CHAPTER 12: CONCLUSIONS

INTRODUCTION

The research conducted for this thesis is one of only a few studies that have examined burglar decision making where subjects controlled the amount of information they needed. The method employed allowed the examination of the effect of various combinations of cues on deliberations and included an examination of interactions with age and experience.

This chapter is in five parts. First there is a precis of some of the main findings of this thesis, and a distillation of the findings into overall conclusions. Second there is a discussion of methodological issues, especially the strengths and weaknesses of the methodology employed for this thesis. Third there is a discourse on the theoretical implications of this thesis, concentrating on the evolution of the rational choice perspective and routine activity theory and criminal career research. Fourth, the practical implications of the findings are discussed. It is argued that prevention initiatives will have the greatest chance of success if they are tailored to counteract the specific attributes of burglars. Finally there is a discussion of directions for future research. Further development of the method to include more variables and interactions could lead to the creation of an accurate predictive model. The main contribution to future research could be the application of the methodology developed in this thesis, since its extension to other crime types would advance the knowledge of the decision making involved.

This thesis shows just how complicated human decision making can be and how difficult it is to isolate the effects of individual cues or combinations of cues. Even a very narrowly defined task such as selecting a residential house to break into, in the daytime, on your own, with no one home is a complicated process to examine. The results reveal how unsatisfactory it is to make generalisations about the effect of any cue because the presence or absence of other cues can moderate its impact. Global
statements made by other studies about the blanket effect of a cue across the complete range of burglars are probably misplaced. In addition, the age and experience of a person can have a modifying influence. It was also found that older and experienced subjects placed more weight on cues related to yield compared to younger and inexperienced subjects, whereas younger and inexperienced subjects placed more weight on cues related to risk.

SUMMARY OF RESULTS

The results chapters have presented a complex array of findings and it is worth beginning this chapter by presenting the main findings and then drawing them together to form a number of general conclusions.

The aim of Study One was to answer two research questions:

1. What are the processes used by burglars to select a target, break in, steal, and distribute the proceeds?
2. What are the crucial decision making cues used to select a target?

The method involved interviewing fifty burglars who were chronic heroin users. Each subject was asked how they started using heroin and how they committed a B&E. Most subjects told a very similar story concerning their path to chronic heroin use. It usually began with marijuana use and experimentation with heroin. Over time the heroin use became less enjoyable and the intake increased. Subjects stated that chronic heroin abuse was an expensive behaviour. Forty-nine of the fifty subjects had spent time in prison or on remand.

The subjects committed their B&Es in close proximity to their own residence, and believed that as their experience level increased they became faster, quieter and their monetary yield from each B&E improved. Without prompting subjects listed a number of cues that they utilised to determine the suitability of a potential target. The strongest unprompted deterrent cues were people in a street, a dog and a high
fence with a locked gate. The weakest unprompted deterrent cues were the quality of locks, common security screens and a high fence with an unlocked gate. The strongest unprompted attractive cues were easy access to the rear of a property, such as a back lane, and a house that was surrounded by trees and bushes.

The aim of Study Two was to answer two research questions:

1. What is the impact of various cues, cue alternatives, cue order and combinations selected on target attractiveness in a controlled situation?
2. Does age or experience interact with the effect of any cues?

The rational choice perspective is a very useful framework for developing a method to test the target selection of burglars. Determining and arranging cues that have attractive and deterrent properties is a method that was accepted by subjects and allowed the production of useful results that increased the knowledge of B&E target selection beyond the current standard of learning on the subject. This work set out to provide answers concerning the selection of a house by a burglar, and the results did provide a greater level of information on target selection. However, the results also raised many questions. Many of the questions raised are covered in the section later in this chapter on methodological weaknesses (p. 309). The methodology utilised and the results achieved reveal that research on target selection in criminology is still just scratching at the surface of the multitude of effects and interactions that can exist. This study is an effort to extend the current methodologies used in the field that will produce results to lift criminology above that of a folk medicine (Felson and Clarke, 1994). The following summary of the main results provide a detailed answer to the first research question.

