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# REPEAT BURGLARY VICTIMIZATION: RESULTS OF EMPIRICAL RESEARCH IN THE NETHERLANDS

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by

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***Abstract:** This paper explores some theoretical notions about repeat burglary victimization, and reports findings from research into repeat victimization of residential burglary in the city of Bnschede, the Netherlands, using police records over a period of six years. The study shows that there is a highly skewed distribution of burglary victimization in the population that is not due to chance. Furthermore, the study corroborates the findings of former research that there is a much greater chance of a repeat burglary in the period immediately after a burglary and that the magnitude of this risk declines with time. It is argued that the most plausible explanation for these results is that the same offender(s) — or their acquaintances — return to the premises to commit another burglary. Using data on apprehended offenders, this hypothesis is partly tested. The study shows that repeat victimization is more likely in high-crime than in low-crime areas. It is demonstrated that the most convincing explanation for these results is that offenders are not only more likely to commit a burglary in residences near to the places they live, but that the same applies to the chance of committing a repeat burglary. Implications of the findings for crime prevention and detection are discussed.*

Recently, scientists and policy makers have been showing a growing interest in the phenomenon of repeat victimization (for an overview, see Farrell, 1995). For over two decades it has been recognized that repeat victimization of people and places represents a

relatively large proportion of all victimization, but only now do the implications for criminological theory as well as for public policy seem to be appreciated.

This paper explores some theoretical notions about repeat burglary victimization, and reports findings from research into repeat victimization of residential burglary in the city of Enschede, the Netherlands. Police records covering a period of six years are used. Firstly, there will be a brief discussion of theory and former empirical research. Secondly, some methodological problems of research into repeat burglary victimization will be addressed. Thirdly, the original empirical findings are reported. The paper concludes by addressing the implications for crime prevention and detection.

A criminal event is generally the result of an interaction between one or more offenders and one or more victims or other crime targets. Nevertheless, there is a remarkable gap in criminology between those who seem to be preoccupied with offenders and those who seem to be preoccupied with victims. Integrated theories of criminal events, paying attention to both offenders and victims, are scarce and of a relatively recent date.<sup>2</sup>

The same applies to theories about repeat victimization. Most theories concerned with repeat victimization are rather one-sided and are primarily focused on victims, neglecting offenders and the interaction between offenders and victims. Just as (repeat) offending is often associated with special characteristics of offenders, theorists of (repeat) victimization often claim that repeat victimization means that there must be something special about these victims. This results in explanations emphasizing special characteristics of victims (for instance, personality traits, lifestyle, occupation or area of residence) that would predict an increased risk of victimization. According to this view, these "risk heterogeneity" factors would not only explain victimization but also the phenomenon of repeat victimization.

In addition to the category of risk heterogeneity there is the category of so-called state-dependence explanations. These imply that the state in which a victimization experience leaves a person alters their risk of future victimization. A well-known example is the "once bitten, twice shy" hypothesis of Hindelang et al. (1978:27), suggesting that people change their behavior to protect themselves against future incidents. The opposite effect — that someone's change in behavior may increase the risk of future victimization — seems initially counterintuitive, but has been demonstrated for the offence of bullying in schools. Schwartz et al. (1993) contend that bullied children tend to behave more submissively, making themselves even more vulnerable victims of bullying. Furthermore, Farrington (1993) points at "label-

ling\* processes in peer networks, making these children also more vulnerable to other potential bullies.

Although the explanations of Schwartz et al. (1993) and Farrington (1993) pay some attention to offenders and to the interaction between offenders and victims, most risk-heterogeneity and state-dependence explanations of repeat victimization are preoccupied with victims. However, if we try to explain repeat victimization of residential burglary, victim-oriented explanations are far less obvious than offender-oriented explanations. After all, the offender's behavior is far more important than the behavior of the victim, and there is generally no interaction between the offender and the victim: the prime target of the offender is not the victim but the residence, which can be strictly separated from the victim (the resident). Therefore, the victim's behavior is at the very most indirectly relevant, influencing characteristics of the residence. Such behaviour would include, for instance, signs of occupancy or prevention measures that have been taken. Furthermore, it is highly unlikely that victims of residential burglary will change their behavior in such a way that will increase their future risk of victimization. On the contrary: it is more plausible that they will take prevention measures that would decrease their future risk of victimization.

