A Configurative Synthesis of Evidence for Fear in the Criminal Decision Making Process

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There is now a considerable body of theoretical and empirical research concerned with offender decision-making (see Bernasco, Van Geder and Elffers, 2017). Research has focused on a variety of offender decisions – whether to commit crime or not, where, when, how – as well as documenting those factors reliably found to affect criminal choices. The rational choice perspective has emerged as the dominant model of offender decision-making (Cornish and Clarke, 2008). It holds that crime is a choice, and that individuals are more likely to commit crime if the anticipated rewards exceed the perceived risks and effort.

The first incarnation of the rational choice perspective deemphasized the role (and source) of offender motivation. It assumed a state of readiness on the part of the offender and focused instead on situational contingencies that might make a motivated offender more or less likely to engage in crime. Later elaborations paid greater attention to the relationship between motivation and the immediate environment, most notably the work of Wortley (2008) on situational precipitators – emotional (situational) triggers that serve to initiate or intensify motivation to commit crime that otherwise would not have been considered absent such situational factors. More recent research, informed by developments across the behavioural sciences, has investigated the role of emotion in offender decision-making, asking how emotion affects interpretations of risk, effort and reward, and what this means for the practical task of formulating measures designed to influence the choices of prospective offenders (for e.g. see van Gelder, Elffers, Reynald and Nagin, 2013).

The purpose of this paper is to review what previous research has found on the role of fear and other associated feelings in the criminal decision making process, and the techniques that might plausibly amplify such emotions so as to reduce or disrupt intent. To this aim, we conduct a systematic review of the offender decision-making literature, incorporating a qualitative synthesis of the role of fear in the criminal decision- making

process. Where appropriate we supplement our synthesis with evidence from cognate research areas.

This paper is organised as follows. In the next section, we describe the motivation for and methods used in our systematic review of the offender decision making literature. The results then follow, discussing in turn evidence on the existence of fear in offender decision-making, the presumed source, variation in levels of self-reported fear and/or its effect across offenders, the specific role of fear across different aspects of the crime commission process (before, during, after), and offender fear management processes. We conclude by discussing how this evidence may inform efforts to disrupt crime by denying key information (thus increasing the effort), detecting suspicious behaviour (thus increasing the risk) and deterring would-be criminal activities (by minimizing the reward) (Ekblom & Hirschfield, 2014).

Systematic review of the offender decision-making literature

Systematic reviews are widely practiced throughout the social and medical sciences (see Gough, Oliver and Thomas, 2012). They are generally considered to be a trustworthy source of research evidence, in part because of their adherence to an explicit, transparent and reproducible search strategy that includes both the published and unpublished literature, thereby mitigating the familiar problem of publication bias. Systematic reviews, like primary studies, can take various forms. In criminology, most systematic reviews involve a meta-analysis and are concerned with questions of effectiveness: does the available evidence indicate that a particular intervention is effective at reducing crime? This is typically answered by aggregating the available data (from a sample of studies) to produce a combined estimate of effect.

This paper is not a conventional systematic review. It is not concerned with determining the effectiveness of a given intervention. Instead, it is a *configurative synthesis* (see Gough, Oliver and Thomas, 2012) in which the chief aim is to appraise the relevant literature so as to identify recurrent themes and concepts. In our case, as is described below, this involved scrutinizing a wide range of studies with a view to exploring the presence and relevance of fear and associated negative emotions and their impact on criminal decision-making.

The following sections detail the methods used in our review, including the inclusion criteria, strategy for identifying studies, search terms and data extraction and management processes.

Criteria for considering studies for inclusion

We used the following inclusion criteria:

a) The study must have reported an explicit goal of seeking to chart and/or understand criminal decision-making. Crime, for the purposes of the review, was limited to those acts that involve a certain degree of planning and preparation. Those crimes that are assumed to be largely spontaneous were excluded.[1]

Studies also had to report information on at least one of the items below:

b) The environmental conditions that might affect criminal decisions in the context of risk and security;
c) Factors associated with the individual decision maker that might affect criminal decisions in the context of risk and security.

Finally, the study had to report:

d) some aspect related to emotions in the decision-making process.

We did not discriminate on research design.

Identifying studies: databases and information sources

Studies were identified using the following search methods:

[1] This was a decision of convenience and we recognise that even so-called spontaneous crimes can be thought to have rational elements consistent with the rational choice perspective.

1) A keyword search of four electronic databases including grey literature and dissertation databases[2] up to July 2016 (when this study commenced)
2) Forward and backward citation searches of all eligible studies until April 2017 (when the searching phase of this study concluded).

Full text versions of identified studies were obtained through one of the following means: electronic copies via the university's e-journals service, electronic copies of studies available from elsewhere on the internet, paper copies, electronic/paper copies requested through the inter-library loan system, which sources most materials from the British Library and electronic/paper copies requested from the authors themselves. Should any of the full text versions of the works collated contain insufficient information to determine their eligibility for inclusion according to our coding strategy (described below), where possible the corresponding author was contacted in an attempt to retrieve this information.

More generally, the review considered published and unpublished (grey) studies. No retrospective date restrictions were applied. Studies however had to be available in English since available resources limited our ability to search and translate non-English studies.

