

EXPERT DECISION-MAKING IN BURGLARS

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SUMMARY

This paper begins by reviewing research on the cognitive processing used by residential burglars when choosing targets. We then attempt to make links between this processing and the notion of expertise in the broader cognitive literature, to the extent that, in comparison to novices, processing appears removed from explicit deliberation, tasks are carried out speedily and methodically, and recognition of relevant stimuli or cues is extremely fast, if not instantaneous. We then present new data from interviews with 50 experienced burglars. We cover the initial decision to burgle and selection of the target followed by, for the first time in the UK, a detailed discussion of search strategies *within* the property. Forty-five out of 50 burglars had a predictable search pattern and thirty-seven spontaneously described their searches using terms signifying automaticity – an underlying feature of expertise. We discuss the implications of these findings in terms of primary and secondary crime prevention.

Introduction

Studies of burglars and burglary over the last twenty years have shed light on the cognitive processes involved in property selection at the scene of the crime (see Nee and Taylor, 2000, for a review). Academic and policy-driven interest in situational crime prevention has stimulated a variety of offence-specific research from the 1980s onwards. This has resulted in considerable development in both ‘grounded’ methodological approaches and our understanding of the burglar’s behaviour and decision-making during the criminal event (Nee, 2003). In fact there is now ample evidence to suggest a model of target appraisal in the burglar, which is rational and discriminating in nature and involves the kind of ‘bounded’ decision-making described as expertise in other fields of cognitive science. Our purpose here is to briefly review some of the salient findings on burglary from a cognitive processing point of view, and to begin to make links with the broader literature on expertise and automatic responses to visual stimuli. We then present new data from interviews with 50 convicted burglars. As well as enquiring about their initial decisions to burgle and their approach to target selection, the innovative part of the study was to focus on their search mechanisms once inside the target. This is the first time this has been done in the UK and our findings strongly support our view of the burglar as a rational, ‘expert’ agent.

Cognitive processes in residential burglary

A number of useful American studies of burglary emerged in the 1970s looking at the burglar’s criminal career and lifestyle (Scarr, 1973; Shover, 1973; Waller and

Okihiro, 1978). These studies offered us clues as to the type of information processed by burglars in their choice of targets, such as the level of access, surveillability and cues for occupancy, which in turn gave birth to the first study of ‘target hardening’² in the UK (Winchester and Jackson, 1982). The 1980s, however, saw the emergence of work specifically focussing on the burglar’s appraisal of targets at the scene of the crime, generating a valuable database on which to build increasingly sophisticated studies. Maguire and Bennett (1982) interviewed 40 convicted burglars and categorised environmental cues used by the burglar to discriminate between targets. Even at this exploratory stage of research, very few burglars reported impulsive, opportunistic or indiscriminate target selection. The majority appeared to choose their targets with the skill and expertise that comes from prior experience.

Innovative empirical work (Bennett and Wright, 1984) emerged on the basis of this research, introducing videos and photographs alongside interviews with burglars and two important findings were brought more sharply into focus. Like Maguire and Bennett, around half of the 128 burglars interviewed by Bennett and Wright utilised a sequential decision-making process or offence-chain, initially deciding to offend away from the scene of the crime, then travelling to a location with potential opportunity (noted at an earlier stage or victimised previously) and choosing a target. Similar to this group, a further 17% had spotted a potential target at an earlier stage and had returned to explore its viability later. These were in contrast to much smaller groups of opportunists and ‘planning’ burglars. Secondly, at the final stage of target selection (i.e. choosing a property), all burglars but particularly this large ‘searcher’ category, were undoubtedly relying on learned responses to visual cues at the scene of the crime to discriminate between potential targets. These included cues signifying relative wealth, occupancy, access and security. The burglar was emerging as a strong example of the ‘rational’ criminal, supporting developing theoretical notions that most offenders are not driven by an inexorable urge to commit crime. More likely, they operate using the same bounded, almost habitual decision-making processes that all experienced individuals use to navigate quickly and effectively around their world. This does not involve a time-consuming cost-benefit analysis of the pros and cons of each action, but relies on the use of speedy rules of thumb based on prior learning. Johnson and Payne (1986) were the first exponents of bounded

² The use of locks/ alarms etc to reduce the vulnerability of a property.

rationality theory in relation to offenders, with more recent iterations by Opp (1997). From this viewpoint, the previously neglected areas of the situational context and the role of opportunity became as important in explaining criminal activity as individual motivations (Cornish and Clarke, 1986).

