In general, the more complicated the crime and the less vulnerable the target, the greater the amount of planning.

**INTRODUCTION**

- Law enforcement agencies and departments, and related policy-makers, sometimes assume that if they ‘think criminal’ they can uncover criminals’ decision-making schemas and subsequently alter these to make crimes harder, riskier, and less beneficial for the would-be offender.

- However, studies of criminal thinking contain ambiguities and apparent contradictions. Too often one study is unduly influential while other studies are overlooked.

- This systematic review assessed the criminology literature in order to describe how criminals manage their own security and how they make risk judgements surrounding the commissioning of a crime.

- It found that the degree to which risk impacts upon the would-be offender is moderated by individual, situational, and perceptual (both objective and subjective) factors.

- All the studies included here described criminal decision-making of actual crimes or criminals (both broadly defined).

- The majority of the studies depended on incarcerated samples and focused on acquisitive crimes such as burglary, robbery, and theft. Additional details regarding methodology are given below.

- Significant gaps in research were identified. These should be addressed in order to fully understand the implications of criminal decision-making for security-related deterrence measures.
FINDINGS

PLANNING VARIES ACROSS CRIMES AND WITHIN CRIMES

Across 15 studies, the number of ‘planners’ range from 14% to 87% and ‘non-planners’ from 7% to 75%. ‘Planning’ however could be a little or a lot.

Definitions of planning varied. Some considered planning to be keeping watch for a few moments, acquiring a getaway vehicle, or deciding on a burglary target “in a matter of seconds.” Captive-takers planned over the course of at least days, and armed robbers planned for hours to months; being likely to visit the target beforehand, maintain surveillance, and conduct the robbery after getting a tip from a third party.

EXPERIENCE, CRIME COMPLEXITY, AND COHORTS MATTER

It appears that more planning occurs among those with more robbery experience (although one study of thieving found that experience led to less planning), and that planning was greater the more complex the crime. Criminals that perceive of themselves as successful plan more; those that need quick fixes (e.g. drugs, money) or abuse drugs plan less. Many studies found that the same criminal would sometimes plan and sometimes not plan for the same crime.

Committing a crime as a member of a group (where ‘a group’ may be as small as two) is associated with more planning. There was a trend for criminal groups to plan more than lone actors; this included checking the target from the outside and assessing the target’s security, researching how far away the nearest police station was, organising disguises, and making escape plans.

Criminals that perceive of themselves as successful plan more; those that need quick fixes (e.g. drugs, money) or abuse drugs plan less.

In general, the more complicated the crime and the less vulnerable the target, the greater the amount of planning. Bank robbers were significantly more likely to report planning to overcome security measures (32%) than general armed robbers (8%), but ‘not planning’ reports were equally likely across all types of crimes.

A study of 30 carjackers found that those who targeted victims who themselves were involved in crime engaged in greater planning, probably due to the offender presuming that victim resistance would be higher.
PERCEPTIONS OF RISK

What was consistent across studies was a common acceptance of risk. Of course, risk assessment is seldom made on the basis of a single factor. Instead, multiple security measures are assessed, and it is likely that the crystallisation of such risk that determines risk-taking. Sometimes benefits are viewed as outweighing risks; some offenders focus on risk or on reward but not both at the same time.

PRIOR EXPERIENCE

Prior criminal experience appears to have a significant impact on a number of factors, including more elaborate target schemes and ‘offence conduct scripts’, increased confidence, and perceptual and procedural skill, dehumanisation of the victim, and decreased concern with being caught or being sanctioned by family members.

The experience of not being caught for previous crimes leads to downplaying immediate situational risks; not being caught appears to bolster self-efficacy and self-belief.

Risk decisions are based not only on prior experience, but on the experiences of acquaintances or previous co-offenders. Intelligence on target vulnerabilities and opportunities is sourced from third parties for captive takers, burglars, robbers, street robbery, armed robbery, drug dealers and commercial burglars. Whether this information is accepted likely depends on how socially close the would-be offender is to the informant.

CO-OFFENDERS

Co-offenders were associated with increased physical capability, cognitive reassurance, a sense of control and emotional arousal.

COPING WITH FEAR AND WORRY

Feelings of fear, nerves, stress, tension, worries, apprehension, anxiety, physical sickness and uncertainty were reported for street robbers, first-time sex offenders, shoplifters, thieves (including auto theft), burglars, muggers, and armed and unarmed robbers. For some, these feelings occurred only while the crime was committed; for others, they occurred “on the journey to the robbery”.

Some criminals reported having felt excitement and anticipation – and that for some, fear was beneficial because it made them more alert and focused. Self-management techniques include “acting normal” and “trying not to worry.”

One factor that appeared consistent across studies was the use of drugs and alcohol to overcome such fear and nervousness, although stimulants like cocaine, speed, heroin and PCP appeared to increase fear and anxiety.