In Study Two seventeen cue choices were presented to 96 subjects across twenty case studies. Sixteen of the cues had two alternatives, and one had four alternatives. Subjects could select as much information as they needed to reach a final decision. The results for Study Two were presented across five chapters Chapter Seven presented descriptive information, Chapter Eight presented four decision tree
diagrams that originated from the four most common first selections, Chapter Nine
detailed two decision trees for the case studies that received the lowest and highest
mean final ratings, Chapter Ten examined the contribution of cue selections to final
ratings for each case study, while Chapter Eleven detailed overall findings
concerning age and experience and its relationship with number of cues selected and
final ratings for each case study. Chapter Eleven also examined the effect of cue
selection on final rating while incorporating any interaction effects with age and
experience for each case study. The main findings from each of these five chapters
are now presented sequentially.

As detailed in Chapter Seven, on 282 occasions only one cue was selected and a
subject made a final rating based on this one piece of information. The piece of
information was most often cue 3 (alarm) or cue 16 (inside information). Bennett
and Wright's (1984) study also emphasised the strong influence of an alarm. For
example, if cue 16 (inside information) was selected and the alternative revealed was
attractive subjects made their final rating, which was usually very high, then they
moved on to the next case study. In these cases the subjects were generally older and
experienced. Over the twenty case studies subjects only accessed and utilised one
third of the available information. Of the one third that was accessed, two thirds of
the selections comprised six cues – cue 1 (dog), cue 3 (alarm), cue 4 (occupancy -
lights/tv/radio), cue 5 (occupancy - car in driveway), cue 13 (people in the street) and
cue 16 (inside information). First selections were dominated by four cues – cue 1
(dog), cue 3 (alarm), cue 13 (people in the street) and cue 16 (inside information).
These accounted for nearly ninety-two percent of first selections. The mean final
ratings across the twenty case studies varied from 17.5 to 86.98.

When a case study had a low mean final rating fewer cues were selected to reach a
final rating, but the opposite occurred for case studies with high final ratings. The
findings showed that subjects were deterred more quickly if the first one or two cues
selected had deterrent alternatives. The subjects quickly gave a low mean final rating
and moved on to the next case study. However, when the first one or two cues
selected had positive alternatives, even if the next three or four cues selected had deterrent alternatives, the subject was not deterred as easily.

The four decision trees (Figures 16 p. 182; 17 p. 192; 18 p. 201 and 19, p. 206) discussed in Chapter Eight used as their starting point the four cues that were the most common first selections – cue 1 (dog), cue 3 (alarm), cue 13 (people in the street) and cue 16 (inside information). These four decision trees revealed the complexity of the different strategies subjects utilised to assess a target’s vulnerability. The decision trees showed that the alternative received for a cue could cause variation in the selection and the effects of subsequent cues. A good example of the variation in subsequent selections caused by the alternative received is the right-hand side of Figure 16 (p. 182). On 694 occasions cue 16 (inside information) was chosen first. When subjects received the positive alternative (from a reliable source you are told there could be a large amount of cash kept in the house) on only 21 occasions was cue 6 (affluence) chosen next. However, when subjects received the neutral alternative (no inside information) for cue 16 (inside information) cue 6 (affluence) was chosen next on 106 occasions. The alternative received for cue 16 (inside information) affected the cue selected next.

Chapter Nine presented the decision trees (Figure 20, p. 220 and Figure 21, p. 225) for the most attractive and least attractive case studies (case study 17 and case study 8). The decision trees showed that subjects reached different conclusions from the same case study because they selected different cues initially. The selection of different initial cues from the same case study led to great variation in subsequent cue selections and the ratings given. The two decision trees further illustrated the finding that subjects were much harder to deter when the first one or two selections had attractive alternatives even if subsequent selections had deterrent alternatives.

Chapter Ten examined the relationship between the various cue selections and final ratings for each case study. A linear regression was performed for each case study with the seventeen cues as the predictors and the final rating as the dependent variable. The results revealed that deterrent alternatives and attractive alternatives
had equal impact on final ratings. Every cue was significant as a predictor at least twice with most cues significant three to six times. Three cues – cue 3 (alarm), cue 12 (location), and cue 16 (inside information) – were significant ten or more times. Chapter Eleven provided the main findings in respect of the second research question. The first part of the chapter divided the sample into four distinct groups. The older and experienced group gave very different final ratings in comparison to the other three groups, in that they were much harder to deter. Each member of the young and inexperienced group used an average of 188.3 cue selections across the twenty case studies to reach their final decisions. However, each member of the older experienced group used an average of 43.8 cues. As experience increases the range and number of cues needed to reach a decision reduces.