In the late 1980s, Nee and Taylor presented more compelling evidence to support this picture through their research in the Republic of Ireland. Undertaking a series of investigations involving interviews and simulations of residential environments using slide carousels, they were the first to test how burglars responded to clusters of different types of cues as they naturally occurred in the environment, and the first to compare burglars' (presumably more skilled) responses to those of non-offenders (Nee and Taylor, 1988; Nee and Taylor, 2000; Taylor and Nee 1988). In these free-responding settings, burglars spontaneously described the types of cues identified by Bennett and Wright (1984) in the criminogenic setting, as attractive or deterrent in their appraisal of each target. In contrast, groups of householder 'controls' demonstrated a dramatic lack of discrimination in response to these visual stimuli. They also took statistically significantly more time in navigating their way around the simulated environment and took statistically significantly more slides to reach a decision, using erratic, indiscriminate 'routes' to do this. In contrast, their offending counterparts took one of two modal routes in each simulation. The latter was remarkable, given the somewhat artificial nature of the experiments and certainly demonstrated a level of practiced expertise in the burglars compared to non-offenders.

Other work has continued to emerge, via interviews with burglars, in both Britain and the United States, supporting burglars' use of cues at the scene of the crime and the sequential decision-making process resulting in burglary (Bernasco and Luykx, 2003; Forrester, Chatterton and Pease, 1988; Hearndon and Magill, 2005; Palmer, Holmes and Hollin, 2002; Rengert and Wasilchick, 1986). However, the notion of *expertise* in burglars was significantly moved forward in 1992 by the pioneering experimental work of Logie, Wright and Decker. In two experiments, participants were asked to examine photographs of 20 houses and asked to describe the attractive and deterrent features of each target. Later, a surprise recognition task in which some of the features of the houses were changed, was used to assess recognition memory. In the first experiment a group of very young incarcerated burglars (aged between 15 and 17), like Taylor and Nee's (1988) burglars, demonstrated a significantly greater awareness of a variety of cues in comparison to a

group of householders, particularly the presence of cars and increased cover. Burglars were also more conscious of these cues than a third group of police officers. However, commensurate with the notion of expertise through prior learning, police officers were more aware of burglary cues than the householder group³. The recognition memory test showed more accurate recognition of earlier photos for a range of cues in the burglars than in the other two groups, though again police officers did better than householders. Differences between the burglars and householders reached statistical significance.

Having established superior awareness of cues and recognition memory in burglars in comparison to 'novices', a more rigorous test of offending-related expertise would be to compare burglars' target selection with that of other offenders with no experience of burglary. This might more firmly establish that the burglars' expertise was rooted in repeated exposure to particular types of cues pertinent to burglary, rather than to offending behaviour in general. Using a similar methodology Logie et al. (1992) examined this using another group of young, incarcerated burglars and a group of matched young offenders with no experience of burglary. In keeping with the repeated exposure theme, the burglars demonstrated significantly greater discrimination, being uninterested in an unembellished house (which non-burglars saw as attractive), being deterred by an alarm (non-burglars were not) and undeterred by a dog (non-burglars were deterred). On other factors though, the difference in awareness of cues was less dramatic than for either of the two comparison groups in the first experiment, suggesting that cues for some of the other crimes that non-burglars had experience of, such as theft and car theft, might overlap with those of burglary. On the recognition memory test, however, burglars were significantly better at recognising earlier pictures than non-burglars.

All-in-all, the experiments strongly demonstrated superior awareness and memory sensitivity for burglary-related cues amongst very young but experienced residential burglars in comparison to other less experienced groups. They also rather neatly demonstrated a sliding scale of expertise of an order which one could predict in terms of the relevance of the cues identified to each group: with burglars at the top of

³ One would expect police officers dealing with burglary sites on a regular basis to have a heightened sensitivity to cues in comparison to householders.

the hierarchy, followed by non-burgling offenders, police personnel and householders⁴.

Logie et al. (1992) noted the value of drawing from studies within the mainstream cognitive psychology world, in this case on expertise, in furthering our understanding of the offender and developing crime prevention. This recommendation has rarely been taken up, however, with the notable exception of work on implicit planning and decision-making in sex offenders (see Ward and Hudson, 2001), and responses to social cues in violent offenders (see Topalli, 2005). It seems important, therefore, to look more closely at what studies of cognitive psychology can tell us about expert decision-making in the broader field, and link this with our knowledge of burglars.