Sometimes marijuana users reported enhanced vision and hearing, and cocaine users reported increased decisiveness, efficiency and speed.
WHAT DETERRENCE WORKS?

As noted above, criminals often recognise and accept risk, even when the likelihood of apprehension is likely. They decide to appear normal and/or acquire the necessary skills to overcome the security deterrents.

29% of car robbers separately reported that no deterrent measure would put them off; 11% to 18% of shop thieves admitted nothing would deter them; interviews with robbers and burglars indicated that approximately 30% and 75% self-reported taking unnecessary risks, respectively.

Security measures, such as CCTV and alarms, are considered when making assessments of risk, but are not always deterrents.

VIEWS OF THE EFFICACY OF SECURITY MEASURES VARY

Whereas most burglars adhered to the deterrent effect of alarm systems, a small number saw alarms as a sign of the affluence that would make the target more attractive.

When robbers were surveyed regarding 10 security measures, only two (presence of lighting and presence of a police officer at the target) were agreed upon by at least 30% of those surveyed.

When burglars were presented with a set of scenarios and asked to choose amongst 17 cues to assess risk, for most of the scenarios, they reported needing seven or fewer cues to make their judgement. Security measures, such as CCTV and alarms, are considered when making assessments of risk, but are not always deterrents.

Most of the criminals reported that informal/natural surveillance, formal surveillance, CCTVs and alarm systems were significant deterrents. However, there was a great deal of variance within and amongst these factors across studies.

Visibility, occupancy, and informal social control (neighbours, shop workers) were found to be deterrents in first-hand interviews with burglars, car thieves, card fraudsters and shoplifters – for whom, in one study, informal social control by staff and other members of the public discouraged action. A burglary study found that such ‘surveillance’ was more likely to lead to a burglary being abandoned than other target hardening tactics.

CCTV sometimes was viewed as providing police with "superhuman abilities" and as “one of the biggest deterrents anywhere, ‘cause your picture's there instantly. Most of them are in colour ... correct?” Others described CCTV as “crap” or claimed that “most of them are false.” Notably, however, CCTV factored into their risk assessment. Some offenders considered the quality of the

PERCEPTIONS OF BEING CAUGHT

- For some, making a rational decision surrounding risk necessitated getting close to their target, which may have resulted in a high degree of commitment to going through with the crime and thus disregarding or downplaying risk.
- Less than 5% of commercial robbers perceived their chances of being caught in their last robbery as either high or very high, and only 13% of burglars self-reported a sense that there was some chance of being caught during their recent crimes.
- 23% of sex offenders admitted not considering situational risks; in another, 86% of shoplifters reported "no problems" when committing a theft.
CCTV, type of alarm, positioning of security personnel, abilities of police to detect suspicious behaviours, the watchfulness of Neighbourhood Watch schemes, the attentiveness of home owners to correctly use their security measures, and whether bystanders take notice of alarms as part of that assessment.

Some drug dealers and burglars reported preferring not to deal or steal in view of CCTV; some reported being deterred by alarms and others reported that they would commit a burglary even in the presence of an alarm.

Whereas 88% of drug dealers claimed to not deal in front of CCTV cameras, they were 2.5 times as likely to sell drugs on street segments covered by CCTV than not. Similarly, robbers did not realise the presence of CCTV in over 20% of cases for building societies and over 33% in the case of commercial premises.

It is not simply the number of security measures that is assessed, but also how well they are deployed. Shoplifters stated that the way shop guards are deployed (rather than their simple presence) impacts the ‘mood’ of the offender and heightens the perception of risk. But this is variable.

TARGET VULNERABILITY

There is little agreement among criminals as to what makes a particular target vulnerable. Differences were evident as a function of gender, mannerisms, and demeanour. Some street robbers prefer female victims, others prefer males; some prefer older victims, and others prefer young.

MODIFY DECISIONS

Security measures may not always deter, but they may modify. Offenders may make decisions that decrease the volume or severity of crimes they commit. This has been demonstrated with regards to drug dealers trying to be more covert and difficult to spot.

Displacement was significantly more typical of those offenders who did not plan: one study of various robbery types found more sophisticated crimes were less likely to demonstrate displacement. For example, it was true for only 4% of the cash-in-transit van robbers but was 37% for building society robbers.

Criminals may displace their activities onto other targets, e.g. 28% of sex offenders admitted to changing from a specific target to another because of the presence of situational factors.

Crimes may be delayed. Drug dealers were willing to abandon a location when police arrived but later return upon the police’s departure.

CONCLUSIONS

Every crime involves an element of risk and most criminal events occur where security or guardianship is present. How offenders resolve these risks differs between and within crimes. This review described several management strategies that offenders utilise to minimise perceptions of these risks.

Offenders appear to decide to offend even when they are well aware of the risks involved, although there is significant variance in the kind and level of decision-making both between and among crimes. In general, the more complicated the crime and the less vulnerable the target, the greater the amount of planning. Experience and the presence of co-offenders matter; drugs and/or alcohol are common tactics used to decrease risk-related stress. Perceptions of the efficacy of security measures (e.g. CCTV) vary; however, it appears that how offenders weigh up risks and the efficacy of security procedures is crucial.