The second part of Chapter Eleven examined the effect of cue selections on the final rating for each case study incorporating the possible interaction effects of age and experience. First, in considering just main effects cue 3 (alarm) was notable. It was significant as a main effect the most often (n=13). A further three cues, – cue 1 (dog), cue 4 (occupancy - lights/tv/radio) and cue 7 (doors/windows) – were significant as main effects in at least half of the case studies. The findings concerning interaction effects are discussed further below.

From these detailed findings four general conclusions can be drawn about burglar decision making. The first is that older and experienced burglars are harder to deter. Secondly, experienced burglars utilise different and less information to reach a decision compared to inexperienced burglars. Thirdly, initial attractive information decreases the deterrent effect of later cues. Finally, burglars use less than the available information to make a decision.

The first general conclusion is that older and experienced burglars are harder to deter, compared to younger and inexperienced burglars. Inexperienced burglars' decision making is more volatile compared to experienced burglars. The deliberations of experienced burglars fluctuate less when negative or positive information is received compared to inexperienced burglars. Deterrent alternatives for cues have less effect.
on experienced burglars as they have probably developed strategies to overcome their impact. This conclusion seems to suggest little can be done to deter older and experienced burglars. To the contrary, older and experienced burglars' final ratings are higher when they have inside information; otherwise they could be deterred similar to younger and less experienced burglars. When an older and experienced burglar has no inside information and cannot deduce level of wealth from other sources they respond to deterrence in a similar way to less experienced and younger burglars, but in a more measured fashion. Thus, a burglary prevention initiative in an area where many of the burglars are older and experienced must emphasise that home owners should take steps to ensure that strangers do not receive reliable inside information.

The second general conclusion is that an experienced burglar will select different and fewer cues than an inexperienced burglar. This means that one house can possibly be viewed as a tough target that will deter an inexperienced burglar, yet an experienced burglar will view this same home as attractive. The cause for this dual interpretation of a house appears to be that a younger and inexperienced burglar selects and places more weight on cues concerning risk, whereas an older and experienced burglar selects and places more weight on cues about reward. This means two types of burglar can come to different conclusions about the same house. By way of example, an older and experienced burglar is drawn to and influenced by attractive cues such as inside information, whereas a younger and inexperienced burglar is drawn to and deterred by negative cues such as the presence of an alarm. Of note is that Brown and Bentley (1993) did allude in their study to a sub-sample that linked perceived value of the take with burglary judgements. However, due to data collection and analysis restrictions the authors did not speculate any further about possible reasons for this sub-grouping. Possibly this sub-sample were older and more experienced. These findings differ to the landmark study of Bennett and Wright (1984) who found no significant difference between subjects by age or experience.

The third general conclusion is that if a burglar receives attractive initial information about a target, even though subsequent information is unattractive, they are harder to
deter than the burglars who receive deterrent information initially. This means that if a house has a prominent deterrent alternative that is easily recognised by a burglar it would have an increased deterrent effect compared to a house where a burglar observes one or two attractive signs first before they come across a deterrent alternative. This is best explained by way of example. Suppose a home has a very good guard dog or alarm system, but it also has obvious cues that no one was home and many points of easy entry. If the alarm was totally concealed so that no-one would know it was there and the dog was kept in a kennel in the rear of the yard, a burglar would see the attractive cues first and would not come across the deterrent cues until later, if at all. This home would have a higher chance of being burgled than if an alarm was prominent and the dog roamed the property freely. In the latter case, the burglar would receive deterrent alternatives for cues initially and there would be a better chance of prevention. To maximise influence cues that have deterrent qualities must be conspicuous. However, it must be noted that the results also showed that if an older and experienced burglar had very good inside information about a home, regardless of the strength of the deterrent cues, they would be so highly motivated by the promise of a high yield that they would make the extra effort in order to break in. This suggests further study into the phenomenon of receiving ‘inside information’.