Features of expert decision-making

Empirical studies of expertise, or specifically expert recognition of visual stimuli and the automatic decision-making and action that often follows, have been conducted on a wide range of ‘experts’ in many domains including pilots, chess players, doctors, radiologists, musicians, dog handlers, computer programmers and ornithologists (see Vicente and Wang, 1998, for a review). In their review of the characteristics associated with perceptual expertise, Palmeri, Wong and Gauthier (2004), note that ‘the development of expertise involves a complex interplay of changes in perception, categorisation, memory, problem solving, coordination, skilled action and other components of human cognition’ (p. 379). Palmeri et al. (2004), drawing on Logan’s (1988) notion of automaticity (see below), list ways in which research has shown that experts can be distinguished from novices, as follows. Expert decision-making seems removed from explicit deliberation, unlike novices who rely on explicit instruction when learning a new task. Linked to this, speed of performance increases notably with expertise, whereas novices are slow and deliberate. Experts can multi-task and engage in other activities while making expert decisions whereas novices can be easily distracted from tasks they are unfamiliar with. Recognition of visual stimuli and its categorisation shifts up a level in speed once one has become expert through repeated experience, allowing experts to respond to and categorise subordinate level stimuli almost instantaneously. Experts can generalise their knowledge speedily within a

⁴ A later study also confirmed heightened expertise in burglars in comparison with students (Wright, Logie and Decker, 1995).

limited range and can categorise unfamiliar objects relevant to their expertise very quickly in comparison to novices.

Taken as a set of core features of expertise, Palmeri et al.'s (2004) distinctions could suggest that these provide a convincing explanation of the verbalisations and manifest behaviour of burglars in the studies reviewed earlier, especially in relation to burglars' superiority over novice groups. In particular, burglars in the Nee and Taylor experiments (2000, and Taylor and Nee, 1988) selected their targets with the ease, speed and consistency characteristic of an expert. In comparison, householders were slow, haphazard and inconsistent both in their search for a target and in their verbalisations about the task. Logie et al.'s (1992) burglars were superior in both their recognition and memory for visual stimuli related to successful burglaries in comparison to three other experimental groups including non-burgling offenders. Palmeri et al.'s (2004) description of speedier recognition of visual stimuli through repeated experience and the ability to generalise knowledge quickly (and thereby pick targets from an array of previously unseen properties) seems to explain this plausibly. Moreover, our new data below seems to demonstrate the ability to carry out other tasks while making 'expert' decisions during burglary.

Mechanisms underlying the development of expertise

Logan (1988) suggests that novices addressing an unfamiliar task will do so relying on explicit rules or instructions. With repeated practice, representations of past solutions build up into 'exemplar memories'. Over time and experience, exemplar memories will be retrieved (in favour of using explicit rules) with increasing speed until they become instantaneous. Palmeri et al. (2004) suggest that perception and memory become more sensitive over time with representations becoming more finely tuned. This, in turn, reduces perceptual 'noise' (Ashby, 1992) or distractions during tasks, allowing our burglars to make instant responses to environmental stimuli.

Logan (1988) notes that this automaticity, which comes with experience, is autonomous, without intention, without control, effortless and unconscious. In short, automatic responses will inevitably be triggered when the relevant stimuli are presented. Of particular relevance here is Ward and Hudson's (2001) work on sex offenders. Their suggestion that the features of automaticity seem to characterise the early decision stages of the offence chain in serial sex offending has been an important contribution to the forensic field. Again based on repeated practice (which

increases ‘habit strength’ and the likelihood that the behaviour will occur in future (Ouellette and Wood, 1998)), Ward and Hudson (2001) note that these decisions often appear to be unintentional and unconscious responses to environments strongly associated with past habitual (i.e. rewarding) behaviour. Though only dimly aware of these early decisions⁵, they often result in offenders finding themselves in highly risky situations, which trigger further automatic mental scripts (known as ‘obligatory processes’ by Logan, 1988) resulting in offending behaviour. They give the example of an offender who makes the decision to take some exercise and seemingly unintentionally takes a walk close to a school at the end of the school day. The offender subsequently finds himself in a high-risk situation, which requires conscious effort to abandon. Conscious effort, however, may be inaccessible, or even actively masked. If we accept the unintentional, habitual nature of the early stages of the offence chain, this has very serious implications for intervention and crime prevention. It may also be paralleled in many different types of offending behaviour, such as burglary, and needs further exploration.

