# Supporting Witness Recall and Increasing Witness Cooperation Using Self-Generated Cues and Social Influence

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A thesis submitted for the degree of Doctor of Philosophy at Goldsmiths, University of London in December 2018

## Statement of Originality

I confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Rebecca Louise Wheeler

## Acknowledgements

## Abstract

*The programme of research that follows addresses two key challenges faced by officers on the frontline of policing: (i) the elicitation of full, detailed, reliable accounts from witnesses, and (ii) increasing the cooperation of reluctant witnesses. The ultimate aim of the research that follows is to identify techniques which can be utilised systematically in the field to equip police officers with evidence-based, simple, and effective interview techniques appropriate for a given situation. In addressing the first of these challenges I draw on key principles of memory (spreading activation, encoding-retrieval specificity, and cue distinctiveness) and propose three distinct self-generated cue mnemonics (a keyword grid, event-line, and concept map). An empirical test of these mnemonics suggests that overall use of self-generated cue mnemonics can increase the amount of correct information reported in a free-recall statement without a cost to accuracy when compared to other-generated cues. As such, self-generated cue mnemonics are an effective and easily implemented means of facilitating witness recall.*

*In addressing the second of these challenges I present the findings of a detailed survey of experienced investigating officers. This addressed (i) practitioner perceptions of both the frequency and common features of encounters with reluctant witnesses, and (ii) effective practice techniques for eliciting information or evidence and building rapport with cooperative and reluctant witnesses. Findings suggest that relationship-based techniques might be particularly effective with reluctant witnesses. On the basis of this I argue that social influence techniques represent a viable means of increasing cooperation and disclosure from reluctant witnesses. A systematic review of compliance literature was conducted with a particular focus on techniques that may increase compliance in an investigative context (i.e. a large request requiring ongoing compliance and with a cost far exceeding a potential benefit). The findings of this review suggest that sequential requests (foot-in-the-door and door-in-the-face requests) may be of practical value in obtaining information from reluctant witnesses. Following this a series of empirical studies assess the effectiveness of these techniques in increasing cooperation of reluctant witnesses in both online and face-to-face contexts. Overall these studies suggest that sequential requests can increase compliance with requests for information. Furthermore, the novel paradigms proposed in Studies 3 and 4 represent a considerable advance in enabling research on reluctant witnesses.*

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[1] Please note that final publications, supporting materials and all appendices associated with this thesis can be viewed on the Open Science Framework using the following link:
https://osf.io/bnjum/?view_only=8aca61a60ed5467cbfbf9c57ca3fee8d

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**Publications Arising from Thesis**

Wheeler, R. L., & Gabbert, F. (2017). Using Self-Generated Cues to Facilitate Recall: A
Narrative Review. *Frontiers in Psychology,* 8:1830.
https://doi.org/10.3389/fpsyg.2017.01830

Wheeler-Mundy, R. L., Gabbert, F., Hope, L., & Valentine, T.  Evaluating a Self-
Generated Cue Mnemonic to Enhance Eyewitness Retrieval. *Manuscript in
Preparation*.

## A Note on the Use of Statistics

Within Chapters 4 and 9 some slightly less commonly used statistics are employed. Calculations, interpretations, and references for these can be seen below.

### Effect size

For the Kruskal-Wallis *H* test the effect size was calculated as estimated epsilon-squared ($\varepsilon^2$) using the formula highlighted by Tomczak and Tomczak (2014):

$$\varepsilon^2 = \frac{H}{(n^2 - 1) / (n + 1)}$$

Epsilon-squared is the most commonly used effect size for the Kruskal-Wallis *H* test and should be interpreted as small (0.01 - < 0.08), medium (0.08 - < 0.26), or large ($\geq$ 0.26; Mangiafico, n.d).

For Mann Whitney *U* post-hoc tests the effect size was calculated as *r* using the following formula:

$$r = \frac{Z}{\sqrt{n}}$$

This should be interpreted according to Cohen's classification, where small is 0.1, medium is 0.3, and large is 0.5 or above (Fritz, Morris, & Richler, 2012).

### Confidence intervals around the effect size

Confidence intervals around Cohen's *d* were calculated using ESCI for meta-analysis (Cummings & Calin-Jageman, 2016). Confidence intervals around partial eta-squared were calculated using a NonCF script developed by Wuensch (n.d. See also Lakens, 2014).

**Chapter 1: General Introduction**

The investigation of crime is widely considered to be a primary function of policing (Association of Chief Police Officers [ACPO] & National Policing Improvement Agency [NPIA], 2009) and eliciting information from witnesses and victims is a key aspect of an officer's role (Dando, Wilcock, & Milne, 2008; Geiselman, Fisher, MacKinnon, & Holland, 1986). The Cognitive Interview is widely recognised as the gold standard for eliciting information from a cooperative witness (Memon, Meissner, & Fraser, 2010; see Chapter 2 for an overview of this approach), and the techniques which form the Cognitive Interview are generally highly rated by practitioners (Brown, Lloyd-Jones, & Robinson, 2008; Kebbell, Milne, & Wagstaff, 1999) and academics (Köhnken, Milne, Memon, & Bull, 1999; Memon et al., 2010) in terms of their usefulness. Despite this, research has suggested that the Cognitive Interview is not always practical for application on the frontline of policing. For example, practitioners have highlighted the demanding nature of both training and implementing the Cognitive Interview, and the lack of flexibility provided by this approach which is not compatible with the current demands of policing (Brown et al., 2008; Kebbell et al., 1999).

As a result, researchers have begun to develop a "toolbox" approach to investigative interviewing by proposing "add-on" techniques to be combined with the Cognitive Interview framework. The ultimate aim of this approach is to identify techniques which can be utilised systematically in the field to equip police officers with evidence-based, simple, and effective interview techniques appropriate for a given situation. This approach has been advocated by Fisher, Milne, and Bull, (2011) who highlight the need for additional components of the Cognitive Interview to facilitate the elicitation of a complete and accurate account of events from varied witness categories in a number of interviewing contexts. Throughout the research presented in this thesis I aim to contribute to this approach, by suggesting theoretically driven techniques which could be considered additions to officers' investigative interviewing toolbox.

This "toolbox" approach to interviewing recognises the variety of contexts frontline officers encounter in the investigation of crime and reflects decades of work to develop practical, evidence-based techniques for the elicitation of complete and accurate accounts in the real-world. The following programme of theoretically-driven

experimental research aims to address two key challenges faced by investigative interviewers: (i) the elicitation of full, detailed, reliable accounts from cooperative witnesses, and (ii) increasing the cooperation of reluctant witnesses. These challenges have been identified in collaboration with practitioners employed at two large UK-based metropolitan police forces and can be seen as representative of difficulties faced by those working on the frontline of policing.