Search terms

Table 1 lists the search terms used in this review. These include terms relevant to criminals, decision-making and risk:

Table 1: Search Terms Utilised

CRIMINALS	**DECISION-MAKING**	**RISK**
Offender*	"rational choice"	Deterrence
"law*breaker*"	"offence process"	"perceived risk"
Burglars	"commission of crime"	
Robbers	Distance	
Thieves	Journey	
Thief	Distance	
Stalker*	"location choice"	

[2] PsycINFO, International Bibliography of Social Sciences, Sociological Abstracts and the National Criminal Justice Reference Service

Rapist*	Reconnaissance	
Shoplifter*	“cost-benefit”	
“offender perspective”	“economic model”	
Anti*social*	“crime script*”	
Delinquen*	“target selection”	
Violen*	Mobility	
Murderer*	Rationality	
Killer*		

Data extraction and management f

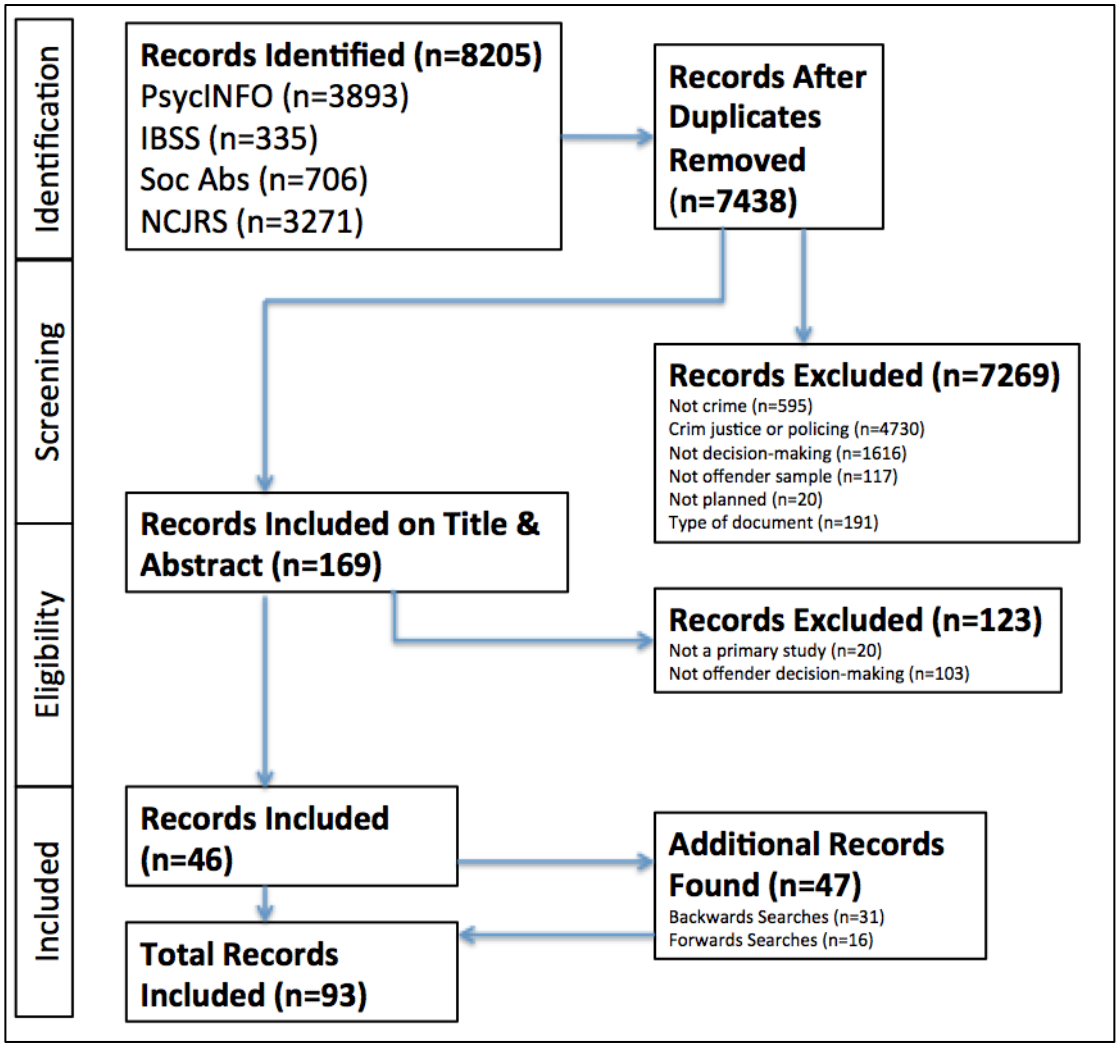
The first level of screening involved the review team examining the title and abstract of those studies returned following our electronic and bibliographic searches. All references were first uploaded to the EPPI 4 reviewer software, a web-based program developed by the Social Science Research Unit at the Institute of Education, UCL, to manage and analyse data generated from systematic reviews.[3] Once uploaded, studies failing to meet inclusion criteria were excluded (with rates of attrition noted – see Figure 1). Excluded studies were flagged as inappropriate in one of several ways. First, many studies were not crime or offender related. Second, many studies were solely focused upon criminal justice and policing topics and tools (e.g. risk assessment). Third, many offender-oriented studies were not focused upon individual decision-making. Fourth, although focused upon criminal decision-making, many studies were omitted because they were hypothetical or theoretical rather than empirical. Fifth, a few studies were omitted on the basis of being entirely spontaneous crimes. Sixth, book reviews and other similar documents were omitted.