The fourth general conclusion is that although a cue is referred to often or mentioned frequently it is not necessarily significant in explaining a final decision. In Study One, as with many other studies on break and enter based on interviews, subjects mentioned cues they utilised to select a target. Then each subject was asked about unmentioned cues, to which they replied with a synopsis of the effect it may have. Yet in Study Two when provided with an opportunity to select from a range of information, the subjects made their decisions based on just under one third of the available information. An example was a house surrounded by trees and bushes. This cue was given prominence in Study One, but was not crucial in Study Two. Findings about break and enter based on a comparison of the attributes of burgled and non-burgled homes could reveal differences, but this would not necessarily mean the differences have an equal level of importance. For example, non-burgled homes
could all have a dog, whereas burgled homes may not keep any pets. However, this does not mean that all the burglars were taking the presence of a dog into their considerations and if some did, one can not deduce the influence it could have on a final decision. Another example that illustrates this point is as follows. Cue 1 (dog) was the second most chosen cue so it was important to subjects. However, when the deterrent alternative (good alarm on house) was present for cue 3 (alarm) and the attractive alternative (no dog) was present for cue 1 (dog) the attractive effect of no dog was overridden by the deterrent effect of the presence of an alarm.

The theoretical and practical implications of the results are now discussed. Consideration is also given to possible directions for future research. First, however, the methodological issues raised by this research need to be discussed.

**METHODOLOGICAL ISSUES**

The two studies conducted for this thesis are a pertinent example of the strengths of combining qualitative and quantitative methodologies. Study one provided the foundation for Study Two. In conducting the research for Study Two the method employed shared the strengths and weaknesses common to any simulated case study approach. The strengths involved the objective construction of scenarios and control over research variables. The weaknesses concerned the question of whether the judgements and decisions made and expressed in a simulated computer based break and enter exercise reflect real world behaviour.

The particular strength of this study is that it overcame a number of the weaknesses in many previous studies. One of the major criticisms of numerous previous studies is the unsophisticated nature of the methodology. Much research has simply involved utilising a methodology that produces findings based on subjective perceptions and collective global assessments of many cues. The soundness of findings based on such methods will remain questionable. The method employed in this study has addressed these deficiencies by allowing subjects to choose the
information that is important to them, and the cumulative effect of contrasting alternatives for various cues was accurately measured.

Another shortcoming with previous research is that many cues are often presented *en masse* in a drive-by or through a visual medium and subjects are asked to verbalise their assessment of the vulnerability of such a target. This method does not tease out the individual effects of each cue, and moreover the subject may wish to know other information that they are unable to see. The method in this study allowed one to isolate and examine the effect of specific cues, as well as various combinations of cues. Alternatives for cues were examined in comparison to alternatives for other cues and combinations. A good example of this process of comparison is cue 1 (dog) and cue 3 (alarm). Both cues were the most selected cues. The regression analysis of each cues' contribution to the explanation of variance of final ratings revealed that cue 3 (alarm) was a significant predictor of final rating for eight of ten case studies when the deterrent alternative was present. On the other hand, cue 1 (dog) was only significant in two of ten case studies when the deterrent alternative was present. The deterrent effect of cue 1 (dog) was counteracted by the alternatives for other cues.

Another attribute of the method in Study Two is that it allowed a subject to inspect all of the information important to them and more crucially not inspect information that was not important. A common flaw in methodologies that use simulated case studies is that they provide all the information to a subject, therefore assuming that all information is relevant and required at all times. Discretion has been removed. In addition, the response requested in Study Two was on a 100 point scale, which allowed a subject to indicate his rating of the vulnerability of a target. A subject could alter their response as they selected cues and received information, and so were not restricted to giving one response as they received complex and diverse information.

There are weaknesses or costs associated with case study simulation approaches. One issue is the generalisability of results beyond the testing situation that is, the ecological validity of the findings. The method in this study was not affected by the
problem of a subject distorting their answers to portray themselves in a favourable light to a researcher. The subjects in Study Two were convicted criminals who had just been released from prison and the case studies simulated the commission of an indictable offence. Subjects had no opportunity, and would have nothing to gain, in making any attempt to elevate their standing to the researcher.