The first of these challenges is that of obtaining a complete and accurate account of events from a cooperative witness. In line with the approach taken by previous research on investigative interviewing (see Chapter 2 for a brief overview), I adopt a theoretically motivated approach to this challenge. Arguably one of the most impactful developments in psychology and law research is the application of memory theory to the retrieval of eyewitness accounts via the Cognitive Interview (Memon et al., 2010). However, as noted above, this approach is not appropriate for all witness encounters or all interviewing contexts (Fisher et al., 2011). I propose that self-generated cues to retrieval offer a novel mnemonic technique suitable for use by frontline investigating officers. **Chapter 3** presents a targeted review of the theoretical and empirical literature on self-generated cues as a means of facilitating recall to address how their effectiveness is supported by underlying memory theory. Within this chapter I offer a definition of a self-generated cue, and in doing so distinguish this from a self-referent cue. I outline empirical support for self-generated cues, as well as giving an overview of three relevant principles of memory (the Associative Network Model of Memory, encoding-retrieval specificity, and cue distinctiveness). I highlight how each of these principles might explain the effectiveness of self-generated cues demonstrated in the empirical literature. **Chapter 4** empirically tests the effectiveness of three novel self-generated cue mnemonic techniques in enhancing eyewitness recall; self-generated cue keywords, a self-generated cue event-line, and a self-generated cue concept map. The effectiveness of these mnemonics is directly compared to use of cues provided by others (other-generated keywords) and to free recall alone (no cues provided or generated). Results suggest that overall use of self-generated cue mnemonics can increase the amount of correct information reported in a free-recall statement without a cost to accuracy. I argue that self-generated cue mnemonics represent a simple and effective means of reliably eliciting free recall accounts from eyewitnesses. I also argue that self-generated cues have the potential to be easily implemented in the field and meet the

demands of frontline policing by providing a low-cost means of maximising witness recall.

Thus far I have explored techniques which can help witnesses to maximise the effectiveness of their recall attempts. The techniques discussed rely strongly on the cooperation of the witness. Within the remaining chapters of this thesis I address the question of whether all witnesses are cooperative, and if not (as could only reasonably be expected to be the case in the most ideal of ideal worlds) how often officers encounter situations involving reluctant witnesses. **Chapter 5** presents a review of existing literature focussing on reluctant witnesses, with a view to outlining what is known about witness reporting behaviours and factors impacting the decision to cooperate with investigations. **Chapters 6 and 7** outline the results of a practitioner survey developed in collaboration with two large metropolitan UK police forces. In particular I discuss (i) the perceived frequency with which reluctant witnesses are encountered, and whether these encounters share any common features, (ii) the approaches taken by officers when encouraging a witness to give information or evidence, including a focus on rapport building and (iii) how these approaches might differ for reluctant witnesses. Analyses highlight some of the key challenges faced by police officers in managing situations involving reluctant witnesses. I speculate about the underlying causes of reluctance and suggest that applied researchers (and applied psychologists in particular) have an important role to play in supporting investigators in maximising the information yield from reluctant witnesses.

It is well established that police investigations are able to progress significantly more quickly where cooperative witnesses are involved. However, as I demonstrate in Chapters 6 and 7, encounters with reluctant witnesses are relatively common in investigations, particularly where the offence involves serious violence. The perceived prevalence of these encounters highlights a need for clear guidance around increasing witness and victim cooperation. The question then arises of how to ethically increase cooperation with requests for information. Social influence has been shown to reliably increase compliance with requests across a variety of cultures (Cialdini, Wosinska, Barrett, Butner, Gornik-Durose, 1999; Petrova, Cialdini, & Sills, 2007) and in a number of different contexts including crisis negotiation (Guthrie, 2004; Giebels & Taylor, 2009), marketing, employment, charitable requests (Cialdini, 2001a; Cialdini, 2001b) and commitment to environmental change (Lokhorst, Werner, Staats, van Dijk, & Gale,

2013). Given the view of the investigative interview as a social influence attempt (Abbe & Brandon, 2013) and the finding that social and communicative elements of the Cognitive Interview are generally well received by officers (Brown et al, 2008; Kebbell et al., 1999; Memon et al., 2010) it is possible that social influence techniques may be used to increase cooperation of reluctant witnesses. The impact of this on investigations would be considerable through speeding up the investigative process and improving outcomes and reducing wastage of time and resources looking for lower-quality non-reluctant witnesses.

In order to address the potential effectiveness of social influence techniques to increase the cooperation of reluctant witnesses, **Chapter 8** presents the findings of a systematic review of the literature into using social influence techniques to increase compliance with large requests. A number of stringent criteria were applied to ensure that the literature included in this review reflected (as far as possible) the nature of police requests for information (i.e. a large request requiring ongoing compliance and with a cost far exceeding a potential benefit). A searchable database of the research included is available on the Open Science Framework (OSF, see Appendix A)[2]. This review contains 40 articles (55 experiments) and argues that overall foot-in-the-door and door-in-the-face techniques may be of some practical value in attempting to obtain information from reluctant witnesses.

Following this, Chapters 9 to 11 empirically test this assertion. **Chapter 9** assesses the effectiveness of sequential request influence techniques in eliciting guilty knowledge in an online information gathering context. Using a 2 (Cooperativeness Instruction: cooperative; reluctant) X 2 (Social Distance: close relationship; distant acquaintance) X 3 (Social Influence Technique: target request only; foot-in-the-door; door-in-the-face) design, I investigate whether social influence techniques can be used effectively to (i) increase compliance with a request for a statement given online, and (ii) whether the completeness of these accounts differs in terms of the amount of guilty knowledge disclosed. Results suggest that foot-in-the-door requests (which present a small initial request prior to the target request) can increase compliance with a request for a statement by approximately 10% compared to a control group and by 20% compared to a door-in-the-face sequential request (an extreme initial request followed

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[2] This can be accessed on the following link:
https://osf.io/bnjum/?view_only=8aca61a60ed5467cbfbf9c57ca3fee8d

by the target request). Furthermore, Chapter 9 establishes a novel online paradigm which can simulate witness reluctance. This represents an important development, allowing applied researchers to begin to develop evidence-based techniques addressing the challenge presented by reluctant witnesses. **Chapter 10** then empirically tests the effectiveness of sequential requests in a face-to-face interview setting. The experiment used an adapted "guilty knowledge" paradigm to assess whether social influence techniques (foot-in-the-door; door-in-the-face) could increase disclosure of guilty knowledge during an interview in comparison to a request for information alone (control condition). Somewhat unexpectedly, a large proportion of participants gave the appearance of cooperating fully, whilst actually completely concealing their guilty knowledge. For this reason, this study was terminated early. As a result, in **Chapter 11** I present the results of two additional online studies which explore the pattern of results shown in Chapter 10. In the general discussion I highlight some of the lessons learned from this data collection phase and make recommendations for future research based upon this experience.

Taken together, the avenues of research presented within this thesis offer two different approaches to achieving the same goal; the elicitation of high-quality accurate information from even reluctant sources. In doing so I offer theoretically-driven solutions to two challenges faced by investigating officers. This is of critical importance in allowing officers to meet operational challenges (particularly that of solving crimes), with limited resources, using easily-trained and effective evidence-based techniques which can be situated within current training and best practice.

**Chapter 2: Introduction to Investigative Interviewing**

*This chapter outlines the background context of the programme of research which follows. I outline the importance of accurate information elicitation and discuss current practice in terms of investigative interviewing in the UK. This section includes some discussion of how the Cognitive Interview is situated within the PEACE model of interviewing, which is generally regarded as best practice within the UK. The latter part of this chapter contrasts the view of PEACE as a highly effective interview framework, with discussion of the impact of austerity – in terms of reductions in training, staffing, and resources – on current police practice. The demands of frontline policing generally (which are exacerbated under the current "do more with less" approach necessitated by the cuts to police budgets) mean that further developments in investigative interviewing are needed. Innovations in investigative interviewing should seek to maximise effectiveness while meeting the demands of frontline policing. The programme of research that follows aims to develop effective and easily implemented interview techniques which facilitate the recall of complete, detailed and accurate accounts from both cooperative and reluctant witnesses. In the discussion that follows I situate these aims in the context of investigative interviewing, both in terms of current practice and existing challenges.*

### 1: The Importance of Accurate Information Elicitation

*"Information and intelligence have always been, and will remain, the most essential components of policing and, indeed all law enforcement work. They are the lifeblood of every enquiry from the simplest of offences to the most complex organised crime or matter of national security."*
(Evans, 2001, pp. vii)

The investigation of crime is considered a core function of policing (Association of Chief Police Officers [ACPO] & National Policing Improvement Agency [NPIA], 2009). The goal of the forensic investigation is to gather enough information about an incident to build a clear picture of what happened, and who was involved. This often involves gathering enough reliable evidence to bring the guilty party to justice via legal proceedings (Gabbert, Hope, Carter, Boon, & Fisher, 2015). Information from victims and witnesses is often vital in aiding police investigators to meet these goals (Dando et al., 2008; Geiselman et al., 1986). Indeed, information from the public has been suggested to be the most important factor within police investigations, with victim and

witness information contributing more to the solving of crimes by police than all other investigative techniques combined (Reiner, 1992, cited in Spencer & Stern, 2001).