Those studies deemed eligible based on title and abstract were then read in their entirety to determine eligibility. Studies were excluded at this stage for either not being a primary study or not centered on offender decision-making. As depicted in Figure 1, 46 studies were eligible for synthesis from this screening. Backwards and forwards citation searches were performed on each of these 46 studies to pursue further candidate studies. This involved reviewing the titles of each study cited within the initially included study and also the subsequent citations that each eligible study accrued. Each title was then

[3] See: http://eppi.ioe.ac.uk/cms/Default.aspx?alias=eppi.ioe.ac.uk/cms up /er4

judged against the above inclusion criteria. For each eligible study found in the backwards and forwards searches, additional backwards and forwards searches were conducted until all leads were exhausted. An additional 47 eligible studies were found through these methods (see Figure 1).

Figure 1: Flow Chart of the searching and screening process



The next stage involved extracting data from the 93 included studies. Entering the information into an Excel spreadsheet, reviewers recorded the following information (if applicable):

1. Study details (title, year, author(s), publication status, study location(s))
2. Crime type(s)
3. Research design (qualitative interviews, process tracing techniques etc.)

4. Description of comparison group, place or period, where applicable
5. Sample (size and any notable features)
6. Statistical test(s) used, where applicable
7. Outcome measure reported and data source
8. Effect sizes (where applicable and/or reported) were initially coded as reported (but see below)
9. Mention of possible mechanisms that impacted decision-making
10. Conclusions of the author(s)

Owing to the nature of the studies identified (many were qualitative) and heterogeneity of the reported results, meta-analysis was deemed inappropriate[4].

For the purposes of the configurative synthesis reported in this paper, a further screening criterion was applied to the 93 included studies after the initial data had been extracted. This specified that a study had to mention some aspect related to emotions negatively impacting upon the offenders' beliefs, attitudes or intentions. 23 studies were found to meet this criterion.

The lead author read and wrote summaries for each of the 23 identified studies. These were then discussed with three research assistants in order to reach a consensus around the most important domains of interest as well as their constituent themes.

Results

The results section is formed of six parts based on dominant themes identified in our eligible studies, namely: evidence of fear in offender decision-making, the presumed sources of fear, variation in levels and/or the effect of fear across offenders, the specific role of fear across aspects of the crime process (before, during, after), the results of fear and offender fear management processes.

[4] Meta-analysis is undertaken when there is comparable quantitative data available, which was not the case in the sample of studies synthesised here.

Evidence of Fear

Numerous studies point to self-reported feelings of fear, nerves, stress, tension, worries, apprehension, anxiety, physical sickness and uncertainty expressed by street robbers (Alarid et al., 2009), first time sex offenders (Beauregard & Bouchard, 2010), shoplifters (Cardone & Hayes, 2012; Carmel-Gilfilen. 2013), thieves (Hochstetler, 2002), auto-thieves (Copes & Tewksbury, 2011; Jacobs & Cherbonneau, 2016; Jacobs & Cherbonneau, 2017; Cherbonneau & Copes, 2006), burglars (Bennett & Wright, 1984; Cromwell, Olson, Avary & Marks, 1991b; Hockey, 2016), card fraudsters (Finch, 2011), armed robbers (Kapardis, 1988; Kroese & Staring, 1994; Gill, 2000) and unarmed robbers (Feeney, 1986; Hochstetler, 2001; Kang & Lee, 2013; Walsh, 1986; Wiersma, 1996; Wright & Decker, 1994).

Copes and Tewksbury (2011) investigated what offenders fear during auto theft. Whilst interviewing 42 offenders, "the most consistent theme throughout…was the common experience of extreme physical sensations, often described as a 'rush' or 'butterflies', that occur during the offending activity. Such experiences can be interpreted as indications that anxiety is a large part of the act of auto theft". Lejeune's (1977:129) study of street muggers likewise reports that "fear is a central concern" pre-crime. 43 of the 45 participants labelled fear as the "most salient feeling experienced before and during" their first mugging. This was true even for those previously socialised into violence via street fights and gang fights.

As an illustration, we now provide a number of first-hand quotes across a wide range of crime types. The quotes illustrate that the function of fear/anxiety acts both to ensure a state of readiness among those contemplating crime and as a compensatory mechanism to alert individuals to the potential risks:

> "The adrenaline gets to pumping. It might seem like you're cool but you not. It's always there, the thought of getting caught. It's always there" (Car Thief cited in Copes & Tewksbury, 2011).

> "To be perfectly honest I was shitting myself" (Bank Robber, cited in Gill, 2001:70).

> "Yeah, just a little nervous…Then I just hit my mind and cleared it out. You know, I take a real deep breath. Now I'm relaxed and before my nerves come back up…hey, I'm going'" (Burglar cited in Bennett & Wright, 1984:106).