Even if the subjects did not manipulate their responses, one can raise questions regarding the degree to which a computer simulated B&E can capture the subtle and fine distinctions and the stress and tension of committing a real B&E. It is possible that the remoteness and precision of the computer simulated case studies increased accuracy at the expense of realism. For example, if a burglar was in the process of assessing and considering a particular house as a target and a dog was barking loudly at the front gate the burglar could not ignore this cue and would be cogniscent of its presence. In the computer simulation for Study Two a case study may have for cue 1 (dog) the deterrent alternative (dog barking loudly). If a subject does not select cue 1 (dog) they would remain unaware of a barking dog’s presence, but in the real world this would probably not happen.

The debate surrounding the use of a methodology that utilises case studies that simulate decision making tasks will not end with this study. The question is not whether an interview based method is superior or inferior to a case study simulation method. Both methods have inherent strengths and weaknesses and each can be more suitable for different research goals. This thesis is an example of how the strengths of each method can be integrated to produce a whole that is greater than the sum of its parts. What this combination methodology and the findings bring to the field is a level of scientific objectivity and rigour that is often absent in much contemporary burglar decision making research.

THEORETICAL IMPLICATIONS

This section discusses displacement, situational crime prevention, criminal careers and gives an example concerning routine activity theory in light of the findings of
this thesis. The method and subsequent findings of this thesis allow a deeper understanding of the person-situation interaction and this can assist in better appreciating phenomena such as displacement.

Situational crime prevention and its underlying theories have as a central component the interaction between person and place. Situational theorists have utilised the developments in psychological research that emphasise that predispositions of personality do not fully explain behaviour as it can be influenced by the situation or context in which it occurs. Although the role of the person is usually acknowledged situational researchers invariably focus on the role of place. This imbalance is epitomised in the words of Newman (1997) who stated that “disposition has been recognised as playing a role, albeit a distant one, in the situational approach to crime” (p. 5). Most situational practitioners have been as guilty as dispositional theorists of dealing with one side of the person-situation interaction thus impeding the potential contribution from a more integrated effort. Crime can be reduced through situational crime prevention without fully understanding the personalities and antecedents of offenders. However, could crime be even further reduced through situational crime prevention if we had a fuller understanding?

The research in this thesis clearly showed that the rational choice perspective provided an acceptable and useful framework for analysing criminal decision making. However, the research also showed that criminal decision making needs to be advanced beyond the rudimentary and global mechanisms of risk versus gain. The overall premise of the rational choice perspective is sound, but this research demonstrates that the interaction between cues and modifying influences such as age and experience can create a process that is far more fluid and subtle than previously envisaged.

By way of example, the older and experienced subjects were attracted initially to the cues that indicated the level of reward and these were given greater weight, whereas the younger and inexperienced subjects were drawn to cues that indicated the level of risk and these were given greater weight. This shows that the rational choice
perspective provides a fundamental starting point, but the complexity of interactions between cues and subjects is far beyond a uniform process where each criminal utilises a generic decision making process. Cues have various levels of impact on the net assessment of a target. As a second example, if an older and experienced burglar receives reliable inside information concerning reward this can counteract some of the strongest cues that convey the level of risk. In addition, each subject can interact differently with various cue combinations depending on their age and experience. Decision making research on B&E needs to incorporate interaction effects where possible. The same situational prevention measures or combinations of measures will not equally deter each burglar.

The role of age and experience in decision making has important implications for the crime displacement debate. Bennett and Wright (1984) mentioned that the typology of a decision maker could have implications for displacement. The findings suggest that experienced burglars are more determined in their pursuit of gain and less put off by obstacles in their way than are inexperienced burglars. Thus, if blocked in one location, it seems that experienced burglars are more likely to seek out a new target. However, if physical effort becomes a problem an older burglar’s drive to seek new targets at another location may wane. On the other hand, younger and inexperienced burglars are more likely to cease their activities as risk increases. In other words, displacement would seem especially problematic for more experienced burglars regardless of age. The suggested relationship between age, experience and the probability of displacement is illustrated in Figure 42 and Figure 43.

Figure 42 depicts the suggested probability of displacement for younger burglars. The figure shows that as experience increases for younger burglars the probability of displacement increases. However, the gradient of the slope is not as steep as that in Figure 43, which depicts the effect of increased experience on older burglars. Young and inexperienced burglars pose the least challenge to possible displacement. For Figure 42 it is not known if the relationship is as uniform and relatively linear as that illustrated, but as experience increases cues that signify risk have decreasing impact on the deliberations of burglars, whereas cues that signify reward increase in