Eyewitnesses can provide information which can help investigating officers to establish what, if any, criminal act took place, under what circumstances, and who was involved in this incident (Spencer & Stern, 2001). This information often provides major leads within an investigation, and in doing so directs the course of the investigation (Fisher et al., 2011; Gabbert et al., 2015; Gabbert, Hope, & Fisher, 2009). For example, in the early stages of an investigation information from witnesses may provide a description of the suspect, identify additional lines of enquiry, and suggest other potential sources of information (Dando & Milne, 2009). However, witness reporting of incidents is relatively low overall. It has been suggested that just 12% of offences are brought to the attention of the police through witness reporting (as a comparison point around 54% of reports come from victims; Bottomley & Coleman, 1981, cited in Spencer & Stern, 2001). Despite this, the role of the independent witness is vital to the criminal justice process. It is not uncommon for information from witnesses to be viewed as more significant than that of the victim, who after all may have seen nothing (Spencer & Stern, 2001). Witness evidence is also particularly important on those occasions where a case reaches court. For example, during a trial an independent witness can provide evidence which moves jurors to a decision "beyond reasonable doubt". In doing so the witness can transform a case from being the victim's word against the defendant's to one in which impartial testimony (or at least the appearance of this) is present (Spencer & Stern, 2001). For this reason, eyewitness testimony is often recognised as a key factor contributing to the apprehension and prosecution of offenders (Dando & Milne, 2009).

As is suggested above, eyewitness testimony is a powerful form of evidence. While physical evidence (e.g. DNA or fingerprint evidence) provides an indirect link between a suspect and a victim or crime-scene, the eyewitness claiming to have seen someone commit a crime provides *direct* evidence of guilt (Memon, Vrij, & Bull, 2003). Despite the seemingly more objective nature of physical evidence (although this has recently been called into question; Davis, 2017; Dror, Péron, Hind, & Charlton, 2005), it is eyewitness evidence that is considered most persuasive by jurors and legal professionals alike, with a single eyewitness statement sometimes being enough to secure a conviction (Loftus, 1996).

Given the influence of eyewitness testimony, it is crucial that investigators ensure the accuracy of this evidence. It has been estimated that around 77,000 individuals in the USA are charged with crimes based solely on the evidence of eyewitnesses (Memon et al., 2003). Unfortunately, the information provided by eyewitnesses may not always be as complete as investigating officers would like (Kebbell & Milne, 1998), and may contain errors as memory becomes distorted over time (Gabbert et al., 2009). Errors in eyewitness testimony can have serious consequences. For example, erroneous eyewitness testimony is recognised as the leading cause of known wrongful convictions in both the UK and the USA (Findley, 2002; Huff, Rattner, Sagarin, & MacNamara, 1986; MacFarlane, 2005). Eyewitness evidence is often so persuasive that mistaken eyewitness identifications are the single largest contributor to wrongful convictions, more so than all other contributing factors combined. As of November 2018, the Innocence Project (n.d.) reports 363 DNA-based exonerations, of these 254 convictions were the result of mistaken eyewitness identifications. This figure has increased from 267 total DNA-based exonerations, 200 of which were the result of mistaken identifications in March 2011 (Wells & Loftus, 2013). In addition, even when eyewitnesses are mistaken, they are likely to express certainty in their decisions (Wells & Loftus, 2013; Wells & Olson, 2003).

## 2: The Purpose of Investigative Interviewing

The persuasive power of eyewitness testimony means that it is vital that investigators obtain a full, accurate, and reliable account of events. As a result, the ability to conduct high quality investigative interviews is a crucial skill for any investigator. An appropriate investigative interview is likely to effectively direct an investigation and provide support for the prosecution case. This in turn saves valuable time, money, and resources, and can serve to increase public confidence in the police (ACPO & NPIA, 2009). The National Policing Improvement Agency[3] suggest seven principles of investigative interviewing, which apply to the interviewing of victims, witnesses, and suspects. These are shown within Figure 1 below.

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[3] Please note that the National Policing Improvement Agency closed on the 7th October 2013. Its primary functions were replaced by the College of Policing, the Serious Organised Crime Agency (later replaced by the National Crime Agency), and bodies within the Home Office (NPIA, 2014).

i) The aim of investigative interviewing is to obtain accurate and reliable accounts from victims, witnesses or suspects about matters under police investigation

ii) Investigators must act fairly when questioning victims, witnesses or suspects. People with clear or perceived vulnerabilities should be treated with particular care, and extra safeguards should be put in place.

iii) Investigative interviewing should be approached with an investigative mindset. Accounts obtained from the person who is being interviewed should always be tested against what the interviewer already knows or what can be reasonably established.

iv) Investigators are free to ask a wide range of questions in an interview in order to obtain material which may assist an investigation and provide sufficient evidence or information.

v) Investigators should recognise the positive impact of an early admission in the context of the criminal justice system.

vi) Investigators are not bound to accept the first answer given. Questioning is not unfair merely because it is persistent.

vii) Even when a suspect exercises the right to silence, investigators have a responsibility to put questions to them.

*Figure 1*. Key principles of investigative interviewing. Developed from "*Investigation: Investigative interviewing* [Authorised Professional Practice]" (College of Policing, 2018). Contains information licensed under the Non-Commercial College Licence.

As shown in Figure 1, the seven principles of investigative interviewing outline an approach to interviewing which is full, accurate, and as far as possible free from bias. The account should also be challenged and integrated into the investigation, but these challenges should be made in an ethical manner in line with the interviewee's rights. Principle one sets out the aim of an interview as being to obtain an accurate and reliable account from an interviewee, regardless of the role they may have played in the incidents under investigation (victim, witness, or suspect). In effect, an accurate and reliable account is one which is as complete as possible, with minimal omissions or distortions, which is truthfully given, and able to withstand further scrutiny. This is the case regardless of the role the interviewee is thought to have played in the events in question. As well as ensuring that appropriate measures are put in place to protect the vulnerable, principle two mandates that investigators approach interviews free from prejudice. This ensures that investigators take an open-minded approach within interviews and focus on impartially assessing the accuracy of the account they are

given. Relatedly, principle three sets out that interviews should be undertaken with an investigative mind-set. The purpose of the interview is to establish facts, which can be tested against other information available to the investigator, and as such can direct the course of further enquires. It is this information-gathering approach that separates the investigative interview (whether conducted with witness, victim, or suspect) from the more accusatory interrogation which aims primarily to obtain a confession (Williamson, 1993). Principles four, six and seven relate to questioning. Investigators should use appropriate questions to obtain and challenge accounts, regardless of whether or not the interviewee is forthcoming in their responses. Finally, principle five highlights the benefit of obtaining information early on in the investigative process in terms of focusing both the interview itself and the investigation as a whole.