Returning to the world of burglary, Wright and Decker (1994) have also described what they regarded as expert, cognitive scripts used by burglars to navigate targets, once inside. Using arguably the most superior methodology ethically possible⁶, they interviewed over 80 active burglars at the scenes of recent crimes who reported using strikingly similar cognitive scripts to execute the burglary with maximum gain and minimum time, effort and risk. Ninety-three percent went straight to the master bedroom to locate cash, jewellery, guns and other small valuable items, methodically searching dresser, bedside table, under the bed and wardrobes usually in that order. They then engaged in a very short, superficial search of the downstairs rooms and left the house within minutes. The same practised, routine approach, seen earlier in target selection, was again in evidence in the efficient search of the target.

A detailed examination of the behaviour and decision-making of the burglar once inside the property has not been carried out in Europe until our present study. We felt such a project would represent an important opportunity to extend our comparative understanding of the cognitive processes involved in the burglar’s appraisal of the property, and how these relate to those involved in target selection. Thus, we set out to replicate this aspect of Wright and Decker’s study, in a different

⁵ Ward and Hudson (2001) refer to them as SUDS – seemingly unimportant decisions.

⁶ Bar accompanying a burglar on an actual burglary.

country, using a semi-structured interview with a prison-based sample of burglars. We predicted, on the basis of Wright and Decker (1994), that burglars would report the same kind of routine and expert decision-making once inside the property as previously noted in their *selection* of properties.

Method

Participants

Fifty experienced residential burglars were recruited from two closed training prisons in the UK. All were male and aged from 21 to 60. Twenty participants were under 30, 19 were between 31 and 40, eight were between 41 and 50, and three between 51 and 60. Given the wide age-range, several checks were made during analysis to look for differences in the nature of responses between younger and older offender groups. No notable differences emerged in relation to any part of the interview and therefore data from all participants was included.

Participants were identified according to a current or previous index offence of residential burglary (n=33); via a recruitment letter placed on their prison wing (n=12); or through recommendations of other participants (n=5). Preliminary discussions were used to ensure that only those who had committed at least 20 burglaries in the last three years were included⁷. Over half had committed more than 100 (and this was not related to age, with many of the younger participants having extensive experience). The average age for first involvement in burglary was 13. Of those whose current index offence was not burglary (n=36), 22 were serving a sentence for armed robbery, and ten for other violent offences. The remainder had index offences for drugs, firearms or commercial burglary. No relationship was found between age and index offence, or between index offence and responses to any of the main areas covered by the interview. Nearly two thirds of the sample (32) had a substance misuse problem during recent spates of burglary (usually heroin and/or crack), though only two reported spending most of their proceeds on their habit, suggesting the latter was an aspect of lifestyle rather than the driving force behind their criminal activity. Substance misuse was not related to age or index offence.

⁷Ten further potential participants were excluded due to relative lack of experience.

Materials

In their review of methodologies used in burglary research, Nee and Taylor (2000) noted that the more sophisticated experimental and ethnographic designs had served mainly to validate and triangulate the interviewing methods used in earlier research, and the findings were generally consistent. Given the resource constraints on the current research, interviews were chosen as the most cost-effective but reliable method. The one-to-one interviews were semi-structured and largely based on previous research in the area. Although the main aim of the interview was to explore patterns in searching inside the property, it seemed sensible to gather further data on the whole process, from initial decisions to burgle and target selection, to disposal of goods as it had been some time since this had been explored in a British context. We began the interview by asking about background factors such as age, criminal history etc. Then the burglars were asked to talk us through a detailed description of a recent typical burglary beginning with the initial decision to commit the burglary, through target selection (if these two processes were separate), to gaining entry and searching of the property, to departing and disposal of the stolen goods. An innovative part of the interview took place during questions about the search inside the property. We asked participants to gauge their level of concentration whilst searching a recent, typical burglary target in an attempt to assess levels of expertise and the automaticity of their strategies. It was difficult to find a valid way to estimate this within the scenario of an interview, but we settled on a scale of one to ten, where 'one' was 'nearly asleep – no concentration at all', 'ten' was 'really focussed, for instance, when doing your driving test' and 'five' was 'doing something that doesn't require too much thought such as washing up'. If automatic 'cognitive scripts' were in use, we predicted that most of the sample should score around 5.

