in a map of the area (fig. 3.4). They are fairly scattered, even if some concentration to certain major roads is discernible. There is also a tendency to greater affliction of houses on corner sites.

A check has also shown that houses subjected to three or more burglaries are, to a greater extent than might be expected, situated

either on corner sites or on sites facing the edge of a wood or the like. There thus appear to be certain purely physical factors affecting the risk of burglary.

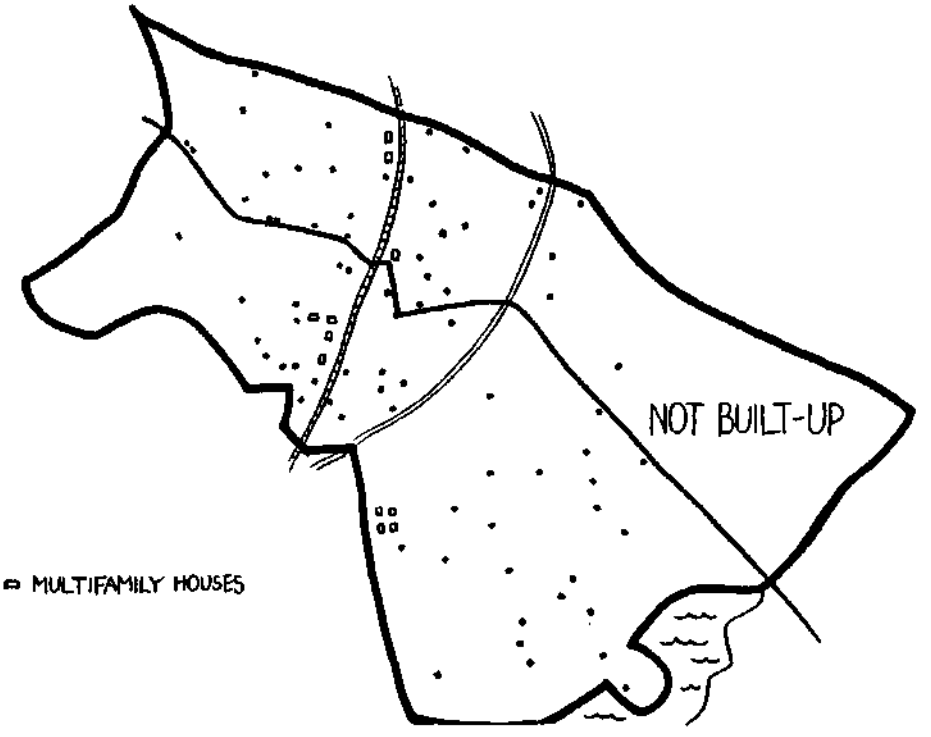


Figure 3.4 Distribution of burgled houses in 1982

If the distribution of houses with characteristics that make them more vulnerable to burglary differs between the various groups of protective measures, this affects the possibility of drawing conclusions concerning their effects.

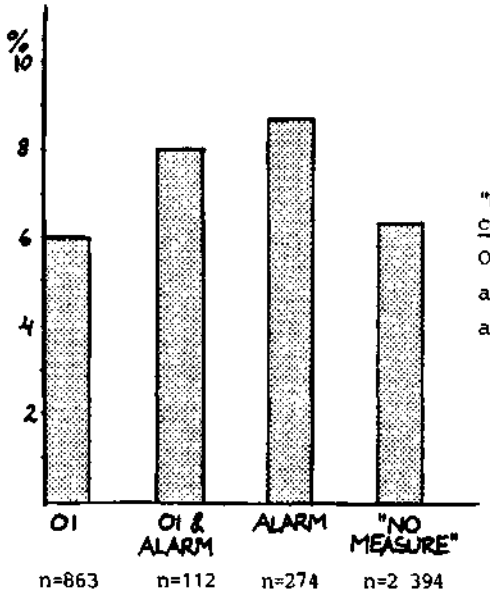
By defining houses afflicted by at least one burglary during the prior period (1975-1978) as *house at risk* I have kept this factor under control. The ultimate criterion of vulnerability is, of course, if one is afflicted by burglary. The classification in groups of protective measures was determined after the 1983 observation.

It is reasonable to expect a greater proportion of *houses at risk* among those enrolled in Operation Identification or having installed an alarm system, since we may presume that rational considerations underlie a decision to take protective measures.

Some of those who, as found in the 1983 observation, had taken measures had done so during the observation period (1979-1982). Of the Operation Identification houses barely half had accrued in the

latter period. For alarm systems the figure was a little more than half (55 %) and for the combination marking-alarm 70 %. Many were thus added during the observation period.

The result of the check of the burglary level for the various categories in the prior period is shown in the figure below. The object of the check was to test whether the houses in which the three categories of measures were taken are to be denoted houses at risk in comparison with the houses where no measure was taken. The test was carried out with the aforementioned definition of house at risk under the zero hypothesis *no difference* (5 % level). The result is shown in the figure.



"No measure" compared with:	Chi-2	df	
OI	0.31	1	non-sign.
alarm & OI	0.31	1	non-sign.
alarm	2.98	1	non-sign.

Figure 3.5 Percentages of houses afflicted in the prior period 1975–1978 according to category in 1983

It is seen that those taking part in Operation Identification had been afflicted by burglaries to a slightly less extent (6.1 %) than the other categories. The differences are, however, not significant. For the combination Operation Identification-alarm the figure was 8.0 %, for alarm alone 9.5 % and for those displaying no sign at all 6.7 %.

Those displaying either alarm or alarm in combination with Operation Identification, accordingly, are burgled rather more often. The differences are, however, not significant but should be regarded as tendencies.

The outcome may appear remarkable. But it must not be forgotten that those living round about are also affected by a burglary in the neighbourhood. They, too, are motivated to protect themselves.

Looking at the number of burglaries in houses of different categories it is seen that houses with alarm system have higher averages. Thus they have relatively more often been exposed to more than one burglary. For the houses with alarm signs alone the difference in average compared with those that had taken no protective measure is signifacant (5 % level).

The fact that the corresponding difference for the combination alarm and Operation Identification is not significant is due to the small number of burglaries in such houses. The difference in relation to houses without protective measure lies within the limits of the random variation. Se table below.

Number of burglaries Class	Operation Identifi-cation	Alarm and Operation Identifi-cation	Alarm	No measure
1	46	7	22	141
2	7	2	3	14
3	–	–	1	3
4–	–	–	–	1
Total houses	53	9	26	159
burglaries	60	11	31	182
Average	1.13	1.22	1.19	1.14

A problem in this context is that the differences might be a result of effects of the various protective measures. Some of the households *were protected* also during the prior period. But we cannot determine their number as we do not know whether the measure was taken before or after the burglary. In checks I have made (see below) it proved that those who have an alarm system had usually installed it (set up the sign) after a burglary. This tendency is not so pronounced, on the other hand, for Operation Identification.

There is thus a certain element of uncertainty. The result, however, indicates that there seem to be no great differences in the distribution of *houses at risk* between the various categories. A possible exception is the houses with alarm system, more of which lie in the risk zone.

This is an important conclusion, as a check must be made for the occurrence of such houses in the various groups if conclusions are to be drawn concerning the effects of the various protective measures.

3.6.3 Effect

If there is any crime prevention effect, it must be reflected in reduction of the risk of burglary for the households participating in

Operation Identification or having an alarm system in relation to those without protective measures. To investigate this I proceeded as follows.