Therefore, it is not surprising that research on repeat burglary victimization in particular (Forrester et al., 1988; Polvi et al., 1991, 1990) has challenged the preoccupation with victims, and has stimulated interest in explanations focusing on the advantages to the offender of repeat offending against the same target (or victim) (Farrell et al., 1995).

Why is it attractive for a residential burglar to return to the premises to commit another burglary in the same dwelling? The first advantage is the knowledge the burglar has obtained about the goods to be stolen. The second time the burglar can steal the goods that he or she couldn't transport the first time, the goods that he forgot to steal the first time, or the goods for which he has only now found a potential client. Furthermore, the burglar can be sure that after a period of time, the goods stolen the first time have been replaced by insurance. The second advantage of a repeat burglary is that the burglar not only has more knowledge about the goods to be stolen, but also about risk factors, the layout of the house, and the ease of access and egress.

A majority of the small sample of 10 offenders interviewed by Bennett (1995) admitted that they had gone back to the same dwelling and had burgled it again, whereas almost half of them said they had burgled a dwelling as a result of other burglars telling them

about it. When asked why they returned to the homes that others had burgled before them, offenders gave a number of reasons that focused on the perceived rewards offered by the dwelling (rather than low risk or ease of entry). Nearly the same conclusion can be drawn from Dutch research conducted by van Burik et al. (1991): almost half of the 57 interviewed burglars admitted they had gone back to the same dwelling and had burgled it again. Porter (1996) conducted interviews with a sample of 21 cross-border offenders in order to get a better understanding of why they travelled to commit crime. As many as six of these unusually mobile offenders admitted that they had targeted the same premises more than once, whereas a further two said they might "put someone else on it." The interesting thing is that all of them said that when they returned to the same target on the second or even the third occasion, no additional preventive measures had been taken by the owners (Porter, 1996).

Hence, a repeat burglary might be explained not only by the fact that some dwellings are more attractive to burglars than others (risk heterogeneity), but also by the fact that the same offenders, or their acquaintances, return to the premises to commit another burglary (a form of state dependence). It seems more plausible that the same offenders or their acquaintances return, and that consequently state-dependence explanations have greater explanatory value, for two reasons:

- (1) Risk heterogeneity would be a plausible explanation for repeat burglaries if there were large differences in attractiveness between potential targets, and if these differences in attractiveness referred not to clusters of targets but to individual targets. However, in many instances the number of potential dwellings to burglarize is abundant, the differences in attractiveness are not too large, and many important risk-heterogeneity factors do not refer to individual targets but to *clusters* of targets (for instance, type of neighborhood or housing type). Therefore, most city areas may be too homogeneous with regard to individual risk factors to make a risk-heterogeneity explanation very plausible. Maybe risk-heterogeneity influences the risk of a first burglary, whereas the risk of a repeat burglary is mainly the result of the knowledge the offender amasses during these first burglaries (state dependence).
- (2) Risk heterogeneity cannot explain the interesting phenomenon that there is a much greater chance of a repeat burglary in the period immediately after the first event and that the magnitude of this risk declines with time (Anderson et al., 1995;

Polvi et al., 1991, 1990).<sup>3</sup> Polvi et al. (1991) demonstrated that the likelihood of a repeat burglary within one month was over 12 times the expected rate, and that this likelihood declined to less than twice the expected rate when burglaries six months apart were considered. Furthermore, analysis of the repeat burglaries within one month showed that half of the repeat victimizations occurred within seven days of the first. This interesting time course of repeat victimization has also been demonstrated for several other offences (for an overview, see Farrell, 1995). The most convincing explanation for this time course is that the same offenders (or their acquaintances) return to the premises to commit another offence.

To summarize, repeat burglary victimization might be explained by the fact that some dwellings are more attractive to burglars than others (risk heterogeneity), as well as by the fact that the same offenders or their acquaintances return to the premises to commit another burglary (a form of state dependence). There are reasons, however, why the last explanation is more plausible than the first.