Interviews took around an hour to complete and were tape-recorded. The data was then coded onto an SPSS spreadsheet and subject to descriptive analysis⁸. Written informed consent and full debriefing procedures were undertaken with all participants using British Psychological Society guidelines.

⁸ Though some crosstabulation was undertaken using chi squared tests to look for relationships between various findings and age, index offence, drug misuse etc.

Results

Initial decision to burgle and target selection

Supporting the research above, over three-quarters of the sample (39) said the need for money was the primary motivating factor in the initial decision to burgle, with a minority mentioning excitement⁹ (6) or the influence of others (5) as most important, with money second. All but three made this decision away from the scene of the crime. These three were opportunists, usually responding to environmental opportunities immediately. All three were heavy drug users and aged from 21 to 49. Three-quarters of our sample (38) typically made the initial decision to commit a burglary away from the scene of the crime and then searched around in a suitable area until they found a target, once again indicating that 'searching' was the most common method of target selection in residential burglary. Two thirds reported deviating sometimes from their usual target selection method, particularly when having received a tip about a property, or if presented with an irresistible opportunity. Nine of the sample were categorised as 'planners', i.e. having some prior knowledge of the target, its occupants and/or potential profit. Only two of these, however, meticulously prepared for burglaries for a number of weeks. The remainder had prior information of particular contents inside the target and watched occupants for a number of days.

Features of attractive targets

Concurrent with numerous pieces of work reviewed above, our sample were making similar checks for relative wealth, occupancy, access and security reported above (see Palmer et al, 2002, or Nee and Taylor, 2000, for a summary). Despite searching in relatively affluent areas, or working on a tip-off, substantial effort was devoted to assessing the relative profitability of the target. Various aspects of this were mentioned 57 times, most commonly: general upkeep and décor (21), visible, expensive items (15) and type of car parked outside (11).

More important though, were layout cues (with various aspects being mentioned 87 times during interviews), particularly regarding weighing up the degree of cover (47), access and 'get-away' routes (23). The particular style of housing (e.g. detached,

⁹ Although not statistically significant ($\chi^2(4, N=50) = 7.84; p=0.09$), more burglars with a current conviction of armed robbery mentioned excitement as a primary motivating factor (n=5 as opposed to n=1).

semi-detached) was less important than access and potential profitability¹⁰. Three-quarters (38) preferred the property to be unoccupied, with two-thirds checking this by knocking on the door or ringing the bell. Other checks included: no lights on (7), car on driveway (5) and milk on doorstep (5). Ten preferred occupancy as long as occupants were asleep, because in this case they knew where the occupants were, and most valuables such as wallets, handbags and jewellery would be in the house.

Interestingly, security cues were mentioned least frequently (39 times in total), with twenty-two mentioning they always (11) or sometimes (11) avoided dogs, or that they always (9) or sometimes (8) avoided alarms. Thirty said they were not deterred by either alarms or dogs and some mentioned that they were attracted by double-glazing (8) typically thought to be a deterrent to burglars by the general public. Just under half of our participants (21) had noticed a significant improvement in security in the past 10 years (as opposed to 28 who had not). In any case, all participants felt security features were rarely enough to deter them, due to a lack of vigilance in locking up on the part of home-owners. The most common reason for abandoning a recent burglary was because they had been disturbed (22) rather than being deterred by insurmountable security (14).

¹⁰ Though obviously more separated houses are likely to have better access.

Types of goods

All participants stole cash, jewellery and documents¹¹. A further 27 took ‘middle-range’ portable electrical items such as TVs, DVDs, laptops, mobile phones, digital cameras and camcorders. However, 11 of these also stole items associated with more high-level burglary. Unlike earlier studies, there was no real relationship between types of goods targeted and level of planning. In our small sample of planners, only half (5) typically stole specialist goods such as antiques, silver, glass, china and paintings and used a specialist receiver to dispose of these. Many of these items were also stolen by ‘searchers’, a third of whom used specialist fences too, which suggested a general increase in sophistication in the disposal of goods and a blurring of the former categories of ‘middle-range’ and ‘high-level’ burglar¹² (Maguire and Bennett, 1982).

Accomplices

Two thirds (29) of participants always (15) or usually (14) worked alone preferring not to split the proceeds or risk partners identifying them to the police. The remaining third worked with one or two others preferring to have additional help with the burglary. Nearly half (23) said they had burgled people they knew (mostly acquaintances but in five cases, family). Reasons given were opportunity (13) and revenge (10). Twenty liked daylight, 23, darkness and seven did not have a preference.