The addresses of the houses subjected to burglary during the observation period (1979-1982) have been compared with those listed from the various observations. The burglaries occurring in 1979 and 1980 have been checked against the 1979 and 1980 observations and those in 1981 and 1982 against the 1980 and 1983 observations.

For a house in either of the protective-measure groups to be accepted as afflicted by burglary it must be recorded in the observational studies prior and subsequent thereto.

If it is recorded in only one of them (with the odd exception the later) there is required for acceptance a check showing that the burglary occurred *after* the measure had been taken. In this way I get past the problem of the regression artifact.

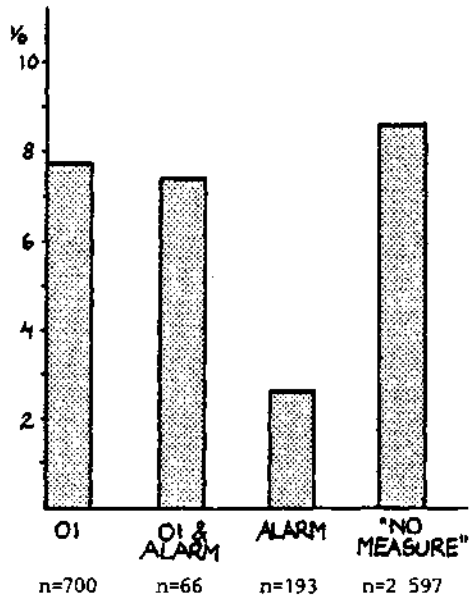
The check was made either against information in crime reports or by telephone conversation with the victims. Of those questioned who had alarm systems all (8) stated that they had installed the system after a burglary. Four were inaccessible. As regards Operation Identification 11 had joined in before and 7 after a burglary. The drop-out in this group was 8.

The differences in risk for the various groups have been calculated by means of a test developed for epidemiological studies (the Mantel-Henzel test, see Annex I). The houses in which measures had been taken are regarded as *vaccinated,* those without as *unvaccinated.* The two groups are compared in respect of the extent to which they had been afflicted by burglary (fallen ill).

A problem in this context is that there had been a growth of housing in all categories during the observation period. New houses had been built. Some had changed status from, for example, *no measure* to *alarm* or *Operation Identification.* In the calculations, therefore, the number of house-years has been used instead of the number of houses.

The growth in number of new houses has been estimated by an assumption of linear growth between the times of measurement (see Annex II).

As regards the estimates of the number of *house-years* for the various protective-measure groups - which have a step-shaped growth - linear growth has again been assumed. Provided that the growth is not too asymmetrical, this provides a good estimate. (The figure below, however, shows the estimated averages for the number of houses in the various groups.)



"No measure" compared with:	Chi-2	df	
OI	0.12	1	non-sign.
alarm & OI	0.31	1	non-sign.
alarm	7.68	1	1 %-level

Figure 3.6 Percentages of afflicted houses by categories during the observation period 1979–1982

It will be seen from the figure that there are small differences between Operation Identification (7.9 %), the combination Operation Identification - alarm (7.7 %) and those not displaying signs (8.3 %). None of the differences, however, are significant. On the other hand the alarm systems level is much lower (2.6 %) than the others and this difference is significant.

If a comparison is made of the number of *burglaries* in the various groups instead of the number of afflicted houses, the result is slightly changed. The difference between the alarm and other groups disappears. This, however, is explained by two houses, each of which had three burglaries. See table below.

Number of burglaries Class	Operation Identification	Alarm and Operation Identification	Alarm	No measure
1	49	4	2	192
2	6	1	1	19
3	–	–	2	3
4–	–	–	–	1
Total houses	55	5	5	215
burglaries	61	6	10	243
Average	1.11	1.2	2.0	1.13

We may thus recognize that *it has not been possible to confirm any crime prevention effect of Operation Identification.*

On the other hand alarm signs have a deterrent effect. Houses with alarm system run a smaller risk of burglary. It is reduced 3.2 times in comparison with houses carrying no signs at all. This is a point estimate. With 95 % certainty the reduction of risk lies in the interval 1.4-7.7 times.

It should be pointed out in this context that there are certain indications of a greater number of *houses at risk* among those with alarm system. The reduction of risk found between the prior period and the observation period is also a fact that substantiates the contention that alarm systems have a deterrent effect on burglars (see fig. 3.5 and 3.6).

The combination of alarm and Operation Identification, however, has shown no effect, which may appear remarkable in view of the outcome with alarm alone. I have no explanation of this but should point out that the figures in this category are very small (66 houses), so that there is much scope for random variation. To obtain a significant difference not more than one house in this group need have had a burglary.

4 Operation Identification and the stolen goods

4.1 Introduction

From the foregoing section it has appeared that no preventive effect of Operation Identification can be documented. But perhaps those burgled have retained marked objects - or if these have been stolen - have got them back? In the introductory theoretical section I stated that this aspect of Operation Identification is very important for the success of the theory.

I deal with this question by first presenting figures of the flow of stolen goods from residential burglaries, the quantity of marked objects and the possibility of their recovery. This is followed by consideration of the extent to which burglars avoid dealing in marked objects.

4.2 The flow of stolen goods

The contents in the flow of stolen goods from residential burglaries are determined by numerous factors. The first is what there is to steal at all in people's homes.

The spread of wealth between households exhibits great variations - from elderly wealthy persons who, apart from hereditary possessions, have collected masses of objects in the course of their lives, through young families with a passion for gadgets, young people who have recently moved in, to people on the shady side of life. The existence of articles of consumption is, however, such that there is at least something desirable for a burglar.

Another fundamental factor is what is in fact stolen - or rather - what the thieves most wish for. Here their preferences, the objects available to them and their means of transport enter into the picture. Briefly it may be said that valuable and compact objects that are easy to dispose of are the most attractive. Apart from the most popular, which of course is money - at least as long as it is available in fairly large amounts - it is jewellery that is most coveted.

As regards Operation Identification an essential aspect is which of the desirable objects in a person's possession can be marked. The idea is

that thieves will be loath to have anything to do with marked objects.

If they steal them nevertheless, Operation Identification should lead to restoration of the objects to the rightful owners. For this purpose the police have a computer-based Register of Stolen Property.

Stolen objects furnished with some form of unique identity (e.g. production number, personal identity number, name or initials, etc) can be entered in this Register. A person's identity number is of advantage as, via national registration data for example, suspect objects can be directly checked against the person having them in his possession.

The first point - what in fact exists to steal - is difficult to answer with any great accuracy. There are, however, exceptions for certain articles. Thus about 90 % of all households have TV, a large number have stereo equipment, and so on.

On the other hand it is rather simpler to investigate what is stolen. I have attempted (Knutsson, 1980) to establish the flow of objects deriving from dwellings burgled in Stockholm in 1977.

The table below shows the numbers of objects stated to have been stolen in the 6 044 burglaries, in nine groups. These nine groups account for 75 % of all objects recorded in the reports (96 000 of 128 000).

Table 4.1 Stolen objects from 6044 residential burglaries reported to the police and recorded in the Register of Stolen Property in Stockholm, 1977

	Number of stolen objects	In the Register of Stolen Property	of which marked	Restored	of which marked
Jewellery	23 100	1 684	31	46	1
Silverware	22 600	517	12	8	0
TV sets	450	200	4	6	0
Stereo	1 200	706	47	16	0
Radio sets	1 700	254	15	8	0
Records/ cassettes	41 600	11	0	0	0
Cameras, etc	1 800	538	25	23	2
Watches/ clocks	2 400	202	4	4	0
Paintings	1 100	698	2	13	0
Total	95 950	4 810	140	124	3
Total re- ported	128 000	5 913	158	198	4

N.B. The figures in the first column are taken from Knutsson (1980), the others from the Register of Stolen Property.