### 3: Current Practice in Investigative Interviewing

A number of interview techniques have been developed in order to achieve the goals outlined above, most notably the Cognitive Interview (Geiselman et al., 1986). The Cognitive Interview is widely recognised as the gold standard for eliciting information from a cooperative witness, and represents one of the most successful developments in psychology and law research of the last three decades (Memon et al., 2010). Originally developed by Geiselman and colleagues in the 1980s, the Cognitive Interview is theoretically driven, and incorporates several distinct mnemonics designed to facilitate the recall of a complete and accurate account of events. These mnemonics are based on two key principles of memory. Firstly, that a memory trace comprises multiple pieces of related information, and as such that effective retrieval cues are those which contain a large amount of overlap with encoded information. This is known as the encoding-specificity principle of memory (Tulving & Thomson, 1973). In essence the encoding-specificity principle of memory takes as its core the idea that it is only possible to retrieve what has been stored in memory, and that the way this information has been encoded and stored governs the ways in which this information can be retrieved (Tulving & Thomson, 1973). Tulving and Thomson's (1973) findings that (i) differences in encoding conditions can result in differences in recall performance under identical retrieval conditions and (ii) that differences in retrieval conditions can influence the recall of information encoded under identical conditions highlight the role of encoding-specificity. Information in memory may be inaccessible given the cues available at the time of the recall attempt (Brown & Craik, 2000). Investigators should

therefore attempt to maximise encoding and retrieval conditions as far as possible to aid the recall attempt. The second principle which forms the foundation of the Cognitive Interview is the spreading activation nature of memory. Spreading activation models conceptualise long-term memory as a network of associated nodes. Each of these nodes contains a unit of information and its associated concepts (Anderson, 1983a; Collins & Loftus, 1975). The key assumption of this theoretical approach is that it is possible to recall a given item from memory by recalling other information associated with the target. This is made possible through the process of activation spreading through the network (Anderson, 1983b; Crestani, 1997). The associated network nature of memory means that different retrieval cues may facilitate the recall of different items of information (Geiselman et al., 1986). These concepts are discussed in more detail in Chapter 3.

The originally proposed Cognitive Interview contained four mnemonic techniques which are based around the principles of memory outlined above (Geiselman et al., 1984, cited in Geiselman et al., 1986). The first of these aimed to increase the overlap between encoding and retrieval contexts through (i) mental reinstatement of context (wherein the interviewee is guided to reinstate the physical and personal context of the event), and (ii) the report everything instruction (which involves encouraging the witness to report everything they can remember regardless of the completeness or perceived importance of the information). The final two techniques build upon the idea that there are multiple routes available when attempting to recall information through encouraging witnesses to recount events in (iii) a variety of orders, and (iv) from a number of different perspectives. The Cognitive Interview has been steadily adapted over the years, and the present Enhanced Cognitive Interview (originally proposed by Fisher & Geiselman, 1992, cited in Memon et al., 2010) now incorporates approximately seven distinct phases (please note that some sources suggest nine distinct phases; see for example Milne et al., 2004). These stages (illustrated in Figure 2) allow a structured approach to the entirety of the interview, from greeting and building rapport, through to the final summary and closure stages.

| **Phase 1:** Greeting & rapport |
| Greet & personalise the interview. Establish rapport. |

| **Phase 2:** Explain interview aims |
| Focused retrieval & concentrate hard. Report everything. Pauses & no interruptions. Transfer control. |

| **Phase 3:** Free report |
| Context reinstatement & sketch plans. Open-ended questions. |

| **Phase 4:** Questioning |
| Report everything. Interviewee-compatible questioning. Okay to say 'don't know' or 'don't understand'. Activate & probe an image. Open & appropriate closed questions. |

| **Phase 5:** Varied & extensive retrieval |
| Change the temporal order. Change perspectives. Use sketch plans & drawing. Focus on all senses. Introduce investigatively important questions if appropriate. |

| **Phase 6:** Summary |
| Summarise the information obtained thus far. |

| **Phase 7:** Closure |
| Reintroduce neutral topics. Thank the interviewee. Answer any questions the interviewee has. |

*Figure 2*. The stages of the Enhanced Cognitive Interview (developed from Milne et al., 2004 & Centre for Research and Evidence on Security Threats [CREST], 2016).

The effectiveness of the Cognitive Interview is relatively undisputed. The findings of two meta-analyses demonstrated that the Cognitive Interview generally leads to a large, significant increase in correct details when compared to a standard control interview (average Cohen's $d = 0.87$ to $1.20$; Köhnken et al., 1999; Memon et al., 2010). This effect appears to be fairly robust. It is rare that this effect is not reproduced in studies incorporating the Cognitive Interview. Furthermore, the ample

body of research incorporating the Cognitive Interview has not yet resulted in an instance of the Cognitive Interview producing fewer details than a standard control interview (Köhnken et al., 1999). Overall, despite a small significant increase in the amount of incorrect details recalled, the Cognitive Interview has been suggested to significantly improve the recall performance (in terms of amount of correct details recalled) of adults and older adults compared to a control group. Moreover, this benefit remains sizeable regardless of event type (neutral or emotional) or event medium (live or video). In addition, the benefit of the Cognitive Interview on performance persisted even where recall was delayed (Memon et al., 2010).

The evidence base behind the Cognitive Interview is so strong that police forces within England and Wales have incorporated these techniques within their investigative interviewing approach, PEACE (Kebbell et al., 1999). The PEACE framework of investigative interviewing incorporates five distinct stages: **P**lanning and Preparation, **E**ngage and Explain, **A**ccount (Clarification and Challenge), **C**losure, and **E**valuation. This approach is appropriate for use with victims, witnesses, and suspects, and includes both Cognitive Interview and Conversation Management techniques (Clarke & Milne, 2001). At this point it is worth noting that Conversation Management is seen as being of most practical value within suspect interviews (Dando et al., 2008). In the discussion that follows I focus on the inclusion of Cognitive Interview techniques within PEACE, as this is deemed the most appropriate general interview structure for use with a cooperative witness (Fisher et al., 2011). The way in which the Cognitive Interview is situated within the PEACE framework is illustrated in Figure 3 (note the term Cognitive Interview is usually excluded from practitioner training material in a bid to remove the number of labels used; Clarke & Milne, 2001).
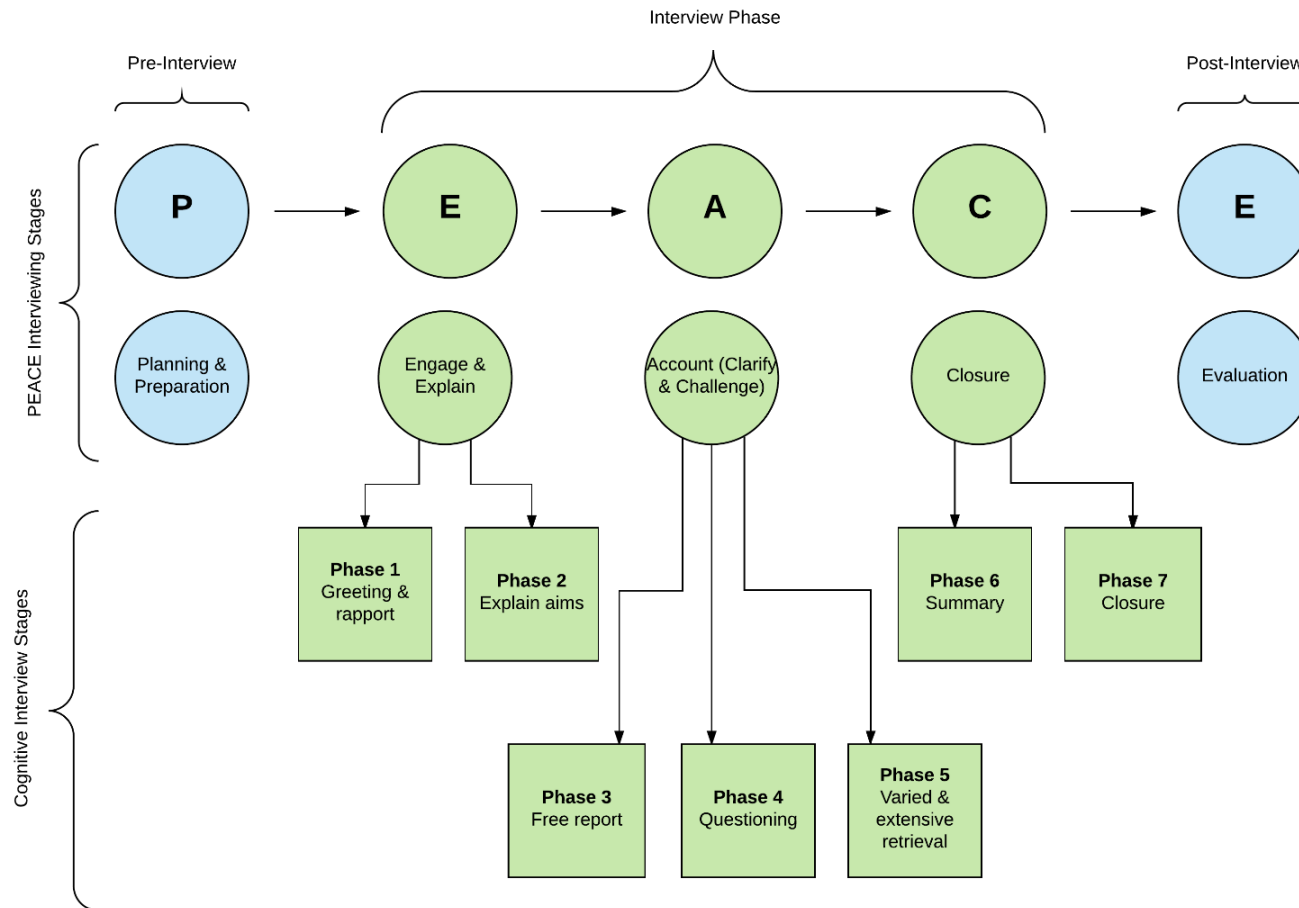
*Figure 3*. The Situating of Cognitive Interview Techniques within the PEACE Framework of Investigative Interviewing.