> "Fear. Cold blooded fear. It's really amazing about people who rip off other people. You know, here you are the victim and saying: 'Wow, I'm scared to death. They're gonna cut me and do all these things to me'. And meanwhile you don't realize that the dude that's doing the ripping off, man, is just as scared, if not more afraid of you" (Mugger, in Lejeune 1977:129).

Katz (1988) outlines that the reconnaissance of a target is not a cold calculation of costs and benefits but is one salient with subjective feelings impacting upon the decision. Offenders who reported refraining because a particular offence was too risky often referred to a general 'feeling' that the offence was 'not right' rather than to any specific identifiable cue that they were aware of. In most instances the 'feeling' was thought to result from intuition rather than some immediately recognisable guardianship, which was read by the offender as a warning:

> "There are some other signs that unconsciously come to you. It's basically a feeling that you have" (Burglar cited in Bennett & Wright, 1984:96).

> "It all depends on how you feel about it really. If you feel in the mood for doing something, then nothing is going to stop you from doing it. If you get a bit shaky, something has shaken you, then you say, 'Let's go home and have a drink or a smoke or something'" (Burglar cited in Bennett & Wright, 1984).

> "If the feeling ain't right, I won't go in there its like some clock inside, which says you'd better not go in" (Commercial Burglar in Wiersma, 1996: 221).

The feelings alluded to above have been reported across the crime event. For burglars, Cromwell et al. (1991: 318) suggest that fear is less likely in the target selection phase because these offenders are not usually 'at risk' during this phase and fear, stress and other emotions are therefore less aparent. Other studies on burglary however suggest

that this is not the case because the timing between reconnaissance and crime commission is quite small and the risks are high. For example, one burglar noted the anxiety associated with approaching the crime target: "That's when I be making my split decisions; should I or should I not? I'm thinking about it for maybe about five minutes" (Burglar cited in Bennett & Wright, 1984:105-106). The same is also true for auto theft (Jacobs & Cherbonneau, 2014:361; 2016:37-8). Although reconnaissance on cars to steal "provides real-time information about risk…[it]…can make one look suspicious to patrolling officers…Getting 'noticed' by a bystander can increase the likelihood of being officially identified; actual confrontation…with owners or guardians makes the police more likely to be called upon to intervene; and if confrontation evolves into violence, the offender risks being charged with additional crime" (Jacobs & Cherbonneau, 2016:37-38). In one study, over half the sample of armed robbers reported being nervous, scared, and worried about the way to 'hit' their target. This however, was reduced to 20% during the commission of the crime itself (Kapardis, 1988:44). In a separate study of commercial robbers, "virtually every offender" reported some level of nervousness whilst committing a robbery (Kroese & Staring, 1994). Fraudsters similarly reported an elevated level of fear during the crime commission phase. This is particularly the case with cheque forgeries where the need to replicate the signature was seen as "the most dangerous time" and the "moment of tension [at which] it was most likely that something would go wrong" (Fraudsters cited in Finch, 2011).

In sum, fear and related emotions appear to be a standard feature of criminal choices. These emotions are observed across the different aspects of the crime event, from planning and preparation to crime commission. In some cases, these emotions serve to prime an individual to proceed with a criminal act. In others, awareness of these emotions is interpreted as evidence that the attendant risks might be sufficiently high to decide against further action.

Sources of Fear

If we assume that fear and related emotions are a common component of offender decision making, then what are the sources of such emotions? Studies typically attributed feelings of fear to a fear of detection. For example, Cherbonneau and Copes'

(2006) study of 54 auto thieves demonstrates offenders are well aware that such offending is inherently risky. Primarily the risk stems from potential interactions with police during both the pre-crime searching phase and in the post-crime getaway in the stolen vehicle. The study highlights how interactions (even imagined ones) with police in particular triggers apprehensiveness, fear, stress, anxiety, uncertainty and tension. Feelings of fear and anxiety are embellished when offenders perceive police to be skilled "at discerning and deciphering the physiological manifestations of these emotions" (2006:203). As offenders have outlined:

> "You look suspicious by looking spooked". A second offender outlined: "See the scared people, that's the ones who draw attention. They the ones who panic. You got to be calm" (Auto Thief, 2006:203/4).

> "You don't want to go in a place thinking things that will upset you. You got to be normal, man, walk up to the house like it's yours. You got to look around. [If the] police ride by man, wave at 'em…You don't want to do nothing that draws suspicion, being nervous is how you get caught" (Burglar cited in Bennett & Wright, 1984:106).

Other studies suggested that fear may relate to being challenged by conscientious workers or empowered bystanders (see Alarid et al., 2009):

> "I were afraid when I went into the bank, I didn't think, you know I didn't think I'd do it, and then I just went up to the counter and gave her the note, and I just couldn't believe it was happening 'cos she was so calm, just giving me the money, you know? She didn't laugh or think 'oh he ain't serious', because if she'd just challenged me I would have run. She didn't, she just read the note, straight away she just put the money in the bag" (Bank Robber cited in Gill, 2001:64).

> "I was scared, very nervous, I was shaking. That is why he set the alarm off, he could see that" (Bank Robber, cited in Gill, 2001:71).