Apart from records/cassettes two groups of objects predominate -jewellery and silver. The large number of silver items is explained by the relative commonness of cutlery in the reports. A set of silver cutlery (knives, forks and spoons) may thus comprise 36 objects. As is seen, the objects consist almost exclusively of capital goods (a little surprising fact for that matter).

The second column in the table shows the numbers of objects recorded in the Register of Stolen Property. The nine groups of objects together account for about 80 % of all items entered in the Register by reason of these burglaries. Of all objects reported stolen they represent about 5 % (5 900 of 128 000).

Comparatively few of the stolen objects were thus recorded in the Register of Stolen Property. This points to the fact that most persons do not have particulars of production number or other identity on their possessions.

The percentages of different types of stolen objects recorded in the Register, however, vary greatly, being very high for paintings (63 %), stereo equipment (58 %) and TV sets (44 %), fairly high for example for cameras and camera equipment (30 %), fairly low for jewellery (7 %) and very low for silverware (2 %). The percentage for records/cassettes is negligible.

The identification has usually been of conventional kind (production number, initials, signature, etc), but personal identity numbers have also occurred. Proportionally the latter totalled barely 3 % (158 of 5 913). It may be presumed that the use of personal identity numbers is connected with Operation Identification.

It may be mentioned in this context that the number of dwellings in Stockholm involved in Operation Identification at the end of 1977 was 2-3 % (The Statistical Institute, 1977).

The proportion of objects identified by personal identity number varies for different types. It is, for example, nearly 7 % for stereo equipment, 5 % for cameras/camera equipment and 2 % for jewellery, silverware, TV sets and watches.

Of all objects entered in the Register of Stolen Property just over 3 % have been restored to their rightful owners (198 of 5 913). For the specified types of objects the figure is rather lower (2.6 %).

The proportion varies somewhat, however, for different kinds of objects. About 6 % of stereo equipment and radio sets were restored, about 2 % of watches, jewellery and silverware.

Of all marked objects listed four were restored, i.e. 2.5 % (4 of 158). Regardless of type of object or form of identification, accordingly, the great majority of objects listed in the Register of Stolen Property could thus *not* be restored to their rightful owners.

What is the corresponding flow from dwellings participating in Operation Identification? The table below shows what was reported to have been stolen in the 50 completed burglaries from these dwellings in Stuvsta in 1979-1982.

Table 4.2 Objects reported stolen or listed in the Register of Stolen Property from 50 burglaries reported to the police in houses participating in Operation Identification in Stuvsta 1979-1982

	Number of stolen objects	In the Register of Stolen Property	of which marked	Restored
Jewellery	267	20	0	0
Silverware	425	38	8	0
TV sets	5	2	0	0
Stereo	20	11	7	0
Radio sets	11	3	3	0
Records/ cassettes	162	0	0	0
Cameras etc	28	11	4	0
Watches/clocks	52	9	2	0
Elec.appliances	17	1	1	0
Antiques	55	6	4	0
Paintings	5	2	2	0
Clothes/furs	87	0	0	0
Coins (collec- tions)	13	0	0	0
Stamp collec- tions	4	0	0	0
Miscellaneous	–	1	1	0
Securities, pass- ports, etc	23	23	–	0
Total*	1 151	105	31	0

*Excluding "Miscellaneous" and "Securities". The "Miscellaneous" group has not been totalled. It consists of everything from dog whistles to umbrella stands. The objects in the Register consist of a cigarette lighter and a fire-pump. All figures are taken from the reports. The entries in the Register of Stolen Property are taken from these documents, including a record of objects restored.

In comparison with the stolen goods from the Stockholm burglaries a larger proportion have been entered in the Register of Stolen Property and a larger proportion of the stolen objects are marked. The percentages are shown in the table below (for the groups up to "Paintings" excluding "Antiques").

	Stolen goods in the Register of Stolen Property %	Marked stolen goods %
Stockholm 1977	5	0.15
Stuvsta OI burglaries 1979—1982	10	3

Relatively more objects have thus been entered in the Register via Operation Identification. *But not a single object listed in the Register has been restored from the Operation Identification burglaries in Stuvsta* (see fourth column in Table 4.2).

The general pattern as regards the proportions of objects from different groups is roughly the same, with small proportions of valuables, e.g. jewellery and silverware (see table below).

Jewellery and silverware

	Stolen goods in the Register of Stolen Property %	Marked stolen goods %
Stockholm 1977	5	0.09
Stuvsta OI burglaries 1979—1982	8	1.2

For the Stockholm burglaries 5 % of these stolen goods were listed in the Register of Stolen Property against 8 % for the Operation Identification households in Stuvsta. The proportion of stolen goods in this category that were marked is minimal.

As regards capital goods of consumer type - e.g. TV, stereo and radio sets - the proportions are considerably greater, as shown by the table below.

TV, stereo equipment and radio sets

	Stolen goods in the Register of Stolen Property %	Marked stolen goods %
Stockholm 1977	35	1.8
Stuvsta OI burglaries 1979—1982	46	29

For just over one-third of the Stockholm and barely half of the Operation Identification burglaries these stolen objects had been entered in the Register. From the latter burglaries the number of marked objects amounted to barely one-third.

In view of the fact that all burglaries in Stuvsta relate to Operation Identification households it is remarkable that only half of the stolen objects were listed in the Register. A probable explanation is that many people are content merely to set up the signs but omit to mark their things or to record the production number.

The outcome as regards the small proportion of recorded valuables and the fairly proportion of TV sets and the like - regardless of whether the householder participated in Operation Identification or not - gives rise to a reflection as to what is markable and what possessions a person most wishes to retain.

I assume that among jewellery and silverware there is much that has a great affective value. A problem with Operation Identification in this respect is that these objects are to a large extent impossible to mark. Another thing, of course, is what means exist to recover them if they are stolen. The results point to a rather meagre possibility.

Objects to which, on the other hand, there is not the same personal relationship - e.g. TV sets and stereo - are markable and recordable to an entirely different extent. But do people react so strongly if they are stolen and do they really want to have them back? Many consider undoubtedly that the matter can be better settled through their insurance company. I think, too, that many don't want them back as they feel them to be "soiled" by having been in the thief's possession.

The results here presented point in my opinion to some serious shortcomings in Operation Identification.

- What people most want to safeguard is not markable (only 1 % of the stolen jewellery and silverware from Operation Identification burglaries were marked).
- The marking does not immunize the objects against theft (a bare third of stolen TV sets and the like from Operation Identification burglaries were marked).
- The probability of getting back stolen marked objects is very small (none of the marked objects from Operation Identification burglaries have been restored).

The modest effect of Operation Identification on the flow of stolen goods accords with the findings of Heller et al. (1975).

But it is possible that participants in Operation Identification retain more of their possessions as a result.

4.3 Are marked things left because they are marked?

What thieves leave unstolen and for what reason is a critical factor in Operation Identification. That they are to any great extent guided by moral scruples - e.g. "I do not steal more than I need" -1 personally have *great* difficulty in imagining.

The decisive factors presumably are what is available, the time that they dare remain on the scene of the crime, what objects are attractive to them, and their transport resources. In parentheses it may be mentioned that drug injection criminals who have a car appear to be more efficacious in their criminal operations than colleagues who have no car of their own (Kiihlhorn & Edlund, 1982).