Research has shown that in practice, police interviewers do not value all stages of the Cognitive Interview equally, and this in turn influences the frequency with which individual techniques are utilised within interviews. For example, Kebbell and colleagues (1999) surveyed 161 police officers (96 trained in use of the Cognitive Interview, and 65 untrained) about both their perceptions of the forensic effectiveness of the individual Cognitive Interview components, and their experiencing of using each of these components within their own interviews. Perhaps unsurprisingly, perceptions of the usefulness of techniques were highly correlated with actual usage. In other words, where officers felt a technique was likely to be effective in eliciting accurate information, they were more likely to incorporate this within their own interviews.

Research has suggested that officers generally rate the social or communication-based phases of the Cognitive Interview as being most useful. For example, establishing rapport, the report everything instruction (see Phase 1 & 2 or Engage and Explain in Figure 3), encouraging concentration, and witness compatible questioning (Phase 3-4 or Account [Clarification and Challenge] in Figure 3) were seen as being particularly useful components. However limited consensus emerged among respondents when it came to the usefulness of the cognitive components of the Cognitive Interview, however Mental Reinstatement of Context was generally seen as the most effective of these techniques (Kebbell et al., 1999). This is a view that has been echoed by other researchers and practitioners (Brown et al., 2008; Memon et al., 2010). Cognitive Interview research frequently incorporates Mental Reinstatement of Context, with a meta-analysis suggesting that 100% of the studies utilising the Cognitive Interview and its variants incorporated Mental Reinstatement of Context instructions (Memon et al., 2010). In contrast to this, reports of actual use of Mental Reinstatement of Context suggests that officers may find this technique (and the Cognitive Interview in general) cognitively demanding, requiring flexibility, and difficult to implement in the field (Brown et al., 2008; Kebbell et al., 1999). Officers also report that they do not have as much time as they would like to conduct interviews, and that as the Cognitive Interview takes longer than a standard interview, they do not have time to fully utilise this within the field (Kebbell et al., 1999). Taken together, the experimental and field-based research outlined above demonstrates that throughout its 30-year history the Cognitive Interview has repeatedly been viewed as an effective tool for facilitating complete and accurate recall of events, yet one that is not always ideally suited to the conditions faced

by interviewing officers. For example, Fisher et al. (2011) call for adaptations of the existing Cognitive Interview protocol to enable these techniques to be adapted more readily for specific interviewing conditions or witness categories. In essence, there is a need for simpler, more intuitive yet effective methods of information elicitation to support practitioners in eliciting complete and accurate accounts of events under the most demanding conditions encountered within their role.

## 4: Investigative Interviewing in Times of Austerity

Investigating officers may experience a number of potential issues in attempting to gather detailed, complete and accurate accounts of events within investigative interviews. For example, interviews might be delayed due to a lack of time, expertise, or personnel available to conduct an interview (Gabbert et al., 2015). Frontline officers in particular are often required to conduct interviews with only minimal training and experience (Dando et al., 2008). These issues have been exacerbated by reductions in training and resource allocation as a result of cuts to the police budget.

The UK is still in the grip of financial austerity, with police forces among those adversely affected by budget cuts. Police forces in England & Wales have been tasked with finding £2.53bn worth of savings since 2010 (96% of this figure was ultimately accounted for through cuts made by individual forces). This equates to around a 20% cut in Home Office spending on the police, or approximately 17,000 police officers and 17,000 civilian staff (Dodd, 2015; Press Association, 2015). At the same time police were faced with protecting their frontline staff, restructuring to maximise efficiency, and continuing to provide a high-quality service to the public (HMIC, 2014). Despite calls for an investment in policing in 2015 (HM Treasury, 2015), the current spate of budget cuts looks set to continue. Reports estimate cuts of 20-25% to police funding by 2020, which could result in the loss of around 15,000 police officers (Dodd, 2015). This is likely to affect some forces more adversely than others, with forces anticipating substantial losses until at least 2019 (e.g. Kent police anticipate a £61m budget cut between 2015 and 2019, and South Yorkshire Police a £49m cut between 2016 and 2020; Press Association, 2015).

The current challenge faced by police is to meet public expectations of policing during austerity, while minimising loss of personnel. This is a particular challenge at a time when the demand for policing has (at the very least) held at a consistently high

level. For example, there have been recent reports that the number of 999 calls received has risen by 10.5% for the year 2015-2016 in comparison with the previous year ("Police struggling with surge in phone calls", 2017). This has had an impact on the number of 101 calls control room staff are able to resolve, thus affecting police response to more minor crimes or public enquiries. While some forces have risen to this challenge through opening up additional channels of communication between the public and the police (e.g. through email or social media), this has nonetheless created significant problems ("Police struggling with surge in phone calls", 2017).