## **METHODOLOGICAL PROBLEMS**

During our empirical research into repeat burglary victimization in Enschede, the Netherlands, using police records of 6,266 residential burglaries over a period of six years (1987-1992), we encountered at least three of the methodological problems noted by Farrell and Pease (1993).

The first methodological problem is that some burglaries are not reported to the police and that some reported burglaries go unrecorded. Farrell (1995) argues that the use of police records may lead to an underestimation of the extent of repeat victimization. If, for instance, 70% of all burglaries are reported and recorded, then a repeat burglary has a chance of only 0.49 ( $0.7 \times 0.7$ ) of being recorded. Therefore, the use of police records will probably result in an underestimation of the extent of repeat victimization. One may object, however, that the degree of underestimation will be moderated by the fact that people who report their first burglary may be more likely than average to report their second burglary as well. Furthermore, the reporting rate of burglaries in Enschede is rather high (about 90%). Hence, there is only a probability of a small underestimation of the extent of repeat victimization. In Enschede, if reporting rates are constant regardless of how many times a burglary is repeated, then 81% ( $0.9 \times 0.9 = 0.81$ ) of households experiencing two burglaries would

have reported them to the police, 73% of those experiencing three burglaries, and two-thirds of those experiencing four burglaries, etc.

The second methodological problem is how to identify repeat burglaries. The same address may be recorded in different ways and one address may refer to more than one dwelling. Therefore, we constructed an "address key" for each police record, which we subsequently matched with information obtained from the local government concerning addresses and dwellings. If burglaries had occurred at an address that could apply to more than one dwelling, we assumed (to be on the safe side) that these burglaries did not occur in the same house, resulting in a conservative estimation of the extent of repeat victimization.

The third methodological problem concerns the "time window" of the study of repeat victimization (Farrell, 1995). The length of the period of observation directly influences the extent to which one is able to identify repeat victimization. The shorter the period of observation, the higher will be the degree of underestimation of repeat victimization.<sup>4</sup> In this study the period of observation is quite long (six years), but one should bear in mind that the date of the first burglary in a dwelling during this period actually determines the time window for the identification of repeat victimization. Therefore, special attention will be paid to the dwellings that were burgled in 1987 (the first year of the observation period), because these are the dwellings for which it is possible to identify repeat victimization over a rather long period.

In summary, we may conclude that if the research method used is biased, it will rather lead to an underestimation than to an overestimation of the extent of repeat victimization.

## FINDINGS

What is the extent of repeat burglary victimization in the city of Enschede and how does this relate to what would be expected?

Firstly, the empirical analysis shows that the extent of repeat burglary victimization is substantial: about a quarter of all burglaries (24.5%) occurred in dwellings that were repeatedly victimized. As 9.2% of all dwellings in Enschede were burgled during a period of six years (1987-1992), a quarter of all these burglaries took place in just 1.2% of all dwellings. Hence, a small percentage of the dwellings represent a relatively large percentage of all burglaries.

Furthermore, Table 1 demonstrates that the extent of repeat victimization is significantly different from what would be expected. This table displays the observed frequency of the number of burglaries occurring in the same dwelling and the expected frequency based

upon the Poisson distribution, assuming — among other things — that the burglaries are independent and occur randomly.

**Table 1: Observed Frequency and Expected Frequency (based upon the Poisson Distribution) of the Number of Burglaries in the Same Dwelling in Enschede from 1987-1992 (N=58,925)<sup>5</sup>**

<b>Number of Burglaries</b>	<b>Observed Frequency</b>	<b>Expected Frequency</b>
0	53,499	52,981
1	4,732	5,634
2	579	300
3	91	11
4 or more	24	<1

Table 1 shows that the expected frequency of four or more burglaries in the same dwelling is smaller than one, whereas four or more burglaries actually occurred in 24 dwellings. Furthermore, the observed frequency of three burglaries in the same dwelling is as much as eight times the expected frequency. Finally, the observed frequency of two burglaries in the same dwelling is almost twice the expected frequency. This corroborates the statement that there are significantly more repeat burglaries than would be expected.