The extent to which marked objects are left unstolen *precisely because they are marked* is difficult to decide. But certain estimates can be made. The extent to which certain objects are recorded as stolen from burglaries in Operation Identification households can be compared with those stolen from other unfortunates. If the theory functions, differences in the stolen goods profile should be found which can be related back to Operation Identification.

Figure 4.1 shows percentually the extent to which different types of objects are recorded in reports of residential burglaries among Operation Identification householders in Stuvsta (shaded field). For each type of object the average number stolen is also indicated.

This may be compared with the residential burglaries in Stockholm in 1977. The number of Operation Identification households is here so small that it cannot reasonably affect the result.

It will be seen from the figure that cash was reported stolen in roughly 30 % of the cases - both from Operation Identification households and others. The difference in average amount stolen is difficult to explain with reference to Operation Identification.

Jewellery was taken in nearly 80 % of Operation Identification burglaries and about 40 % of the others. This difference as well can hardly be related to Operation Identification. The most likely explanation is that there was more jewellery to steal in Operation Identification households and that the thieves take the jewels they find.

TV sets are an interesting group of objects. Since most people have a TV, the figure of 8 % signifies that most Operation Identification households retained their sets. The problem is that the same proportion of other households *also* retained their sets.

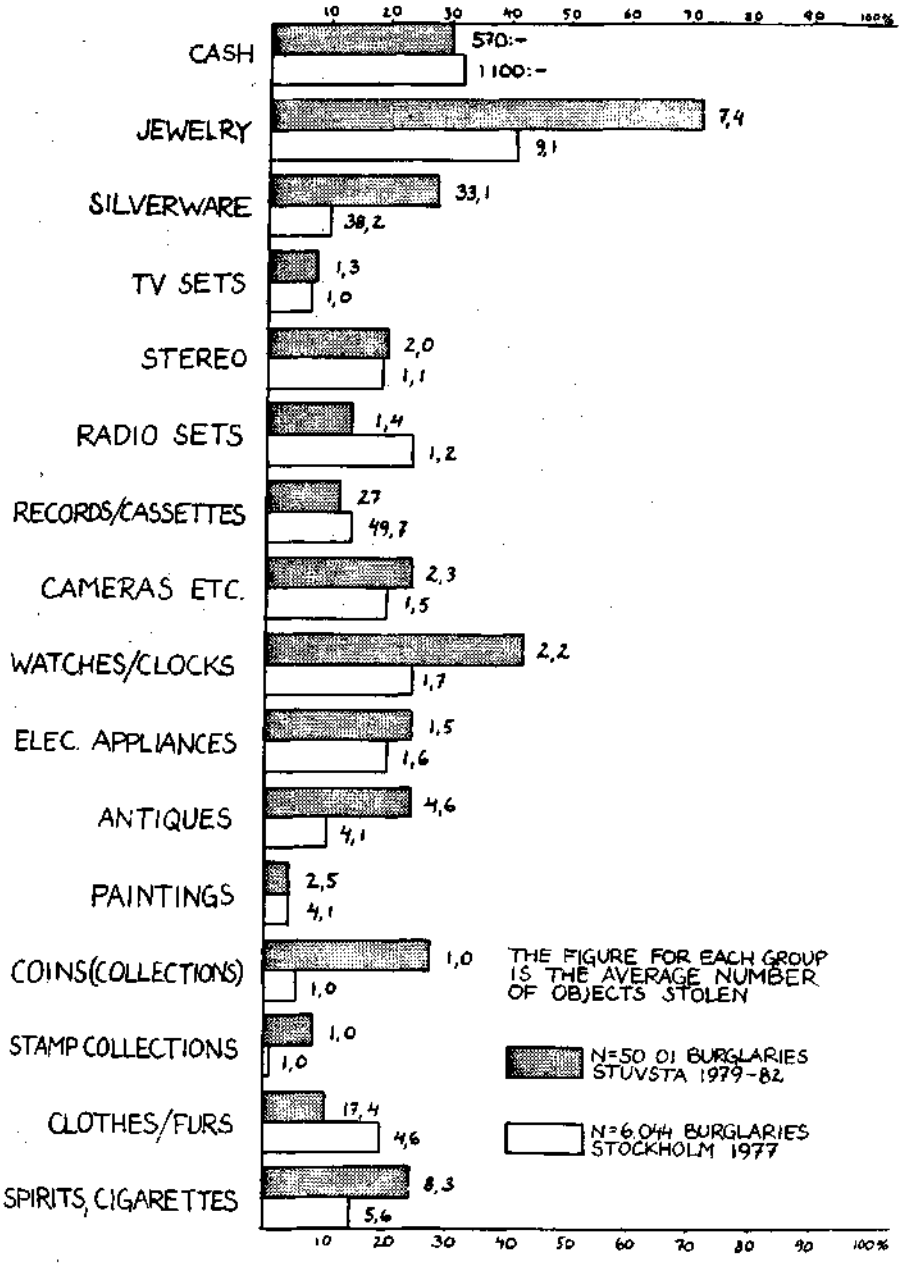


Figure 4.1 Different types of objects burgled from Operation Identification and other households (%)

It can thus actually not be decided whether Operation Identification households had retained their TV sets by reason of Operation Identification or whether they would have retained them in any case since the thieves were uninterested in them. In view of the bulk of TV sets, the demand on the receiver market, etc, I personally incline to the latter view.

A perusal of all groups of objects and of the general picture that emerges indicates that Operation Identification does not appear to

have affected what is stolen. As regards the objects that are markable, e.g. TV sets, stereo equipment, radio sets and cameras, the patterns are similar. On the other hand there are certain differences among objects marked only to a small extent, e.g. jewellery and valuables.

These differences may be better explained by the difference in opportunity structure between afflicted dwellings. The Operation Identification burglaries occurred in one-family houses, the others mainly in flats. Since the income level is generally higher for those living in one-family houses, they would probably offer objects of greater attraction to burglars.

I wish to point out that is is not *proved* that Operation Identification did not lead to the non-theft of marked objects. Strictly speaking one would need to make an inventory in burgled dwellings in order to answer the question. The fact is rather that, from the available information, Operation Identification does not seem to have had this effect. Insofar as objects were not stolen the reason would thus be that they lacked interest for the thief.

5 Operation Identification and crime clearance rate

Another substantial aspect of the Operation Identification theory relates to the crime clearance rate. The intention is that criminals who commit burglaries in Operation Identification households run a greater risk of getting caught. This in turn should have a deterrent effect on them and their colleagues.

The clearance rate for residential burglaries in the last few years has been around 13-14 %. It is thus relatively low. In certain metropolitan areas it is even lower. In Stockholm the figure is 7-8 %. In the mid-sixties this figure was considerably higher - just below 20 %. There is thus ample scope for improvement.

The investigations that have been made of the crime clearance rate show that it is the information existing in the crime report that more or less decides whether a crime is cleared up or not. The single most important item of information is the name of the suspect. If this is not known there is little probability of the crime being cleared up (see, for example, Knutsson, 1983b). This applies also to residential burglaries.

Of the altogether some 20 000 residential burglaries reported in 1981 about 14 % (2 700) were cleared up. Of the roughly 19 000 crimes in which no name was mentioned about 10 % (1 800) were cleared up. When the name of a suspect was reported the figure was about 70 % (900 of 1 300).