Having chosen a target and assessed occupancy, methods of entry varied depending on the opportunities that presented themselves. Methods included: forcing a vulnerable door or window (20); getting in through an open window or door (14); and dismantling the double-glazed patio doors or windows (12). Once inside, nearly half (22) locked the front door to prevent access for returning householders.

Searching the target

Two thirds (32) of the sample reported using the same search pattern for every burglary. A further 13 said they had specific search patterns that varied slightly

¹¹ Such as credit cards, cheque books, passports etc.

¹² In their classification, middle-range burglars stole portable, easy to dispose of goods. High-level burglars planned their offences, often stole to order and targeted valuable, easily identifiable goods, needing a specialist receiver to dispose of them.

depending on the type of property they had entered. Only five changed their pattern every time to prevent the police linking their crimes. Of the 45 with a predictable pattern¹³, eight were not prepared to divulge it. However, two thirds (31) utilised an identical search pattern, searching the master bedroom first, followed by any other adult bedrooms and then the living area including living room, dining room, study (if there was one) and kitchen¹⁴. We called this Search 1. Four reversed Search 1, dealing with the living areas first, followed by bedrooms (Search 2). Finally, search pattern 3 (n=2) involved searching the living areas without the kitchen, followed by the bedrooms, and only going back to the kitchen if there was time. Young children's bedrooms were rarely bothered with and 26 said they actively avoided them as they were rarely lucrative. No relationships were found here with age, index offence or addiction to drugs.

'Automaticity' of search

Only thirty participants were willing to use our ten point scale, preferring to give a description of what went on and, at first glance, the results from the scale were disappointing. Only six (out of the 30 who used the scale) rated their level of concentration at six or below, with 18 rating it at eight or higher (and ten of these rating it a 10 – the highest level of concentration). However, forty-seven respondents gave a description of their typical levels of concentration, and this was more illuminating. Only ten described their search as highly focussed. Over three-quarters (37) described their search as relatively routine in terms of the levels of concentration required, with many (15) actually using terms such as 'automatic', 'routine', 'second nature', 'methodical' and 'instinctive' in their descriptions. Further, 15 of this group of 'automatic searchers' (n=37) reported that while searching relatively automatically, their senses were very focussed on listening for noises signifying the return of occupants.

Scores on the scale bore little relation to actual levels of concentration. Thirteen of the 18 who had scored 8 or more on the scale of concentration were highly focused on noises as opposed to searching which was relatively automatic. The following selection of quotes typify the majority that searched automatically.

¹³ 34 of the 38 participants who were categorised as 'searchers' in relation to target *selection* fell into this group, the remaining four not wishing to divulge their pattern.

¹⁴ Two of these searched the room of entry first, but we included them here as the rest of the search was identical to Search 1.

‘People leave things in the same basic locations...could have done it with my eyes shut. I’m very, very diligent, efficient.’ P43

‘.....got to be totally focussed on outside noises, sometimes sixth sense, the search is automatic.’ P25

‘After so many years you know where you’re heading straight away...senses on overdrive.’ P24

If you're concentrating too much you can't see, most stuff is on the sides.’ P19

‘I’m a relaxed person, know what I’m doing but on edge for sounds, know where to look.’ P14

‘You do the search without realising it, look everywhere, most people leave things in similar places.’ P26

‘...sometimes find stuff where you’re not expecting, but usually you know where it will be. Most attention is on listening...searching's the easy part.’ P37

‘The search becomes a natural instinct, like a military operation, becomes routine to concentrate on what’s going on around you and where to find things. Most concentration is on the risk of someone coming back - search is natural.’ P47

In terms of how automatic searching *inside* the property mapped on to levels of planning in target *selection*, there was a very high overlap between searchers in terms of target selection and automatic search once inside (28 out of 36 who gave a response, or eight out of every ten). Six out of the eight ‘planners’ responding, described doing automatic searches, as did all three opportunists. No relationship was found between automaticity of searching and either age or index offence.

About half (22) of the entire sample said they started searching with the drawers in each room and then carried on the search ‘everywhere’. Although all could list the areas/furniture they would search, they found it hard to articulate a particular pattern within rooms.

Seven out of ten spent twenty minutes or less inside any given target, with a range extending from one minute for one planner to 120 minutes for two searchers. There was no overall relationship, however, between length of time searching the

property and prior knowledge of goods (which planners usually had), or between time spent searching and age.