These considerations of risk may necessitate those tasked with security and crime prevention to highlight the effectiveness and not just the presence of security measures. This may objectively impact upon considerations of risk for some offenders, and subjectively impact upon mood and affect for others.
METHODOLOGY

The goal of this review was to interrogate the existing literature on criminal decision-making in terms of its coverage, common themes, methodological strengths and weaknesses, and implications for other offender types. A configurative review strategy was used. Configurative reviews attempt to understand and interpret the world, in contrast with aggregative reviews, whose aims are to collect empirical data to describe and test predefined concepts. To be included in the review, the study must have reported:

- An explicit goal of understanding criminal decision-making in actual crimes or criminals (both broadly defined).
- Substantive information relating to causal mechanisms activated in the context of deciding whether to commit a crime or not.
- Substantive information about the environmental conditions that impact upon criminal decision-making in the context of risk and security.
- Substantive information regarding the offender that impact upon criminal decision-making in the context of risk and security.

A keyword search (e.g. ‘burglars’, ‘robbers’, ‘murderer’, ‘commission of crime’, ‘target selection’, ‘perceived risk’) initially identified 169 possible studies. However, many were not eligible because they did not meet the criteria described above. Others were excluded because they:

- Were not crime or offender related.
- Focused solely on criminal justice and policing topics and tools.
- Were not focused upon individual decision-making.
- Were not conducted on offender populations.
- Described entirely spontaneous crimes (e.g. intimate partner violence).
- Book reviews and other similar documents also were omitted.

Analyses of the 169 studies identified five domains of interest. These were the methodological approaches undertaken within the studies, the scale and evidence of pre-crime planning, the individual factors that impacted upon decision-making in the context of risk, the environmental and situational factors that increased/decreased perceptions of risk, and the management techniques offenders used in the context of risky situations.

THE DATA

1. Sample sizes ranged from 7 to over 2000. Only 15 studies reported a sample size of 100+ and these were disproportionately studies involving surveys and experimental methods.

   The sampling largely appeared opportunistic in many cases and there was a consistent lack of reporting in terms of how offenders were approached, the inclusion criteria utilised, and the numbers of offenders who fit the criteria but were not approached or who rejected approaches.

2. The most commonly studied crime is burglary, accounting for 44% of the studies. This is followed by robbery (17%) which encompassed both general robbery and more specific types such as armed robbery, cash-in-transit robbery, commercial robbery, robberies involving aggravated assault, and drug robberies.

   The remaining studies focused on shoplifting (11%), auto theft (10%), sex offending (8%), mugging (3%), drug dealing (2%), captive-taking (1%), fraud (1%), and joyriding (1%) (These may not sum to 100% due to rounding errors.)
3. Over two-thirds of the studies involved first-hand interviews with offenders. These were typically conducted within prison or correctional settings, although some engaged with active offenders. 22 studies engaged in some form of experiment, and eight used surveys.

4. Only nine studies attempted to corroborate the responses gleaned from interviews with other data sources (e.g. interviews with family, co-offenders, correctional officers, police records, observational approaches). Thus, there may be an element of both post-hoc rationalisation and/or an inability to remember key situational factors in many first-hand accounts.

5. As noted above, there was a great deal of variance in self-reported planning between crimes, and definitions of planning varied widely.

6. The majority of the studies included in the review depended on incarcerated samples. Therefore, there may be a tendency within the literature to overinflate the results of essentially unsuccessful criminals at the expense of those who manage to evade the law (and presumably take fewer risks). Those few studies that did compare incarcerated with non-incarcerated offender samples found that those incarcerated thought less about risk.

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**RESEARCH GAPS**

1. This review revealed gaps in the extant research that are highly relevant to law enforcement deterrence strategies and tactics.

2. There are aspects of crime that appear to be significantly under-studied in terms of offender decision-making. For this review, no studies were for antisocial behaviour, arson, criminal damage, cyber crime, hate crime, murder, stalking and harassment, and terrorism.

3. Insight from psychology on how emotional and affective states, heuristics, and cognitive biases impact risk perceptions has little, if any, representation within the included criminological studies. Similarly, no studies looked at the impact of personality traits, culture, and gender upon risk and decision-making.

4. The fact that most studies neglected the potentially non-random composition of their sample, may have led to misspecifications and generalisations that may only hold true for a subset of the offender population.

5. Although ethical and practical constraints make incarcerated samples relatively more convenient, studies of incarcerated samples should also strictly account for factors such as co-offenders, substance abuse and criminal experience.

6. The studies reviewed here tend to be on crimes that were committed. Additional insight could be gleaned from accounts of where crimes were considered but abandoned and investigations of what the key threshold for desistance was.
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