The most usual manner of clearing up residential burglaries is that the burglar is caught more or less in the act (Knutsson, 1979). Most commonly a neighbour notices something suspect, e.g. a noise of breaking. The latter rings the police, who immediately send a patrol to the site. They then apprehend the thief in the act or during flight. (Residential burglaries, moreover, appear to be one of the crimes for which a quick turn-out affects the probability of apprehension (van Kirk, 1978).) The police who have apprehended the suspect then hand him over for investigation and write a report.

It is, above all, this process that explains the existence of reports which name the suspect and why these crimes are to so large an extent cleared up.

In discussing the clearing up of crimes a distinction should be made between crimes cleared up in the course of the criminal investigation and those which initiated the investigation (cf. 2.2.4). The pronounced decline in the clearance rate for Stockholm is partly due to the now fewer residential burglaries recorded per suspect (Knutsson, 1983a).

It is, in particular, when the criminals have stolen goods in their possession that Operation Identification enters into the picture.

According to the earlier cited study (Knutsson, 1979) stolen goods were found on barely half of the burglars. But if the criminals are caught in the immediate vicinity of the scene of the crime, Operation Identification has no significance since the victims can identify the objects. It is actually only when the police find suspected stolen goods that cannot be directly associated with a specific burglary that Operation Identification may be of significance.

About every tenth cleared-up burglary was cleared up through the finding of goods in the possession of a person which could be assigned to a specific burglary. The police had, for example, stopped and examined suspect cars, made checks at places frequented by criminals or in other way noticed suspect objects.

The problem here is that one does not know in how many cases there has been failure to associate suspected stolen goods with a specific burglary. According to the police this very commonly happens. If there was an identity number on any of the objects it would be a very simple matter.

Here there is a great potential for Operation Identification. It is thus possible that the crime clearance situation could be improved through Operation Identification.

The burglaries in Stuvsta have also been studied in respect of the clearance rate. Of all burglaries during the observation period 8 % were cleared up. For the Operation Identification burglaries the figure was 9 %, for the others 8 % (se table below).

	Operation Identification	Others	Total
Cleared up	9	8	8
Not cleared up	91	92	92
Total	100	100	100
	(67)	(253)	(320)

In this respect as well Operation Identification does not seem to have had any effect – a conclusion drawn also by Heller et al. (1975). I

would emphasize, however, that the scope for random variation is fairly great in view of the relatively small numbers involved.

In interpreting this result it should be borne in mind that only a few per cent of all stolen objects from Operation Identification burglaries were marked. It is therefore hardly reasonable to expect Operation Identification to have any effect on the crime clearance rate.

6 Concluding discussion

6.1 Tenability of the result

From the earlier sections it has appeared that no crime prevention effect of Operation Identification could be documented, nor was it found to have any effect on either the flow of stolen goods or the crime clearance rate.

All investigations have their weaknesses. It is thus important to discuss how satisfactory the result is. Concerning the conclusion of a lack of crime prevention effect this is based on a broad empirical foundation. About 3 500 households, of which barely a third participated in Operation Identification, were observed during a total period of four years. The burglary rate was of an order such that the confidence in the results is reasonable.

The data are not so satisfactory, on the other hand, concerning the flow of stolen goods and the crime clearance rate. Some 60 cases have been studied and there are several factors of uncertainty. But I maintain that the outcomes for the various subaspects are entirely in line with one another.

This is an important point to notice, as the various assumed effects partly build upon one another. The crime prevention effect postulates, above all, that the crime clearance rate is affected by Operation Identification. The crime clearance rate, in turn, postulates an effect on the flow of stolen goods, which should also have a crime prevention effect. The three partial results thus reinforce one another.

But there are some other complications. I have studied only one-family houses. I can say nothing about the effect of Operation Identification on dwellings in blocks of flats. It should be noted, however, that the proportion of marked objects in the Register of Stolen Property is low (although slightly rising) and that the figures of restored pbjects are small (Annex III).

A further complication is that in some American studies crime prevention effects are said to have been found in the form of diminished risks for Operation Identification households.

Gabor (1981) presents one example. His material, however, is so small that the effect is not statistically assured. It may equally well be due to chance - which is also pointed out by the author.

In their survey of American studies Heller et al. (1975) present some cases which point to a crime-reducing effect. They reveal some possible sources of error, however, and do not appear to be convinced of the results. It is, among other things, the fact that no effects have been proved either on the stolen goods or on the crime clearance rate that make them doubtful.

It is, of course, always possible to find one or another case in which Operation Identification has led to success in clearing up crimes and in restoration of stolen goods. But a theory cannot be substantiated by citing occasional cases. The method is called "exampling" and lacks scientific value apart from serving as illustration.

My own view is that, purely theoretically, Operation Identification appears reasonable. Reality, however, seems to operate in a different way than Operation Identification presupposes. It is therefore that it has not been possible to trace any effects.

6.2 What should be one's attitude to negative results?

It is, of course, a gloomy state of affairs when one cannot find the positive effects an action or a programme is supposed to have. I would strongly emphasize two points in this context.

In the first place one cannot definitely know in advance whether a measure will be effective or not.

There is, secondly, only one way to get clarity on that point and that is to implement the measure and then evaluate the result.

For Operation Identification the outcome was negative. This must, however, *not* mean that one omits to try other strategies or measures for crime prevention.

It should be pointed out that the result is by no means unique in evaluation research. Rather the contrary - it is studies showing positive effects of actions or programmes that are conspicuous by their absence, at least so long as one keeps to methodologically acceptable evaluations.

The fact is that researchers to some extent can themselves "determine" the results. In treatment research there are, for example, plenty of examples in which the choice of method has produced positive results - regardless of whether they were so or not (see, for example, Jenner et al., 1977).

By evaluating Operation Identification on "Operation Identification's conditions" I should undoubtedly have been able to present a study showing positive effects. Such a "study", moreover, would be considerably simpler to carry out.

One attitude is that it is not necessary at all to evaluate whether a measure or programme has the alleged effect. Reliance should be placed on those who work with it in practice. They know best.

Such an attitude is basically indefensible. It guarantees that one will not find out anything about anything.

Measures and programmes, if they are considered important, should be evaluated. Experience has shown, however, that it is difficult for the organizations concerned to accept negative findings. The evaluators are unwelcome, those concerned ensure that evaluations have such a form that the results are positive, and so on.

We must strive for solutions to these problems. Otherwise there is a risk of poor evaluation research and thus of poor information for decision-makers. In the long run this is unfortunate for all parties.

6.3 Final comments

About 2 % of all houses in the studied area were afflicted by burglaries every year. Some admittedly had more than one burglary but there is a constant new recruitment of households to the group of victims. Over a five-year period roughly every tenth house received the attentions of a burglar and over a ten-year period nearly every fifth. Considerable figures are thus involved.

This situation became increasingly serious in the late sixties and early seventies. People must now accept that they may suffer an event of this kind.

That fear has gripped people's minds is seen from the growing number of protected houses. An interesting fact is that it is the increase of alarm systems that was strongest in the later part of the observation period. At the last observation about every tenth house had an alarm system.

The study has shown that alarm systems are effective. They greatly diminish the risk of burglary. But there are some drawbacks.

- Alarm systems are expensive. Not everyone can afford them.
- Alarm is often set off by other causes than burglary. There are many false alarms. Howling alarm signals, regardless of reason, are a sanitary nuisance for those living round about.
- Alarm systems require a supporting organization. Someone must answer them, investigate the cause and take action.

- Alarm systems prevent crime - for those who have them. Through crime redistribution the risk becomes greater for the unprotected.

In the prolongation of this trend there is a risk of differences arising between the ability of different groups to protect themselves against crime. One thing is certain, it will not be the poorer householders who are the winners.