Several studies of shop theft note the important role of *perceptions* of informal surveillance to embellish a sense of fear. It is argued that the fear of being watched can produce as big a deterrent effect as actual surveillance because it exacerbates the natural feelings of fear that accompany crime commission.

> "If somebody's watching…I'll go over and buy my popcorn or whatever and leave" (Cardone & Hayes, 1999:46)

> "I'd be kind of nervous about [large clothing retail chains]. There's just something about them. I've taken a couple shirts from, I think it was [a large clothing retailer], and I didn't get caught. But I don't go now. I was just really uncomfortable about the whole thing" (IBID).

A recent example of the preventive gains resulting from offenders 'feeling' as if they are being watched is provided by Nettle et al.'s (2012) study of the 'watching eyes effect'. Nettle et al. (2012: 2) write that, 'the rationale for the [watching eyes] effect is that being observed committing an act is likely to lead to social repercussions, either positive or negative, and thus it makes sense that when observed, people tailor their acts so as to be more socially desirable. The watching eyes in the studies are always just images, and thus cannot in fact observe anything. The effect occurs nonetheless, since humans have fast, automatic psychological mechanisms which have evolved to respond to all eye-like stimuli'. Nettle and colleagues (2012) go on to demonstrate that anti-cycle theft signage containing a pair of human eyes and the message 'cycle thieves, we are watching you', produced a 62% reduction in reported cycle thefts at a university campus (compared to the rest of the campus) in the one year following intervention.

For some crime types, a very real fear is that co-conspirators are in fact working for the police (Jacques, 2010). This also has clear preventive implications surrounding the need to create uncertainty in the minds of offenders surrounding who can be trusted.

Finally, Walsh (1986:48) argues that when criminals engage in 'rational' planning, it imposes a "greater strain" than when relying on impulsivity and hunch. If rational planning is utilised, and the offence fails – "the result is to be instantly confronted with one's own inadequacy." If it fails after spontaneous decisions, the failure "can be

explained by saying that of this occasion he was not really trying". The commercial burglars studied by Walsh (1986) self-reported rational planning restricted them because a natural by-product was "much more fear and anxiety".

Variance between offenders: the role of experience

The capacity to feel and cope with fear is, like most human emotions, likely to vary by individuals, consequent on their genetic endowment and developmental experiences. Individual differences are likewise expected among offender populations, with certain individuals more sensitive to feelings of fear than others. A dominant theme in the offender decision-making literature is the effect of experience on the intensity of and approaches for dealing with fear. For example, testimony in Beauregard & Bouchard's (2007) study of sex offending indicates that lack of experience may be associated with heightened levels of fear: "The first rape I was nervous and I panicked so I left evidence everywhere." An armed robber largely agrees: "It's like a buzz. The adrenaline flow is unbelievable. You do shit yourself. The first one is the worst. It don't get any better, you just get used to it" (cited in Gill, 2001: 70). In the absence of experience, fear may stem from a feeling of the unknown, in particular the attendant risks and potential rewards. As one car thief outlines: "I remember that feeling of excitement. Like a big ole rush, but at the same time I had that fear of what could happen" (cited in Copes & Tewksbury, 2011: 66).

Although these are obviously isolated statements within wider studies, experimental research provides supporting evidence. Carroll and Weaver (1986) conducted an experiment that compared the verbal recall of experienced and novice shoplifters as they walked through a real-life store. Participants were encouraged to 'think aloud' about the various risks and potential facilitators they observed when contemplating shop theft. These verbal utterances were tape-recorded. Experts' verbal statements differed substantially from novices. The latter dedicated 39% of their statements to the chances of being observed or being caught. Experts only dedicated 16% of their statements to these perceptions. Novices also more regularly expressed negative feelings (10%) than experts (2%) (1986).

Clare (2011) largely replicated this finding via structured interviews with 53 expert burglars and 53 novice burglars. Novices reported higher levels of fear of apprehension during their first and most recent burglaries. Feeney's (1986:65) study of 113 robbers indicates "most of the first-time robbers indicated that they felt fear and apprehension as they approached their robberies". As experience developed however, their fortitude for crime was likely to harden, and tentativeness and fear reduced. Experienced offenders also "debate less in mental conversations with themselves and in communication with others in latter crimes in a series" (Hochstetler, 2002:64). Thus, the first crimes in a series are "significant turning points in criminal trajectories" (Hochstetler, 2002:64). Indeed, Cherbonneau and Copes (2006) similarly highlight that criminal success breeds criminal self-confidence which in turn makes both fear management and the ability to read the adversary's non-verbal behaviour an easier task. Kroese and Staring (1994) argue that it is not that experienced offenders do not feel nerves, but it is that they have learnt to deal with them substantially better.

Lejeune's (1977:130) study of mugging demonstrates that the more muggings conducted by the offender leads to a normalization of behaviour and minimization of fears:

> "You scared the first time. But the second time you feel better. The third time you even feel better" (Mugger, in Lejeune 1977:131).
>
> "After the first few times I wasn't scared any more" (Mugger, in Lejeune 1977:131).
>
> "I was scared. The first couple of times you felt you would get caught. But then you got used to it" (Mugger, in Lejeune 1977:131).