Throughout this period of austerity there has been a clear attempt to protect the public-facing frontline of policing. Approximately 29% of the required savings have been found in non-pay costs, such as goods and services (which make up approximately 20% of the overall policing cost base; HMIC, 2014). Despite this considerable workforce reductions have been required to meet budget restrictions of this scale. By March 2015 there were plans to reduce the workforce by 34,400 (a 14% decrease, from 243,900 in March 2010 to 209,500 in March 2015). In real terms, this means the removal of three posts from every twenty (HMIC, 2014). Home Office reports suggest that at present there are 123,142 police officers across all ranks in England and Wales, the lowest this figure has fallen since 1985 ("Policing facing a 'perfect storm'", 2017). The loss of staff has been felt across all levels of policing (frontline, operational support, & business support; see Table 1 for examples of the roles involved in each level). The total number of frontline policing staff (officers, staff, and Police Community Support Officers) has declined by approximately 14,900 between March 2010 and March 2015 (an 8% decrease). This includes a reduction of around 8,500 frontline officers (a 7% decrease from 2010 to 2015). In addition, the number of Police Community Support Officers has been reduced by around 22% between March 2010 and March 2015. This equates to a loss of around 3,600 Police Community Support Officer posts. In contrast, operational support has reduced by 27% (7,900 posts) and business support by 24% (7,700 posts; HMIC, 2014).

Table 1.

*Roles included in each level of policing (adapted from HMIC, 2014)*

| **Operation Frontline** | | **Operational Support** | **Business Support** |
|---|---|---|---|
| Response | Custody | Coroner's Officer | Communications/IT/Audio |
| Neighbourhoods | Enquiry/Station | Operational Planning | Corporate Development |
| Community Safety/Relations | Local Commanders | ACPO and Directors | Finance |
| Traffic | Traffic Wardens | Departmental Heads | Personnel/Human Resources |
| Dogs | Crime & Incident Management | Criminal Records Office | Press and Public Relations |
| Firearms – Tactical | Asset Confiscation | Criminal Justice Units | Property |
| Mounted | Burglary | Intelligence | Staff Associations |
| Firearms/Explosives | CID (inc. Specialist Crime) | Fingerprint/Photographic | Buildings |
| Marine | Drugs | Staff Officers | Catering |
| Surveillance Unit | Fraud | Complaints and Discipline | Stores/Supplies |
| Ports | Hate Crime | | Training |
| Special Branch/Protection/Immigration | Vehicle Crime | | Other Admin/Clerical |
| Child/Sex/Domestic/Missing Persons | Vice | | Vehicle Workshop/Fleet |
| Scenes of Crime | Control Room (Call Handlers) | | Welfare – Occupational Health and Welfare |

*Note.* Contains public sector information licensed under the Open Government Licence v3.0.

Despite the provisions put in place to minimise the impact on the public, it remains likely that cuts of this magnitude will affect the ability of the police to protect the public and effectively prevent crime. As budget cuts continue there is an increased risk to the frontline of policing, particularly neighbourhood policing (HMIC, 2014). This is likely to have a detrimental effect on the ability of the police to build relationships with communities. Neighbourhood policing is an important means of building trust and confidence in the police within communities at a level beyond that which response officers alone are able to reach. A strong local presence is also important in terms of gathering intelligence to prevent crime within communities, and to build a clear picture of the threats faced by distinct neighbourhoods (HMIC, 2017). There has been the suggestion that this loss of intelligence from communities could even affect the "local to global" approach to counter-terrorism (through which communities can be connected to counter-terrorism agencies via neighbourhood officers; Dodd, 2017).

The current approach of "doing more with less" has placed strain upon those on the frontline of policing. The evidence that police forces have been somewhat successful in absorbing seven years of budget cuts is no guarantee that they can continue to do so. At present the UK finds itself in a situation where officers are overworked, experiencing extremes of stress and low morale, and feeling that both the public and the officers themselves are vulnerable (Stewart, 2015). This has resulted in calls for an investment in policing in terms of increases in both budget and personnel, and the end of the "do more with less" approach (Marsh, n.d.).

**5.1: Advancing Investigative Interviewing**

As outlined above, although components of the Cognitive Interview are often highly-rated by interviewing officers in terms of their usefulness, implementing these techniques in the field is seldom a straightforward task. The techniques which make up the Cognitive Interview are demanding and require a degree of flexibility which is not always readily available, particularly to officers on the frontline of policing (Brown et al., 2008; Kebbell et al., 1999). These issues are exacerbated further by the demands of policing in times of austerity. The difficulties in applying existing evidence-based techniques combined with the increased demand on officers as a result of reductions in training provision and personnel suggest a need for simpler yet equally effective

methods of information elicitation. It is vitally important that such techniques are appropriate for the demands of frontline policing and as such are developed with ease of use in mind.

In response to this challenge, researchers have begun to adopt a "toolbox" approach to investigative interviewing. The aim of this is to identify "add-on" techniques which can be bolted on to standard PEACE interviewing procedures. These "add-ons" can then be utilised systematically within the field to enable police officers to deploy evidence-based interview techniques as required in any given situation. This approach has been advocated by Fisher et al. (2011) who called for researchers to adapt or extend the Cognitive Interview to facilitate information elicitation from (i) different witness categories and (ii) under a number of interviewing contexts. Research has already begun to establish additional interview formats with these aims in mind. Gabbert and colleagues propose two alternatives to the Cognitive Interview; (i) the Self-Administered Interview, a tool designed to allow witnesses to provide their own statements (Gabbert et al., 2009) and (ii) the Structured Interview Protocol, which distils the key principles of the Cognitive Interview into a simpler format appropriate for frontline police officers (Gabbert et al., 2016). Each of these approaches offer evidence-based streamlined solutions to some of the challenges faced by interviewing officers, for example lack of resources and lack of training. Researchers have also proposed additional components for inclusion in a Cognitive Interviewing framework. For example, recent research has proposed alternative forms of context reinstatement and retrieval techniques, each of which are designed to be witness (rather than interviewer) led. These techniques include the Timeline Technique (Hope, Mullis, & Gabbert, 2013), and the Sketch Mental Reinstatement of Context (Dando, Wilcock, Milne, & Henry, 2009).

Despite the progress made by researchers in adapting or extending the Cognitive Interview for different situations likely to be encountered by investigating officers further research is necessary. The idea of witness-led interviewing procedures inherent within the Timeline Technique and the Sketch Mental Reinstatement of Context is an interesting one. This approach serves to reduce cognitive constraints on both the interviewer and the interviewee by transferring control to the witness (Hope et al., 2013). This approach also makes theoretical sense in terms of the associative network nature of memory (Anderson, 1983b; Crestani, 1997). In allowing the witness to guide

the interview process, we are able to capitalise upon the strength of associative links within memory, enabling activation to spread quickly between the strongest links within the memory network and thus enabling faster, accurate retrieval of information. If it is the case that the power of these techniques lies in facilitating the spread of activation throughout the memory network, then allowing the witness to provide their own retrieval cues may further increase this benefit. For this reason, the first half of this thesis discusses the theoretical rationale behind self-generated cues to facilitate recall (see Chapter 3) and presents an empirical test of a number of viable cue generation techniques and their impact on witness recall (see Chapter 4). Should these prove effective, then self-generated cues offer an additional "add on" component to complement existing Cognitive Interview techniques.