The American colleagues of the Swedish crime prevention police do not merely give information about locks and the like. They also help people to organize patrols to protect themselves against intruders in their areas.

A positive way of viewing the matter is that this increases the interaction and solidarity between the inhabitants. (This positive effect of criminality was noted for that matter by Durkheim even in his day.) To put it bluntly, one assists in creating citizens' guards.

It is no Utopia that we may have a similar phenomenon in Sweden.

One may ask whether this development is inexorable.

When criminologists speak about the crime trend in general, we often refer to changes in the opportunity structure and in social control. That we have acquired a richer assortment of expensive and desirable consumer articles in our homes in the past 20-30 years is manifest.

The mass consumption society has also had the effect that we organize our lives in a different way than before. Since women go out to work to a greater extent, more dwellings are left empty in the daytime. More people, furthermore, live on their own.

According to Cohen & Felson (1979) three things are required for crime to be committed: (1) motivated criminals, (2) appropriate objects and (3) the absence of capable guardians (some who can intervene directly or indirectly). When these three converge in time and space, crime ensues. A change in any of these components affects the crime trend.

The increase in residential burglaries could thus be explained by the fact that appropriate objects have become more numerous and that capable guardians to a greater extent than before are lacking.

If this conclusion is accepted, measures will be recommended which are directed to increasing the number of capable guardians. Waller & Ohiro (1978) maintain, for example, that in order to reduce residential burglaries someone in the household should stay at home. In practical terms this would mean a radical change of social structure, with equality issues quickly coming into the limelight.

In actual fact there is information which indicates that active criminals have become more numerous and that this is a factor in the increase of crime.

In Stockholm the number of residential burglaries brought to the notice of the police more than doubled between the mid-sixties and the end of the seventies. The crime clearance rate, on the other hand, fell from nearly 20 % to 6-7 %.

Behind this reduction lay two factors. Owing to centralization of the criminal investigations the police lost contact with juvenile criminals. They hardly occurred at all among the suspects at the later date. The second factor was that fewer crimes were recorded per investigation (Knutsson, 1983a).

Looking, on the other hand, at the key group in this context - men aged 20-30 years - the number of suspects *increased.* Of still greater interest is the fact that the number of *times* each individual was suspected of residential burglary increased even more.

In relation to reported crimes - which had more than doubled - this age group occurred to roughly the same extent as before. This may be explained by the fact that it is chiefly chance factors that decide whether a person is caught or not (see chapter 5). The higher the level of activity, the greater the risk of being caught.

The burglars in this group would thus have been both more numerous and more active. Despite the lower crime clearance rate the highly active criminals would be caught to the same extent as before.

The reason why burglars have become more numerous is difficult to answer with any exactitude, except by reference to the general social development.

On the other hand there are more manifest explanations of why they get caught more often during a year. One may be the increase of drug addiction among them and that the multiplicator effect of drugs on criminal activity has been operative. Another possibility is that incapacitating forms of correctional treatment are now adopted to a lesser extent. These two explanations, moreover, do not exclude one another.

In a discussion of countermeasures, accordingly, one should not *a priori* exclude the criminals.

Reppetto (1974) discusses several possible counterstrategies. He is somewhat deprecatory of measures aimed at circumventing or preventing the means for committing crime, owing to different displacement effects that may arise.

Swedish experience does in fact point to the possibility of reducing the opportunity structure without displacement effects needing to occur (Knutsson & Kiihlhorn, 1980).

In the case studied, however, the *total* opportunity structure was altered. As regards residential burglaries it is a matter of changes at the *individual level.* By such means one can hardly reduce criminality, merely redistribute it - unless the majority of objects are affected.

Nor, with the exception of alarm systems, would there seem to be any assured methods, at least for one-family houses, from the point of view of technical crime prevention. One possibility might be that future dwellings are constructed as fortifications. It is hoped that this is nothing but a grotesque idea.

Reppetto recommends, instead, efforts directed rather to the criminal. It must not be forgotten that it is only a fraction of the population who are guilty of this kind of crime.

He points, among other things, to the great role of drugs in this context. A large part of the increase in residential burglaries is attributed to drugs. A reduction of drug addiction would result in substantial lowering of the crime rate.

That drugs have been a weighty factor also in the development in Sweden is manifest. But we cannot (as yet) say precisely how much it has meant. Our attempts hitherto to help drug addicts to get to grips with their problems have met with little success. Here there is scope for trying new methods.

One possibility is to attempt to improve the crime clearance rate situation.

Such measures may in principle follow two lines. Either one can attempt by means of intensified criminal investigation to elucidate the suspects' entire criminality and not merely the crime which initiated the investigation or one can concentrate one's efforts on getting hold of more of the criminals.

The former method should be the simpler one. But one may question its usefulness. The most manifest effect would be a slight improvement in the crime clearance rate (Knutsson, 1983b).

As regards the second method we know of no assured means (Reppetto, 1974:73-76). And as Reppetto says, it is hardly reasonable to expect any substantial effect merely through police activities.

As regards the other sectors of the judicial apparatus and their possibilities Reppetto is not averse to the use of the incapacitation effect (closed institutions, e.g. prisons, greatly reduce the opportunities for crime).

Research hitherto concerning incapacitation indicates that no dramatic effects are forthcoming. Some even maintain that more incapacitation merely aggravates the situation. A Swedish study of

crimes of violence, however, points to an opposite result (Kiihlhorn et al., 1984).

We cannot expect to find any single measure that would radically reduce the problem.

But if we want to arrest the present trend, we must try different measures and perhaps look for entirely new approaches. They should also have such a form that they can be evaluated.

Personally I find it difficult to accept the objections raised against the use of experiments from the social and legal spheres (Sherman, 1983). Through them we can get an idea of the efficacy of our countermeasures. This, too, is an example of the forms an evaluation may have.

Those who object to at least *trying* new strategies should consider the consequences of *not* doing so.

Annexes

Tables

Table I. Houses with Operation Identification sign according to initial and check observations

	Number of houses with sign			
	Initial and check observation	Initial observation alone	Check observation alone	Total
First day, unaccustomed observer	39	14	19	72
First day, accustomed observer	41	9	7	57
Second day	62	8	11	81

Table II. Percentage of houses with sign in relation to all reported (%)

	Initial observation	Check observation
First day, unaccustomed observer	74	80
First day, accustomed observer	88	84
Second day	86	90

Table-III. Reported residential burglaries in the studied area (excl. burglaries in flats) and in the rest ofHuddinge in absolute figures and per 100 dwellings 1975-1982

	Studied area		Rest of Huddinge	
	n	%	n	%
1975	76	2.3	356	1.6
1976	80	2.4	523	2.3
1977	80	2.4	456	2.0
1978	69	2.0	349	1.5
1979	63	1.8	330	1.4
1980	57	1.6	394	1.6
1981	120	3.4	430	1.8
1982	78	2.2	362	1.5

N.B. Since the address was not recorded for crimes cleared up in 1975 and 1976, there is some uncertainty as to whether they relate to the studied area or not. Owing to the relatively high clearance rate in 1976 the effect may be considerable for that year. In the other years it is evident that most of the cleared-up crimes took place in the studied area. For the years 1975 and 1976, therefore, these crimes are included among those in the studied area. The number of definitely located crimes in 1976 was 64. There is no reason to suppose that this difference between 80 and 64 in 1976 affects the result.