The same conclusion can be drawn from an analysis of 811 dwellings that were burgled in 1987 (the first year of the observation period). As many as 174 of these dwellings (21.5%) were burglarized again during the following five or six years. Apparently, there's a connection between victimization and repeat victimization. It has already been argued, that the most plausible explanation for this connection is that the same offenders (or their acquaintances) return to the premises to commit another burglary.

Another convincing argument for this interpretation is the time course of repeat burglary victimization, shown in Figure 1. This figure displays the frequency distribution of the time course of repeat burglary victimization (in months) for all 840 repeat burglaries.

**Figure 1: Frequency Distribution of the Time Course of Repeat Burglary Victimization (in Months) for all Repeat Burglaries (N=840)**

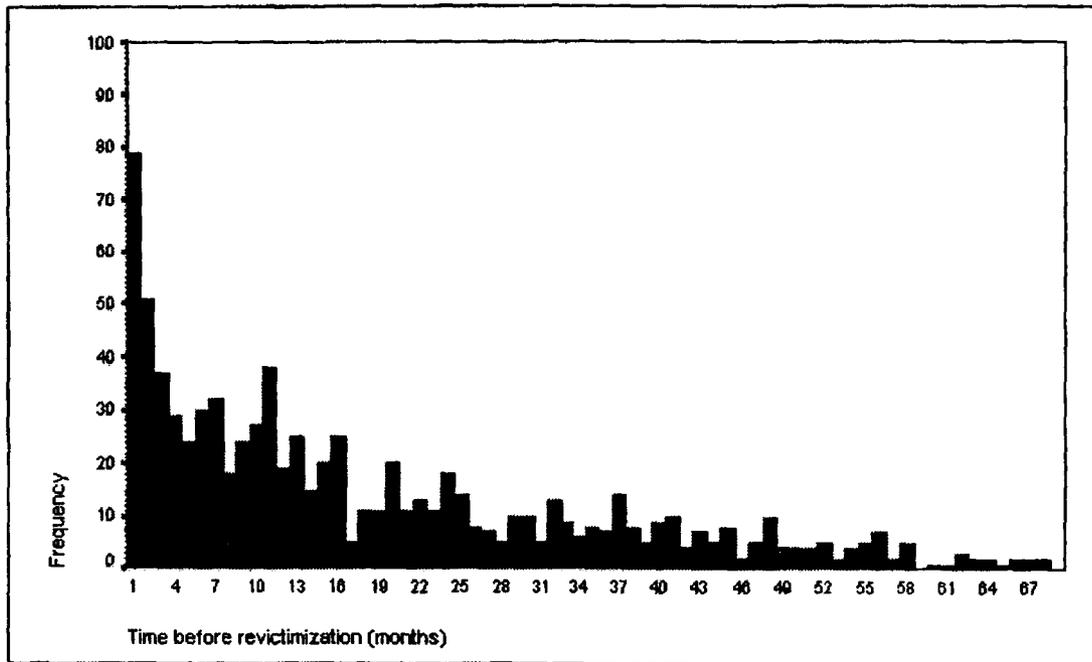


Figure 1 demonstrates that 9.4% of the repeat burglaries occur within one month of the preceding burglary, 29.6% within six months, 47.9% within one year, and 69.8% within two years. The observed frequency of 79 repeat burglaries within one month is about 10 times as high as the expected frequency.

Also very interesting is the time course shown in Figure I.<sup>6</sup> Assuming that all dwellings that have been burgled run a higher risk of being burgled again, this risk turns out to be much higher in the period immediately after the first burglary, whereas the magnitude of this risk declines with time. In the first month the observed frequency is 6.4 times higher than the average, declining rapidly during the following months from 4.1 times the average (in the second month) and 3.1 times the average (in the third month) to about twice the average. It is remarkable that the gradual decline towards the average (about 18 months afterwards) seems to be interrupted by a small risk hump around 11 months after the previous burglary. This indicates a possible seasonal effect,<sup>7</sup> but it might also be attributed to chance fluctuation in the data.