Results of Fear

All behaviour can be thought of as an interaction between the person and the situation. From this perspective, crime can likewise be thought of as the result of internal dispositions in combination with situational contingencies that may promote or constrain certain behaviours. A crucial corollary to the notion of person-situation interactions is that different people might construe the same situation differently. In this

respect, it is interesting to consider what the literature on offender decision making has to say about the ways in which fear might affect offender perceptions and subsequent behaviours. First, we find consistent evidence suggesting that subjective internal feelings impact the decision to offend or not. In other words, fear may give rise to a deterrent effect:

> "You just walk in there and if there is the chance, you take it. Sometimes you are not in the mood so you don't want to know. *Sometimes something is telling you not to do it*" (cited in Butlet, 1994).

> "I just said it wasn't meant for me to do [a burglary] today…that's when you get caught" (Burglar cited in Bennett & Wright, 1984:117).

> "I got home and count my blessing…You got to get over that spooked feeling…If I had…went on I would've been caught because I didn't pay attention to my first mind" (Burglar cited in Bennett & Wright, 1984:117).

> "I be shaking' when I'm [doing a burglary] 'cause, you know I have a feelin' that I'll get caught. But I'm trying' not to think about that and have faith in what I'm doing" (Burglar cited in cited in Bennett & Wright, 1984:128).

Second, they may also increase opportunities for detection. As mentioned previously, one interaction noted in Beauregard & Bouchard's (2007) study of sex offending indicates that fear and panic led to offending mistakes: "The first rape I was nervous and I panicked so I left evidence everywhere." The fear of detection may lead to a behavioural change which itself increases the chances of detection in the eyes of the offender: "[The risk of being apprehended] crosses my mind, but then I just kind of block it out. You start thinking about that and you start getting paranoid and start getting clumsy and stupid" (Burglar cited in Bennett & Wright, 1984)

However, there is also some evidence to suggest that these psychological states may actually benefit offending behaviour in particular circumstances. Jacobs and Cherbonneau (2016:36) outline in their study of auto theft:

> "Fear energizes conduct to minimize risk and thereby facilitate offending. In essence, the offenders used fear as a resource. They drew from it to choose the time and place for offending, to prequalify settings for risk, to commit offenses rapidly and stealthily, to enlist co-offenders, and to develop contingency plans to head off potential trouble. Contrary to prior conceptualization, the 'present-orientation' cultivated by fear appeared to make offenders more attuned to sanction threats, not less. This sensitivity encouraged a degree of focus that minimized risk, enhanced rationality, and emboldened offending" (2016:36).

Fear Management

Jacobs and Cherbonneau's (2017) study of nerve management and crime accomplishment is one of the few that positions these concerns at the centre of its analysis. They consider nerve management as "an intervening exercise in the threat perception process that moderates the fear-offending relationship through its effect on nervousness" (Jacobs and Cherbonneau, 2017: 618). Management processes encompass both cognitive (self-medication, shunting and fatalism) and presentational approaches (smoothness and lens widening). Whilst cognitive approaches attempted to downplay fear and regulate the "thinking patterns that give rise to nervousness" (Jacobs and Cherbonneau, 2017: 8), presentational approaches attempted to convey normalcy and "minimize the cues that might otherwise cause offenders to be nervous" of being noticed (Jacobs and Cherbonneau, 2017: 7). The former deals with inner psychology, the latter outward appearance.

The research evidence further suggests that offenders consciously focus on how to reduce immediate risks via projecting a self-image of normality. Cherbonneau and Copes' (2006) study of auto theft outlines how providing an "illusion of normalcy" is a large focus of the offender throughout the whole crime script. Offenders incorporate such measures to "build normalcy into self-presentations so that the brief attention of 'fleeting looks' from authorities do not escalate into 'studied looks'" (2006:203). These 'normalcy illusions' are a "laborious task" and "fraught with both interactional and emotional challenges" according to the researchers (2006:203). This is because offenders must not only hide their genuine intentions but also hide the fact they are hiding their genuine intentions. This has been found in burglary studies also. Hockey's

(2016) burglars repeatedly refer to the need to be “normal” (p2), “look unsuspicious” (p3) thus suggesting they expect to be seen by others at some point (p7). Katz (1988:63) refers to this as the “second layer of work – the work of appearing not to work at practicing normal appearances”.

Alarid et al. (2009:8) demonstrate how many street-robbers attempt to remove or reduce fears by actively seeking co-offenders. Thus, co-offenders provide a “reassuring presence”, not just in terms of increased physical capital but also psychological resources that aid the depersonalization of the victim, increase confidence that the goal will be accomplished and ease “tension” and “uncertainty” at critical moments of the crime’s commission. Hochstetler’s (2001:749) interviews with robbery and burglary groups illustrate that influential group members not only inflate optimistic talk pre-crime but also decide to omit discussions centred on risk in order to ease the fear of others. Group dynamics and influence are perhaps best illustrated in the following quote:

> “My head was whirling - I gripped the steering wheel and clenched my teeth. I tried to see the faces of Red and Fred…I could sense that they too were not so nonchalant as they would have liked me to believe…It was the ancient herd-instinct that buoyed us up’ forced us to continue though we separately did not wish to” (Robber cited Bennett & Wright, 1984:159).