Annex I

Calculation methods

Jan Ahlberg

Introduction

The intention was to study whether participation in Operation Identification provides some protection against burglary. For this purpose the one-family houses in a limited area were observed during a 4-year period. Some houses were "vaccinated" with an OI sign which was expected to deter thieves, the remainder were "unvaccinated", i.e. had no OI sign. The "individual material" (houses) numbered about 3 500, about 800 of which had been vaccinated.

Method

The evaluation was thus organized as an epidemiological study. The vaccinated houses are compared with the unvaccinated in respect of burglaries.

The analysis is directed to an estimate of the "relative risk" (the rate ratio), which is a measure of the relative risks of burglary in vaccinated and unvaccinated houses. The Mantel-Henzel test is then used to determine whether a significant difference exists, i.e. whether the relative risk significantly differs from 1.

In the calculation of relative risk and in the test of the hypothesis a check has been made for the variables "houses at risk" and alarm system.

The keeping of these two variables under control implies in practice that the population has been stratified in four groups. The Mantel-Henzel test, unlike the ordinary simple chi-2-test, is adapted to this situation.

The outcome of the study has been evaluated by means of two variables (individual unit = house):

1. Afflicted or unafflicted by burglary during the observation period.
2. Number of burglaries during the observation period.

The two variables are intended to measure two different situations. Variable 1 provides a measure of whether the chance of avoiding burglary is diminished by 01. Variable 2 measures whether the number of burglaries is diminished by OI, i.e. whether the householder can reduce the number of burglaries by which he may be expected to be afflicted.

The Mantel-Henzel test is based on a normal approximation of the binomial or Poisson distributions. There is therefore no difficulty in presenting a realistic situational description of the variables in the test variable (the number of afflicted houses or number of burglaries) which give these original distributions. The number of units (houses) is also so great (about 3 500) in relation to the "p-value" (the probability of being burgled or of burglary) that the normal approximation cannot be questioned.

More and more houses were vaccinated (acquired OI signs) during the observation period. These "individuals" thus transferred from the unvaccinated to the vaccinated group. In the analysis, therefore, the basic unit "number of house-years" has been used instead of the number of houses. The numbers of house-years for the respective categories have been estimated by assuming a linear growth between the times of measurement. The assumption would seem to accord well with reality. For the estimates of the number of OI houses, which has a more step-shaped growth, a certain symmetry in the growth has been assumed. Under this assumption the number of OI house-years is satisfactorily estimated on the basis of an assumed linear growth.

Result

The result of the study can be summarized in the following two tables (unstratified).

	OI	Not OI	Total
Number of burgled houses	55	225	280
Number of house–years	3 500	14 576	18 076

	OI	Not OI	Total
Number of burglaries	59	259	318
Number of house–years	3 500	14 576	18 076

When the material is checked for the variables "houses at risk" and "alarm system", the relative risks are found to be 1.03 for variable 1

and 0.95 for variable 2. This could be interpreted as substantiating that the risk of burglary is increased by 3 % by joining in OI, whereas the number of burglaries on the other hand is reduced by 5 %. As the disparate results indicate, they are far from being significant but must be denoted rather as due to chance. The chi-2-distributed test variable in the Mantel-Henzel test gives observation values of 0.04 and 0.11 respectively. For a significant result at the 5 % level (two-tailed test) a value of 5.02 would have been required.

In the same way "alarm" has been tested against "no measure". The result appears from the report.

Formulae

The rate ratio for stratified material is estimated from:

$$\hat{RK} = \frac{\sum_j aj\ Nj\ /\ Tj}{\sum_j bj\ Mj\ /\ Tj}$$

j = stratum index

aj = number of cases vaccinated in stratum j

bj = number of cases unvaccinated in stratum j

Mj = number of house-years vaccinated in stratum j

Nj = number of house-years unvaccinated in stratum j

Tj = total number of house-years in stratum j

The test variable is calculated from:

$$\text{Chi-2 (1)} = \frac{(\sum_j aj - \sum_j cj \cdot Mj/Tj)^2}{\sum_j cj \cdot Mj \cdot Nj/Tj^2}$$

where cj = the total number of cases in stratum j.

Annex II

Number of one-family houses in the area

According to data from the population and housing census (FoB) the number of one-family houses in the area was 3 258 in 1975 and 3 533 in 1980.

The figures are for September/October in the respective years. According to the Head of Statistics at the Huddinge Local Council it should not be too hazardous to assume a fairly uniform growth. A large part of the increment consists of single houses on partitioned sites and previously unbuilt-upon sites. A problem is the terrace houses which come "en bloc". On the other hand moves into the area have often been delayed owing to the austere market. Assuming uniform growth (55 detached/terrace houses per annum) the figures are:

FoB	1975	3 258
	76	3 313
	77	3 368
	78	3 423
	79	3 478
FoB	1980	3 533
	81	3 588
	82	3 643

Annex III

Table A. Number of reported residential burglaries, number of objects in the Register of Stolen Property, number and percentage of marked objects, and number and percentage of burgled objects restored. The entire country 1977-1982

	Number of reported residential burglaries	Number of objects in the Register of Stolen Property	objects/ burglary	Marked objects n	%	Restored Total n	%	of which marked n	of all marked %
1977	22 200	18 660	0.8	723	3.9	1 034	5.5	49	6.8
1978	21 200	18 712	0.9	1 075	5.7	1 205	6.4	45	4.2
1979	17 700	14 806	0.8	973	6.6	898	6.1	51	5.2
1980	20 400	18 059	0.9	1 173	6.5	1 121	6.2	86	7.3
1981	20 000	20 220	1.0	1 248	6.5	1 640	8.5	48	3.8
1982	21 100	15 913	1.0	1 180	5.8	1 410	7.0	67	5.7

It will be seen from the table that, per reported residential burglary in the entire country, the number of objects in the Register of Stolen Property has increased slightly - from 0.8 per burglary in 1977 to 1.0 in 1982.

The quantity of objects marked with personal identity number has slightly increased, varying around 6 % since 1978. In absolute figures it is a matter of just over 1 000 objects annually.

The percentage of restored objects has risen slightly, from 5-6 % to 7-8 %. In all, the number has been about 1 500 objects per annum in the last few years. With an occasional exception the percentage of marked objects restored is rather lower, the total varying between 50-90 per annum. It is thus a matter of small quantities.

It appears that the occurrence of different kinds of objects varies in relation to what has been stolen. Table B shows the numbers of objects of eleven categories for the period 1977-1979. The percentage of those marked with personal identity number varies from about 2 % to 17 %. Of altogether some 40 000 objects barely 2 000 (5 %) were marked.

Table B. Number of objects in the Register of Stolen Property, number and percentage of marked objects, and number and percentage of burgled objects restored by type of object. The entire country 1977-1979

	Number of objects in the Register of Stolen Property	of which marked n	%	Restored objects n	%	of which marked n	of all marked %
Cameras, photographic equipment	4 092	220	5.4	271	6.6	10	4.5
Jewellery	17 044	336	2.0	907	5.3	11	3.3
Watches, clocks	2 461	70	2.8	127	5.2	2	2.9
Amplifiers	2 275	186	8.2	109	4.8	10	5.4
Record players	1 010	70	6.9	44	4.4	3	4.3
Tape recorders	2 564	217	8.5	105	4.1	9	4.1
Radio sets	1 790	180	10.1	80	4.5	1	0.6
TV sets	1 723	74	4.3	57	3.3	3	4.1
Cutlery	1 502	35	2.3	96	6.4	–	–
Silver, artware, trinkets	3 062	508	16.6	149	4.9	19	3.7
Paintings	2 681	38	1.4	127	4.7	–	–
Total	40 204	1 934	4.8	2 072	5.2	68	3.5

The variation in proportion of restored objects is small, oscillating between 4 % and 6 %. Marked objects are restored to a slightly less extent, amounting to about 70 over the entire period.