Hence, this analysis of burglaries in the city of Enschede corroborates several findings from recent literature about repeat victimization. The study demonstrates not only that there is a highly skewed distribution of burglary victimization in the population that is not due to chance, but also that there is a much greater chance of a repeat burglary in the period immediately after the first burglary and that the magnitude of this risk declines with time. It has been argued that the most convincing explanation for these results is that the same offenders (or their acquaintances) return to the premises to commit another burglary.

### **Data on Apprehended Offenders**

This hypothesis can be tested using data on apprehended offenders. The problem, however, is that if the same offenders or their acquaintances return and this is common knowledge among police officers (which is definitely not the case in the city of Enschede), they might also run a higher risk of being apprehended for these repeat burglaries. If the latter is the case, the analysis would be just a reflection of the higher apprehension risk of these offenders. Therefore, the analysis is at the very most a partial test of the hypothesis, as there is always an alternative explanation for a verification of the hypothesis.

Firstly, the analysis shows that only 17.5% of the burglaries in dwellings that were repeatedly victimized, have been solved. This concerns 269 burglaries in 220 dwellings. All (repeat) burglaries in the same dwelling have been solved for only 31 dwellings (14.1%). For all other dwellings (85.9%), one or more burglaries have remained unsolved. Maybe this simply was impossible, but one might also wonder whether or not the investigating police officers have ever considered the possibility that the suspects in one burglary could also have committed the other burglaries in the same dwelling.

Secondly, examining 49 repeat burglaries for which the previous burglaries in the same dwelling had been solved, it turns out that 63.2% of these burglaries had been committed by one or more burglars, who had committed the first burglary as well. However, 36.7% of these burglaries had been committed by others. Whether or not these offenders were acquaintances of the offender(s) who burgled the house the previous time is a question we cannot answer with the available data. Hence, the hypothesis mentioned above cannot be refuted on the basis of this analysis, but some modification might be appropriate: perhaps many repeat burglaries are committed by the same offenders, but this might not always be the case.

### *Repeat Victimization and Urban Burglary Patterns*

Having demonstrated the nature of repeat burglary victimization, one might consider the consequences for urban crime patterns. To what extent is a high burglary risk to a certain urban neighborhood due to the fact that many dwellings in this neighborhood are burglarized (prevalence) or to the fact that burglaries often occur in the same dwellings (concentration)?