Some offenders may also self-medicate to alleviate such fears. This is perhaps surprising considering that alcohol and drugs may increase the chances of making costly errors. Yet, the finding has been reported across a wide range of crimes. For example, 19.2% of burglars reported using alcohol to minimize fears and to “fortify themselves” pre-crime (Kang & Lee, 2013:24). Over half of the burglars in the Cromwell, Olsen and Avary (1991a: 315; 1991b: 60) studies (n=30) referred to consuming alcohol or marijuana in order to “be steady”, “reduce the paranoia” or to “keep up my nerve” because of the high level of fear and anxiety pre-break in. Jacobs and Cherbonneau’s (2017) participants reported preferences for marijuana and alcohol to alleviate fear. One commercial burglar referred to the use of other substances: "It is less risky when you take a rophypnol-pill; you're less scared, because when you're scared you take more risks" (Wiersma, 1996: 223). Other studies reported drugs such

as cocaine, speed, heroin and PCP often unintentionally exacerbated the fears the offenders were attempting to minimize (Jacobs and Cherbonneau, 2017). "Many" confessed that in the absence of drugs or alcohol, the necessary courage would not have been apparent to commit the crime (Cronwell et al., 1991:316). Others stated:

> "I'm scared to death to go in a house. If I didn't smoke a joint or have a few drinks I couldn't do it. If you get inside and you're not 'cool', I mean if you're not aware of what's going on around you, you're gonna get caught" (1991b:60).

> "I'm so scared that I can't think straight without some 'junk' or at least some 'weed'. Once I've got straight, then I'm OK. I'm not afraid and I can think good enough to get the job done and get away safe (1991b:61).

> "[I]f I went [to do a burglary] straight, I wouldn't have the balls to do it" (Burglar, cited in 105).

Other offenders are known to return to previous crime sites in the interests of familiarity (Hochstetler, 2002), operating within their cognitive 'awareness space' (Brantingham and Brantingham, 1993). At such sites, it is assumed that offenders will be in possession of greater knowledge about the attendant risks and rewards, thereby reducing any feelings of anxiety that may arise if scoping out a new unfamiliar area. This pattern of offending accounts for the high levels of repeat and near repeat victimization which have been documented across several units of analysis (people, products, places, properties) and for various crime types (Grove *et al.*, 2012; Pease, 1998; Bowers & Johnson, 2004; Townsley *et al.*, 2000). It is referred to as the *boost account*. Similarly, offender preferences to operate in areas they are familiar with, mainly as a result of routine everyday activities, is a recurrent explanation for why a) most crime trips are relatively short and tend to cluster in and around nodes that offenders are familiar with (such as home) (Townsley and Sidebottom, 2010) and b) spatial displacement is the exception rather than the norm (Guerette and Bowers, 2009) – offenders are disinclined to move to areas that they hitherto have now explored.

Discussion

This paper set out to explore what is already known on the role of fear and other emotions in the decision-making process of offenders. The findings from this paper help us to draw five broad conclusions. Most importantly from this paper we can say that, decision-making was made under emotional pressure. The task of criminal decision-making appears to be laden with negatively expressed thoughts and emotions. Fear appears to be ubiquitous in offender decision-making. This is true across the stages of a crime (pre-planning, execution, getaway). It is also true across a wide range of crimes. Fear functions to ensure a state of readiness among those contemplating crime and as a compensatory mechanism to alert individuals to the potential risks. Interventions that aim to increase such fear during situational decision-making should therefore be beneficial.

Second, the sources of fear are multiple. They include objectives features such as fear of detection by police/security, fear of detection by conscientious bystanders, fear of the unknown, fear of co-conspirators being deceptive and fear of interaction with others. Fear of the 'unknown' is paramount. This source of fear includes subjective features of the environment that the would-be offender cannot formalize but subjectively 'feels'. The fact that decision-making at the scene is undertaken in such an emotionally intense state however, means we should not expect offenders to be able to clearly identify each of the security features present. Targeted messaging could facilitate this and engender an even greater emotional toll. Such feelings can be multiplied if the would-be offender believes the ability of security to detect suspicious behaviour is high. Interventions that therefore highlight, embellish and evidence the ability of security, staff and/or bystanders to detect suspicious behaviour should have a positive net benefit. As criminals are assessing a scene for security weaknesses and opportunities, they may be just as likely to witness such communications if properly displayed. This may help 'nudge' the would-be offender into objectively bringing these factors into their risk/reward calculation. Emotional pressure is therefore malleable and could increase or decrease depending upon the offender's experience and perceptions at the site. The deterrence literature is heavily influenced by the effect that offender risk perception has on committing crime (Apel, 2013; Jacobs, 2010; Pogarsky, 2002). This field often looks at how transmission of information regarding legal sanctions and

detection capabilities can discourage individuals from committing offences (Apel, 2013; Jacobs, 2010; Pogarsky, 2002).

Interventions that also minimize the volume of available information for offenders should also therefore increase uncertainty and either lead to full disruption or the offenders taking ever greater risks to minimise their uncertainty and in turn, maximising the chances of detection. Denying what they need can also mean creating uncertainty and unpredictability about security arrangements at a site. For example, unpredictable timing, type and location of security patrols makes it difficult to determine a pattern of activity that they can exploit with any confidence.