Table C shows the same figures as Table B for the period 1980-1982. The percentage of marked objects has slightly increased, by about 1 % to a total of 6 %. The figures for certain groups of objects are fairly high;for radio sets, stereo equipment, silver, etc, they exceed 10 %. For jewellery and cutlery, which are attractive objects for theft, however, the figures have not much changed.

The percentage of restored objects has risen by 2 % -from about 5 % in 1977-79 to about 7 % in 1980-82. This increase can, however, not be attributed to marking.The total is admittedly rather higher in the latter period, but the increase is explained by a single group of objects - paintings. Taking this into account the proportion of restored marked objects falls to about 3 %. The quantities are small.

Table C. Number of objects in the Register of Stolen Property, number and percentage of marked objects, and number and percentage of burgled objects restored by type of object. The entire country 1980-1982

	Number of objects in the Register of Stolen Property	of which marked n	%	Restored objects n	%	of which marked n	of all marked %
Cameras, photographic equipment	5 320	415	7.8	351	6.6	12	2.9
Jewellery	22 320	693	3.1	1 657	7.4	20	2.9
Watches, clocks	2 795	128	4.6	242	8.7	5	3.9
Amplifiers	1 109	152	13.7	41	3.7	5	3.3
Record players	469	57	12.2	28	6.0	2	3.5
Tape recorders	2 866	275	9.6	114	4.0	8	2.9
Radio sets	1 207	164	13.6	42	3.5	5	3.0
TV sets	1 044	88	8.4	28	2.7	5	5.7
Cutlery	2 610	55	2.1	143	5.5	–	–
Silver, artware, trinkets	3 785	612	16.2	240	6.3	23	3.8
Paintings	1 418	102	7.2	131	9.2	41	40.2
Total	44 943	2 741	6.1	3 017	6.7	126	4.6

Table D shows how the number of objects in the Register of Stolen Property varies between police districts. The metropolitan districts are shown separately. Group II is the larger districts, Group IV the smallest. The percentage of marked objects is smallest in the two largest districts (Stockholm and Gothenburg) and largest in Malmö.

Table D. Number of objects in the Register of Stolen Property, number and percentage of marked objects, and number and percentage of burgled objects by police districts

	Number of objects in the Register of Stolen Property	of which marked n	%	Restored objects n	%	of which marked n	of all marked %
Stockholm	39 011	1 833	4.7	1 360	3.5	50	2.7
Gothenburg	13 016	538	4.1	733	5.6	27	5.0
Malmö	14 268	1 078	7.6	1 186	8.3	63	5.8
PD Group II	28 930	1 947	6.7	1 997	6.9	84	4.3
PD Group III	19 950	1 201	6.0	1 220	6.7	67	5.6
PD Group IV	16 918	1 080	6.4	2 028	12.0	121	11.2

The proportion of restored objects rises the smaller the district - from about 4 % in Stockholm to 12 % for districts in Group IV. A recurrent pattern is that the proportion of marked objects restored is lower than for those listed with other than personal identity number in the Register of Stolen Property.

References

Bejerot, N (1975): Narkotikamissbruk och narkotikapolitik. Sober Förlag.

Cohen, L & Felson, M (1979): "Social change and crime trends: A routine activity approach." I: American Sociological Review, vol 44, s 588-608.

Gabor, T (1981): "The crime displacement hypothesis: An empirical examination." I: Crime and Delinquency. July 1981, s 391-403.

Heller, N m fl (1975): Evaluation of operation identification. Volume I—II. The Institute for Public Program Analysis, St Louis, Missouri.

von Hofer, H (1983): "Alternativ till fängelse eller I väntan på Godot." I: Tidskrift för kriminalvård, nr 2 årg 38, s 24-28.

Jenner, H & Eriksson, A & **Iwansson, A** (1977): Rapport från ett terapeutiskt samhälle. AWE. Gebers.

van Kirk, M (1978): Response time analysis. Executive summary. LEAA. US Department of Justice.

Knutsson, J (1979): "Polisen ochbostadsinbrott." I: Nordisk tidskrift for kriminalvidenskab, 67 årgång, 2 hefte, s 130-155.

Knutsson, J (1980): "Om bostadsinbrott - polisanmälda bostadsinbrott i Stockholm år 1977." I: Svensk juristtidning, årg65, häfte5, s 347-369.

Knutsson, J (1981): "Färre inbrott med operation märkning?" I: Brottsutvecklingen - lägesrapport 1981. BRA-rapport 1981:1. Liber förlag.

Knutsson, J (1983a): Problemen med uppklaringsprocenten. BRA-rapport 1983:1. Liber förlag.

Knutsson, J (1983b): "Polisen och brottsuppklaringen." I: Nordisk tidskrift for kriminalvidenskab, december 1983, 70 årgång, nr 5, s 300-312.

Knutsson, J & Kiihlhorn, E (1980): När checkbedrägerierna försvann. BRA-rapport 1980:4. Liber förlag.

Kühlhorn, E **m fl** (1984): Den svenska våldsbrottsligheten. BRA-rapport 1984:1. Liber förlag, Stockholm.

Kühlhorn, E & Edlund, T (1982): "Bilism i narkomansamhället." I: Brottsutvecklingen - lägesrapport 1982. BRA-rapport 1982:4, s 123-133. Liber förlag.

Matza, D (1964): Delinquency and drift. Wiley, New York.

McGlothlin, W & Anglin, D & Wilson, B (1978): "Narcotic addiction and crime." I: Criminology, vol 16, No 3, s 293-315.
Newman, O (1972): Defensible space. The MacMillan Company.
Persson, L G W (1976): "Inbrottstjuvar i Stockholm." I: Svensk juristtidning, sept, s 527-541.
Persson, L G W (1977): Offer för tillgrepp, skadegörelser och våld - en redovisning av 1974 års offerundersökning. SCB promemoria 1977:7. Stockholm
Persson, L G W (1980): Hidden criminality. Dissertation. Department of Sociology, University of Stockholm.
Phillips, D (1971): Knowledge from what? Rand McNally and Company, Chicago.
Reckless, W & Dinitz, S (1972): The prevention of juvenile delinquency: An experiment. Ohio State University Press.
Riley, D & Mahew, P (1980): Crime prevention publicity: An assessment. Home Office Study No 63. London. HMSO.
Reppetto, T (1974): Residential crime. Ballinger Publishing Company, Cambridge, Mass.
Sarnecki, J (1982): Brottslighet och kamratrelationer. BRA-rapport 1982:5. Liber förlag.
Sherman, L (1983): The scientific practice of police work. Stencil. Police Foundation.
Waller, I & Okihiro, N (1978): Burglary: The victim and the public. University of Toronto Press, Toronto.
Webb, E & Campbell, D & **Schwartz, R** & **Sechrest, L** (1966): Unobtrusive measures: Non-reactive research in the social sciences. Rand McNally & Company, Chicago.
Weiss, C (1972): Evaluation research. - Methods of assessing program effectiveness. Prentice Hall Inc., Englewood Cliffs, New Jersey.
Winchester, S & **Jackson, H** (1982): Residential burglary: The limits of prevention. Home Office Research Study No 74. London. HMSO.
Akerström, M (1983): Crooks and squares. Studentlitteratur, Lund.
SCB rapport 1981:24.