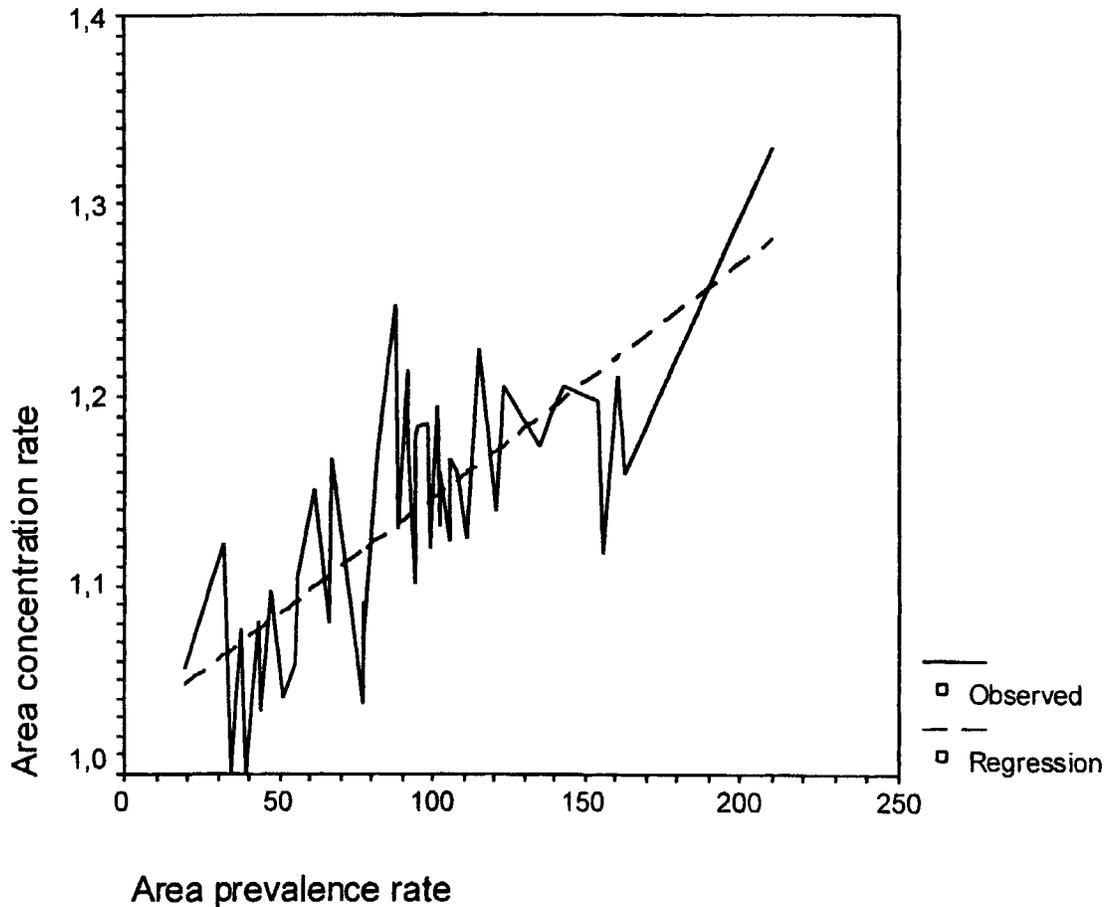
To answer this question, we should distinguish between three different kinds of rates: the incidence rate, the prevalence rate and the concentration rate (Trickett et al., 1992). The incidence rate concerns what is usually meant by burglary risk (for instance, the number of burglaries per 1,000 dwellings). The incidence rate is the mathematical product of the prevalence rate (for instance, the number of burgled dwellings per 1,000 dwellings) and the concentration rate (for instance, the average number of burglaries per dwelling that has been burgled).

If there were no repeat victimization, the concentration rate would be equal to 1 and the incidence rate would be exactly similar to the prevalence rate. Repeat victimization, however, results in an incidence rate exceeding the prevalence rate. Furthermore, as the concentration rate increases, the difference between the incidence rate and the prevalence rate will increase as well.

The average concentration rate for all neighborhoods in Enschede is 1.14. The extent of repeat burglaries, however, varies from 0 to 25%. Furthermore, Figure 2 shows a striking relationship between the prevalence rate (the number of burgled dwellings per 1,000 dwellings) and the concentration rate (the average number of burglaries per dwelling that has been burgled): as the area prevalence rate increases, the area concentration rate increases as well ( $r=0.74$ ,  $p=0.000$ ,  $N=48$ ). In other words, in neighborhoods where many dwellings are burglarized, there are also relatively many repeat burglaries. This deserves further explanation.

Former research into urban burglary patterns and offender behavior in Enschede (Kleemans, 1996) has demonstrated that the target choice of burglars is heavily influenced by the limited "awareness space" of offenders (e.g., Brantingham and Brantingham, 1984; 1981), by the places that play an important role in the daily activities of offenders, and by the limiting effect of distance. The chance that a burglar will commit a burglary by selecting a particular neighborhood and a particular target decreases, as the distance to his residence increases, as the distance to major traffic arteries increases, and as

**Figure 2: Area Prevalence Rate (Number of Burgled Dwellings per 1,000 Dwellings) and Area Concentration Rate (Average Number of Burglaries per Dwelling that has been Burgled) for the Neighborhoods of Enschede: Regression and Observed Rates (N=48)**



the distance to the city centre increases. Therefore, the aggregate burglary risk of neighborhoods turns out to be heavily influenced by the relative proximity of potential offenders (Kleemans, 1996).

However, this relative proximity of potential offenders could not only provide a good explanation for the risk of burglary victimization,

but also for the risk of repeat burglary victimization. If an offender — during his daily activities — often passes a dwelling that he has burgled before, it is more likely that he will decide to burgle it again than if the dwelling is miles away from his residence (even if he has also burgled that dwelling before). Probable evidence for this explanation is that the dwellings of repeat burglaries are nearer to the residences of the offenders than the dwellings that were burglarized only once.<sup>8</sup> Therefore, dwellings in neighborhoods that are relatively near to many potential offenders not only run a higher risk of a burglary, but also a higher risk of a *repeat* burglary.