The denial of information may lead to ambiguity. Prior behaviour and decision-making literature have defined ambiguity as instances where vital information related to a task is missing (Frisch & Baron, 1988). Decision-makers are often found to avoid situations of ambiguity (Ellsberg, 1961) and may exclude ambiguous information from their decision-making process (van Dijk & Zeelenberg, 2003). More recently, Wakeman (2015) demonstrated that when individuals experience ambiguity during their decision-making process, they attempt to resolve the issue by seeking clarity. Ambiguity may affect risky decision-making by imposing fear that the adversary has an advantage over oneself (Frisch & Baron). Thus, individuals may be averse to completing a risky decision-making task if they perceive that their opponent holds advantageous information that will benefit the opponent's decision-making (Frisch & Baron). In the context of this paper, the denial of information may cause ambiguity and therefore, fear, in the offender. Increasing ambiguity and signalling the advantageous position of security services may deter an offender from completing their risky decision-making, thus deter them from completing a criminal act.

Detection and the promotion of integrated, effective capabilities, such as vigilant and engaged security officers with timely and appropriate response, can be particularly powerful. This is because criminals operate with a different mind-set to the normal site user. First, they have guilty knowledge – they know they are at the site for malicious reasons. Second, they know that their need for specific information means they may be behaving in a way that is out of the norm making them self-conscious and potentially susceptible to detection. As such, criminals have a natural underlying anxiety or paranoia (e.g. feelings) about being detected which can alter their perception (e.g. thoughts) and behaviour. The resulting anxiety and concern can also produce behaviours that make individuals easier to detect. An experimental study of behavioural cues in "suspects" versus "non-suspects" indicated that those who had a "suspicious" intent behaved significantly different from those who did not (Jian, Matsuka & Nickerson, 2006). Indeed, Jian and colleague noted that suspects engaged in behaviours (such as moving away from a target before returning back) to hide their deceptive intention. Studies looking at the behavioural cues in risky situations, especially in a criminal context, are needed to further understand how suspicious behaviour can be detected. There is especially a need for experimental designs to test the effect of anxiety, fear, ambiguity, and risk on behavioural patterns. Such studies can inform security services, and perhaps guide detection.

Third, fear by itself is insufficient to prevent a crime in some occasions. Whilst fear is ubiquitous, some offenders manage to regulate it via a number of routes. These include co-offender dynamics, substance abuse and experience. The mechanism through which these routes regulate fear differs. Co-offender dynamics distract from the fear and provides both reassurance and comparative prototypes to anchor the would-be offender's sense of risk against. Communications that highlight the impact of confidential informants and human sources may therefore increase uncertainty within such co-offender groups. Substance abuse dampens fear and thereby aids cognitive management of the situation. Site managers should therefore not easily dismiss strange behaviour as solely being down to substance abuse. There may be an intervening variable (criminal activity) that created both the need for substance abuse and the expression of strange behaviour. Experience regulates fear and allows for presentational management of the situation. Interventions may therefore seek to keep

the offender guessing by regularly shifting security practice to create a fear of the unknown.

Fourth, the fact that fear is ubiquitous may improve the likelihood of detection. Fear may lead to suspicious behaviours, consciously "acting normally" which itself may appear suspicious, and lead to poor decision-making. What suspicious and deceptive behaviours objectively looks like requires a great deal of further research. Studies in this field would benefit from using a range of research methods, in order to expand on the knowledge of suspicious behaviour. As discussed above, experimental studies test the theoretical aspects discussed here (and elsewhere). Based on the findings in this review, it is vital that studies test the effect of fear depending on crime type and situation. In-depth interviews with offenders, where detailed description of a criminal act is given, has the potential to provide a fuller description of suspicious and deceptive behaviour. Further, experimental studies can be applied to test how different security intervention may have an effect on fear, and other emotions, which may cause changes in behaviour. Drawing upon the literature discussed in this review, it would be especially appropriate to test the effect of security interventions on fear over time. Experienced offenders learn to manage their fear, therefore the use of a range of different security interventions may hinder successful fear management.

Finally, fear does lead to deterrence in some offenders on some occasions. Of course, deterrence lies at the heart of many efforts to prevent violent and antisocial behaviour. Deterrence is identified as a dominant *mechanism* through which various policies, programmes, and practices implemented in the name of crime prevention are assumed to work. Deterrence is also generally understood through the lens of rational choice, the model of offender decision-making adopted herein. Rational choice is invoked in discussions of deterrence in two main ways: general deterrence at a macro level via the apparatus of the criminal justice system and the imposition of formal sanctions, and specific deterrence at the micro level through the management and manipulation of the immediate environment in ways that influence the decision-making of prospective offenders (Wortley and Sidebottom, 2017). This paper is concerned exclusively with deterrence as it applies to the micro-level, namely the policies, programmes, and practices implemented in the interests of preventing crime. It should also be remembered the studies cited above all focus upon individuals that have actualised their

crimes. The numbers of individuals deterred by fear alone are unquantifiable simply because they are not captured in such analyses originally. We need to better understand though, the conditions in which preventive measures are more or less likely to give rise to sufficient levels of fear which in turn promote abstinence from crime commission.

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