It is also important to consider the types of witness which might be encountered during investigations. Although some existing techniques have been designed to address a specific interview context (e.g. Gabbert et al.'s [2009] Self-Administered Interview addresses situations involving large numbers of witnesses), the focus of research into information elicitation is predominantly on cooperative witnesses and reluctant suspects. This is inherent within the PEACE interviewing framework itself which includes elements of the Cognitive Interview (for use with cooperative witnesses) and Conversation Management (for use with reluctant suspects; Shepherd & Griffiths, 2013). While these might be expected to be the categories of interviewee most commonly encountered by investigators, the PEACE framework for interviewing might not necessarily be the most appropriate for use with all witnesses. Achieving Best Evidence guidance (Ministry of Justice, 2011) refers to additional witness typologies for example, the vulnerable witness, the hostile witness, and the reluctant witness. While vulnerable witnesses have received some attention both in terms of research and practical interviewing guidance (see for example O'Mahony, Milne, & Grant, 2012), hostile and reluctant witnesses have been the focus of relatively little research. Despite this, reluctant and hostile witnesses are encountered on a fairly routine basis (e.g. Clayman & Skinns, 2011). For this reason, the latter half of this thesis explores practitioner perceptions of the prevalence and nature of encounters with reluctant witnesses and considers existing approaches to intelligence gathering within this context in collaboration with two large metropolitan police forces (see Chapters 5 to 7). I then discuss the potential of social influence techniques to increase witness compliance with

requests for information, before empirically testing two such techniques (foot-in-the-door and door-in-the-face sequential requests; see Chapters 8 to 11). The ultimate aim of this line of research is to establish further "add on" techniques to be included within a Cognitive Interview (or PEACE) framework with a view to informing best practice for encounters with both cooperative and reluctant witnesses.

## Chapter 3: Self-Generated Cue Literature Review

*I draw upon the Associative Network model of memory, as well as the principles of encoding-retrieval specificity, and cue distinctiveness, to argue that self-generated cue mnemonics offer an intuitive means of facilitating reliable recall of personally experienced events. The use of a self-generated cue mnemonic allows for the spreading activation nature of memory, whilst also presenting an opportunity to capitalize upon cue distinctiveness. Here, I present the theoretical rationale behind the use of this technique and highlight the distinction between a self-generated cue and a self-referent cue in autobiographical memory research. I also argue that while existing mnemonic techniques often utilise the principle of encoding-retrieval specificity, whereby the overlap between encoded information and retrieval cue predicts the likelihood of accurate recall, self-generated cues incorporate an additional potential benefit of cue distinctiveness.* [4].

### 1: Introduction

As outlined in Chapter 2, researchers have begun to develop a "toolbox" approach to investigative interviewing. This approach centres on the need to develop effective, evidence-based techniques which can be incorporated into a Cognitive Interviewing framework to answer the demands faced by frontline police officers. The chapter which follows focuses primarily on the challenge of obtaining a complete and accurate account of events from eyewitnesses and in doing so proposes that self-generated cues to retrieval represent a viable means of obtaining such accounts. The recall of information by eyewitnesses falls within the domain of episodic memory. Here, I refer to episodic memory in line with Tulving's (1985) suggestion of episodic memory as a specialized subcategory of memory relating to the conscious recall of personally experienced events. In this sense, episodic memory is both a particular type of encoded information, and a particular type of recollective experience (Tulving, 2002).

Successful recall of information from episodic memory is often dependent upon the provision of retrieval cues (see Tulving, 1974 for discussion). Retrieval cues are aspects of an individual's physical and cognitive environment which aid the recall

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[4] Please note, some of the material in this chapter has been accepted for publication: Wheeler, R. L. and Gabbert, F. (2017). Using Self-Generated Cues to Facilitate Recall: A Narrative Review. *Frontiers in Psychology, 8*:1830. https://doi.10.3389/fpsyg.2017.01830

process; they can be explicitly provided at recall, self-generated, or encountered more incidentally through the retrieval context (Pansky, Koriat, & Goldsmith, 2005). Numerous mnemonic techniques have been developed to facilitate this process. The most successful of these build upon established principles of memory, such as the idea that encoding information leaves behind a memory trace comprised of multiple pieces of related information. This means that effective retrieval cues are those which contain a large amount of overlap with encoded information, and that different retrieval cues may facilitate the recall of different items of information (Geiselman et al., 1986).

In the discussion that follows I outline the qualities necessary for a retrieval cue to be effective, and based upon the extant literature, argue that self-generated retrieval cues represent a unique opportunity to maximize each of these qualities. I close by outlining three memory principles underlying each of these mnemonic techniques: spreading activation, encoding-specificity, and cue distinctiveness.

## 1.1: Effective Retrieval Cues

A number of key qualities have been suggested as necessary for a retrieval cue to effectively support recall. Good quality retrieval cues often have: (i) constructability (cues generated at encoding can be reliably reproduced at recall); (ii) consistency between encoding and retrieval within a given context (i.e. an effective retrieval cue should be compatible with the memory trace created during encoding and show high cue-target match); (iii) strong associations with the target and the ability to be easily associated with newly learned information; and (iv) bidirectionality of association (the cue recalling target information, and target information recalling the cue). It is also important that retrieval cues are distinctive or discriminable. That is, it should be possible to distinguish cues from one another, and to differentiate the target memories associated with each. If retrieval cues are not recognized as being distinct from one another, then cues are likely to become associated with more information. This is known as cue overload (Watkins & Watkins, 1975), which leads to slower less accurate recall as a result of a cue (node) containing too many associative links (the fan effect; Anderson, 1983b). In addition, fuzzy trace theory (e.g. Brainerd, Reyna, & Brandse, 1995) suggests that multiple traces are encoded within memory for a single event. In other words, separate memory traces are created which contain either general information about an event (gist traces) or exact details of the same event (verbatim

traces). It has been suggested that gist traces are likely to be activated by a wider range of retrieval cues than verbatim traces (Tuckey & Brewer, 2003). This means that more distinct retrieval cues are necessary to access detailed target information (Bellezza & Hoyt, 1992; Tullis & Benjamin, 2015a).

## 1.2: Self-Generated Cues

The self-generation of cues to prompt recall of information at a later date is a relatively natural process; for example, individuals regularly create file names to cue themselves as to the contents, create slides to prompt themselves as to presentation content, or take notes on important information to allow detailed recall in the future (Tullis & Benjamin, 2015b). Generally, it can be expected that individuals should be effective at generating cues to prompt their own future recall. When generating cues ourselves we are able to rely upon rich, unique, personal knowledge to produce cues which are often distinctive, highly associated with the target, and consistent between encoding and retrieval (and therefore stable over time). Research has demonstrated that individuals do not consistently favour any one of these principles over the others when self-generating retrieval cues; instead, they utilize these characteristics flexibly to fit with the current task demands (Tullis & Benjamin, 2015a). For example, when learners are provided with information about the similarity of competing targets (they were made aware that targets were similar to one another) prior to generating their cues, they focused more on distinguishing between the targets through maximizing cue distinctiveness, and so improved their performance on a recall task (Tullis & Benjamin, 2015a).

### 1.2.1: Defining a self-generated cue.

Research has suggested that the most effective self-generated cues are likely to have been developed with the explicit purpose of cueing later retrieval. This helps individuals to make deliberate choices distinguishing the target from other items stored within memory, rather than merely describing the properties of the target (Tullis & Benjamin, 2015a). In this way, developing self-generated cues can be considered as an active process, resulting in cues which uniquely and functionally represent the critical properties of the target memory (Mäntylä & Nilsson, 1983). For example, when learners were told directly that the cues they generated would be used to guide a future retrieval attempt (mnemonic cues), their cues tended to include more idiosyncratic knowledge

and personal experience, were more distinctive, and associated to fewer potential targets, and so facilitated greater levels of recall than cues generated to simply describe the target (Tullis & Benjamin, 2015a). Self-generated cues are likely to include idiosyncratic details based upon the personal context of encoding. They are also likely to make particular use of distinctive aspects of the information to be encoded to distinguish the representation of the target memory from others already stored in memory (Mäntylä, 1986).

As far as I am aware there is no widely agreed definition of a self-generated cue. Here, I define a self-generated retrieval cue as any detail salient to the individual, and actively generated by the individual themselves, which serves to facilitate more complete retrieval of a target memory, and as such represents the critical properties of the target memory. Self-generated cues may highlight details salient to the individual, make use of idiosyncratic private (rather than public) information, or any other strategy which suits the individual's needs (see for example, Tullis & Benjamin, 2015b for discussion of how the idiosyncratic nature of cues changes when generated for use by the self versus another individual).