Leaving the property

The most common decision to leave the property was when burglars decided they had got 'enough'¹⁵ (18), or when they felt they had found everything of value (14). A further 13 relied on 'a feeling' that they had been in the property too long and three others actually used a watch to monitor this.

According to our sample, the average amount gained from a typical burglary was around £800, with planners that stole to order achieving between £1000 and £10,000. Of the 46 who answered the following question, 28 sold their goods immediately after the burglary, 10 hid them in a safe place to sell later, and eight hid them at home.

Discussion

Target selection

This research provides further evidence that the majority of burglars typically use sequential, 'searching' strategies when choosing a target, as opposed to knowing their target and planning ahead, or impulsively responding to potentially lucrative opportunities when they come upon them in the environment. Our burglars' accounts also support earlier theoretical explanations of the bounded rationality offenders use when responding to environmental cues for potential burglary targets in a routine, experienced way (Nee and Taylor, 2000). Again, burglars discussed a wide variety of cues to do with relative wealth, layout, access and security in choosing targets that the householder still appears to be unaware of, or does not appear to process in the same way. Their reports, in turn, support our current theoretical explanation that this type of behaviour is an example of expertise in the broader sense, particularly in relation to the instantaneous recognition of familiar visual stimuli (Palmeri et al, 2004).

Many authors (Logan, 1988; Logie et al, 1992; Palmeri et al, 2004; Ward and Hudson, 2001) have noted that experts have an increased sensitivity and willingness

¹⁵ This would vary according to their immediate needs and the frequency with which they committed burglaries.

to recognise relevant cues in their environment that they have associated with past success. Further, some have noted that the instantaneous recognition of these cues leads to the playing out of seemingly obligatory, unconscious responses and consequent behaviours that have produced rewards in the past (Logan, 1988; Ward and Hudson, 2001). In sex offenders, Ward and Hudson (2001) have explained this increased sensitivity through the formation of implementation intentions. This involves the mental rehearsal of desired behaviour, which further strengthens the mental representation of the anticipated situation and behaviour, thus making individuals hypersensitive to the relevant offence-related cues in the environment (Gollwitzer and Schaal, 1998). As far as we are aware, research on implementation intentions has not been carried out with any other type of offenders and is certainly an area for further exploration with burglars.

Target search

Our sample provided some interesting insights into the search process. As predicted, a remarkable 45 out of 50 described a predictable search pattern once inside the property, in line with Wright and Decker (1994). The ‘scale of concentration’ we used to tease out the difference between focussed attention and more automatic methods of searching did not provide reliable ratings in itself¹⁶. It did, however, prove very useful in stimulating coherent and consistent descriptions of the automaticity of the search, without any prompting. Over three-quarters of the sample spontaneously described their searching methods as automatic in nature, indicating that strategies were not reliant on explicit deliberation and satisfying one of the central criteria associated with expertise in the broader literature. Participants’ verbalisations suggested their search was extremely speedy, while remaining methodical and efficient (Palmeri et al, 2004). Of particular interest was the spontaneous description by fifteen participants of multi-tasking during the search. They described using their focussed attention on listening for auditory cues, which might signify the return of occupants or others, while simultaneously searching the property systematically but without thinking about it. This may be an example of Logan’s (1988) proposition that automatic processes use little or no cognitive processing capacity leaving it more or less fully available to perform other tasks and again needs further investigation with other samples.

¹⁶ As noted earlier, only 30 out of 50 felt able to use the scale and there was little correlation between ratings and the subsequent description of the levels of concentration used in the search.

The evidence of expertise found in the burglary work reviewed above, alongside the emerging sex offender research and other studies involving ‘novices’ (such as Topalli’s (2005) work on violent street offenders) are strongly supported by our new findings regarding automaticity in the burglars’ search of the property. Moreover, they are in direct contrast to the longstanding argument by Hirschi (1986) that offenders demonstrate little skill and are incapable of gaining skills over their careers. All-in-all, the processes involved in executing a burglary worth several hundred pounds in around 20 minutes, strongly suggest the use of expertise in the burglar, especially if one were to envisage a novice attempting the same thing. It is therefore crucial to include the instantaneous and skilled appraisal of criminogenic opportunities and environments in our understanding of the commission of crime, as they could play as big a role as individual risk and need factors.