## DISCUSSION

The implications of these findings for crime prevention and detection are quite clear-cut (e.g., Anderson et al., 1995; Farrell, 1995; Farrell and Pease, 1993).

Firstly, these findings provide a rather obvious indication where crime prevention is needed most. As victimization turns out to be a good predictor of (re)victimization, prevention activities should be concentrated upon dwellings that have been burgled before. It's not true that it's too late to lock the stable door after the horse has bolted. On the contrary: after the horse has bolted, it's time to lock the stable door.

Secondly, prevention measures should be implemented as soon as possible after the event, as there is a much greater chance of a repeat burglary in the period immediately after the previous burglary, whereas the magnitude of this risk declines with time.

Thirdly, these findings indicate that next to a quick response, a transient response could also be feasible and cost-effective. If the heightened risk of revictimization declines rapidly with time, there's no need for permanent crime prevention. Hence, temporary measures like a cocoon neighborhood watch or the installation of portable alarms might be a cost-effective means of crime prevention.

Fourthly, these findings have implications for the detection of offenders. If repeat burglaries are often committed by the same offenders (or by their acquaintances), it stands to reason that the police should investigate whether these individuals have been involved in other burglaries in the same dwelling as well. Therefore, it's surprising that this study has demonstrated that for most dwellings (85.9%), one or more repeat burglaries had remained unsolved. Perhaps this simply was impossible, but one might also wonder whether or not the investigating police officers have ever considered the possibility that suspects of one burglary could also have committed the other burgla-

ries in the same dwelling. For the police force in Enschede, the findings of this study turned out to be an eye opener.

This brings us to the practical problem of implementation. It is probably easier to integrate the implications of these findings in existing programs and activities than to start a brand-new project like the one in Huddersfield in Great Britain (Anderson et al., 1995). To start a special project, one has to overcome a lot of scepticism about whether or not repeat burglaries exist and whether or not the extent of revictimization deserves special attention. For many practitioners, the phenomenon of repeat burglary victimization is still too indiscernible, diffuse and counterintuitive. In 1995 Graham Farrell stated: "The extent of revictimization is an empirical fact. In time it will become a criminological commonplace" (p.525). Perhaps revictimization is rapidly becoming a commonplace in criminology. In police practice, however, a lot of "missionary work" remains to be done.



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## NOTES

1. Sometimes the prime target of an offender is not a victim, but an object (for instance: a residence) that can be separated from the victim (for instance: the resident).
2. The emergence of environmental criminology and related criminological approaches has strongly stimulated the development of integrated theories of criminal events.
3. Spelman (1995) has pointed out that, theoretically, "risk heterogeneity" could also explain this phenomenon. But his explanation is not very convincing.
4. Furthermore, a short period of observation may result in statistical artefacts in the time course of repeat victimization (Spelman, 1995).
5.  $\chi^2 = 1392.2$ , 2 d.f.,  $p < 0.005$ . Calculating the  $\chi^2$ , the categories "three burglaries" and "four or more burglaries" have been put together, as the expected frequency of the category "four or more burglaries" was smaller than five.
6. Spelman (1995) offers two alternative explanations for a time course like the one shown in Figure 1. In this particular case, however, these explanations are not very convincing, because the period of observation is rather long (six years) and the number of "multiple" repeat burglaries is relatively small compared with the number of "single" repeat burglaries. Therefore, the time course probably is neither an artefact of a short observation period nor a result of a bunching up of multiple repeat burglaries in the first months.
7. It remains unclear, however, how to explain such a seasonal effect. One explanation might be that in some periods of the year, offenders are more active than in other periods. Another explanation might be that the

situation of a repeat burglary after one year matches most closely the situation of the previous burglary (darkness at particular times of the day, clearly visible absence of the occupants because they are on holiday, etc.).

8. There is a significant difference of 313 meters ( $F=5.35$ ,  $p=0.0208$ ).