Implications for situational crime prevention

Like other recent research (Hearndon et al, 2005; Palmer et al, 2002), the news regarding the vigilance of householders in relation to security issues in our research is not favourable. Typical methods reported to enter properties (through open windows and doors, or forcing vulnerable windows and doors) do not bode well for the use of target hardening as the first defence against burglary and require renewed efforts from crime prevention analysts to find ways around the naturally lax attitude of homeowners in this regard. Novices need to become closer to the expert in the way they process cues symbolising target vulnerability. Perhaps there is a case for householders to practice burglaries in a simulated setting.

Re-victimisation of previously targeted properties is very high with around two-thirds of burglars admitting to it in other studies (Hearndon and Magill, 2005; Palmer et al, 2002). Indeed, in Palmer et al’s (2002) study, familiarity with the layout and type of property was reported as an important attractiveness cue to burglars and supports both Pease’s (1998) and Townsley, Homel and Chaseling’s (2003) ‘contagion’ hypothesis for victimisation of properties near a recently burgled property. These findings may well link with the ability of our burglars to navigate around properties virtually automatically. There may be some situational crime prevention mileage in confounding burglars’ expectations by altering the usual internal layout of properties. Expert burglars appear to be highly habit driven, and crime prevention specialists should capitalise on this.

Unlike earlier studies (Maguire and Bennett, 1982; Taylor and Nee, 1988) there was less of a relationship between types of goods targeted and level of planning. In our small sample of planners, only half (5) typically stole specialist goods such as antiques, silver, glass, china and paintings and used a specialist receiver to dispose of these items. Many of these goods were regularly stolen by the much larger category of 'searchers', a third of whom used specialist fences too. This needs further investigation as it seems to suggest a general increase in sophistication in the disposal of goods and a blurring of the former categories of 'middle-range' and 'high-level' burglar (Maguire and Bennett, 1982) in relation to goods taken. This suggests that strategies such as property marking are not working to deter burglars. In fact, Palmer et al. (2002) also found an increased level of planning in their sample (50%) in comparison to earlier research and it is interesting that many of our searchers planned somewhat more meticulously at times, if they had been given a tip off about the contents of a house.

Secondary crime prevention

Areas of particular concern that could be exploited in the rehabilitation of persistent offenders are: (i) the 'seemingly unimportant decisions' made at the beginning of the offence chain; (ii) the automatic processes and behaviours triggered off in presence of offence-relevant stimuli, and; (iii) the heightened ability to recognise these stimuli. All of these have already been noted in sex-offenders (Ward and Hudson, 2002). There is strong evidence that our burglars and many burglars in previous studies (e.g. Nee and Taylor, 2000; Wright and Decker, 1994; Logie, Wright and Decker, 1992) have heightened recognition ability, and the current study suggests automaticity in burglars, at least in their actual offending behaviour. Further research needs to be done on the earlier parts of the decision-chain with burglars. It may be that the initial decisions are only semi-conscious. If this is the case, it adds a new level of challenge for intervention programmes in teaching offenders to recognise these early decisions (and fostering motivation to change). Naturally, this research should not ultimately be restricted to the offence of burglary.

Crucially, the playing out of over-learned behaviour in an absent-minded way (also known as 'action slips' (Sellen and Norman, 1992)) is more likely occur when an individual is tired, distracted or stressed by cognitive overload or a strong

emotional event (for instance, relationship problems or drug withdrawal). Given the often more chaotic nature of offenders' lives and, therefore, the increased likelihood of these stresses occurring, practitioners should be aware that offenders may be at increased risk of acting out these automatic, over-learned behaviours, if they are to intervene effectively.

Conclusions

The findings reported here are based on interviews with a sample of persistent burglars of various ages, in a custodial setting and involving some innovative methods of questioning. Our conclusions must obviously remain tentative at this stage. Nevertheless, we believe the interviews have produced some reasonably persuasive, preliminary data suggesting that burglars' thought processes during parts of the offence chain may be analogous to those of an expert in any other domain, especially in terms of instantaneous recognition of cues, speed and automaticity. The next stage will be to replicate these findings with other samples of burglars, and with more refined methods of gauging expertise - particularly the automatic and potentially obligatory aspects - perhaps using simulations and ethnographic interviews, and involving novices as a comparison group. The earlier part of the offence-chain in burglary, particularly the initial decision to offend, needs further investigation.

There is certainly room for a clearer and more detailed understanding of the cognitive processes involved in carrying out a whole range of crimes, as we are attempting to do here with burglars. Such research will have important implications for intervention with offenders and may well offer us fresh environmental strategies for the reduction of crime in our communities.

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