In defining a self-generated cue, it is also important to distinguish this interpretation of a self-generated from other similarly named concepts within the domain of memory research. For example, references to "self-referent cues", "self-relevant cues", or "personally-relevant cues" are not uncommon in the autobiographical memory literature. A self-referent cue generally involves processing information in reference to the self. In the simplest terms, this means thinking about oneself during the encoding process (Turk et al., 2015). In doing so the individual associates a piece of to-be-remembered information with a self-relevant item (as in Greenwald & Banaji, 1989). However, this is somewhat different from the definition of a self-generated cue to (non-autobiographical) retrieval I outlined above. The main distinction being that self-generated cues reflect those that represent critical properties of a target memory, while self-referent cues are those that act as a cue relating to an aspect of the self. For further discussion of this distinction (and other such distinctions e.g. the generation effect) please refer to Wheeler and Gabbert (2017).

**1.2.2: The benefit of self-generated cues over cues generated by, or for others.**

It is well established that strong cue-target relationships, cue distinctiveness, and compatibility between encoding and retrieval are necessary to maximize the effectiveness of a retrieval cue. It is reasonable to assume then that if we are able to capitalize upon each of these principles, then recall performance will be further improved. If this is the case, then allowing individuals to generate their own retrieval cues represents our best opportunity to utilize cues that are unique and include a high level of cue-target match. Indeed, some researchers have already argued that the high levels of recall demonstrated when the target information shares a unique relationship with the cue become more striking when the cue is self-generated (Hunt & Smith, 1996). This is not altogether surprising; if effective retrieval cues are both distinctive and compatible with the encoding experience, then it follows naturally that cues are more effective when they are self-generated than other-generated. The "tester" cannot know what information was most salient to the learner at the time of encoding, nor can they anticipate which aspects of that information are most distinctive to the learner (Mäntylä, 1986). As a result, other-generated cues (i.e., cues that are formulated by someone other than the individual themselves) rely heavily upon more general, semantic, gist-based aspects of the target information, rather than the more specific idiosyncratic episodic details incorporated into self-generated cues. In this sense, other-generated cues can be considered to rely primarily upon associative strength (between cue and target), without the additional benefit of cue distinctiveness and encoding-retrieval match offered by self-generated cues. In support of this, Tullis (2013) highlights that when learners recalled an incorrect target, this response appeared to be driven by the associative strength between the cue and the incorrect response. This suggests that when learners are unable to access specific episodic details for a cue they resort to a "best guess" based upon associates of the cue provided to them. In other words, when specific episodic details are unavailable, learners fall back upon more general semantic knowledge. This suggests that strong cue-target associations (favoured by spreading activation theories of memory) are the backup route to recall, when cue-target overlap, and cue distinctiveness fail.

It has been argued that research into self-generated cues makes an important contribution *beyond* the understanding of cue distinctiveness. For example, in

examining the use of self-generated cues, we are able to move beyond understanding encoding as the perception and comprehension of an item, to viewing this process as an additional source of potential retrieval cues (Hunt & Smith, 1996). This argument was based primarily around the findings of Mäntylä and Nilsson (1988) who showed that given distinctive self-generated verbal cues and a consistent encoding-retrieval environment, recall of unrelated verbal targets is consistently of a high level, even with a long retention interval. This advantage is specific to the producer of the cue, with the cue itself failing to function effectively as a prompt for another individual's recall. In effect, even where two individuals have encoded the same information, they are likely to produce unique retrieval cues, and so benefit exceptionally well from their own cues.

The retrieval benefit of self-generated cues over other-generated cues has been suggested as being linked to the generation process (e.g. through encoding more active processing of the target memory). However, the research outlined above suggests that this benefit is the result of both the generation *process*, and the generation *context*. The potentially idiosyncratic nature of self-generated cues means that one individual's cues that are given to another individual at test would be unlikely to benefit their performance, even if the same information had been presented at encoding. Despite this, individuals do frequently generate cues to benefit others in naturalistic settings. For example, we might consider how best to prompt an employee to complete a task, or cue one another's memories for shared events when reminiscing with friends (Tullis & Benjamin, 2015b). It is then interesting to examine how asking individuals to generate cues specifically for use *by others* impacts upon the types of cues generated, and the effectiveness of these cues at test. During one such study participants generated cues for themselves and cues for others. At recall, they received another person's cues (this could be a friend or stranger), but never their own self-generated cues. Results suggest friends are able to cue each other more effectively than strangers. However, performance overall improved when participants were provided with cues generated with the knowledge that the cue would be used to support someone else's recall (Andersson & Ronnberg, 1997, Experiment 2).

Tullis and Benjamin (2015b) examined how the quality of a retrieval cue changed when it was generated for use by others rather than use by the self. Participants each generated two cues for each of sixty words. These cues were to be used to support their own later recall attempt, or to aid another learner in recalling the items on the

wordlist. The stimulus words were selected as having relevance to the life of college students, and so were considered to offer opportunities for the use of cues based on personal experience. Cues presented at recall were either self or other-generated and were intended for use by either the self or another individual. In general, cues generated for the self were consistently more idiosyncratic, and so less beneficial when presented to another learner. Consequently, performance was better when participants received an other-generated cue meant for another individual, than an other-generated cue meant for the self. In addition, self-generated cues intended for another individual were no longer as effective in facilitating the originator's recall performance. Although this difference did not reach significance, this does suggest that the benefit of self-generation of the cue is removed when self-generated cues are intended for use by others. This is perhaps as a result of the reliance on more semantic cue-target associations, rather than distinctive, and often idiosyncratic details, of the encoding experience. It can therefore be assumed that the benefit of self-generated cues lies in the inclusion of personal experience and idiosyncratic knowledge to create a distinctive and meaningful cue.

### 1.2.3: Empirical tests of self-generated cue mnemonics.

A considerable body of research highlights the effectiveness of self-generated cues in supporting recall. However, it should be noted that this research generally explores the benefit of cues generated at the time of encoding on later recall attempts. Mäntylä and colleagues were among the first to note the benefit of self-generated cues on recall. Mäntylä and Nilsson (1983) were able to demonstrate strikingly high levels of recall (round 96% of a 30-word list), but only when participants were able to self-generate retrieval cues, and when these same retrieval cues were presented at test. These extraordinarily high levels of recall have been replicated in other contexts. For example, when participants were able to generate three cues at encoding, and then received these cues during an immediate recall test they recalled around 90% of up to 600 words. Performance levels declined slightly when only one self-generated cue was presented at test (to around 50-60%), but self-generated cues consistently resulted in high levels of performance. When other-generated cues were presented performance was particularly low (around 5% given one cue, rising to 17% when three cues were presented; Mäntylä, 1986). This suggests that the benefit of self-generated cues lie with the inclusion of idiosyncratic details within the cues, resulting in a unique cue which overlaps with few targets. It is then unsurprising, in terms of the encoding-specificity principle of memory,

that these cues were only beneficial when they were self-generated (Hunt & Smith, 1996).

The high levels of performance demonstrated by Mäntylä and colleagues (Mäntylä, 1986; Mäntylä & Nilsson, 1983) did however decline considerably as the retention interval increased. This decline was suggested as being the result of a decrease in the compatibility of the encoding and retrieval context, stipulated as a requirement of effective recall by the encoding-specificity principle of memory (Mäntylä, 1986). If this is the case then it is possible that retrieval is impaired because the meaning of a cue is interpreted differently at encoding than at recall, and so consistent use of cues could help to maintain levels of performance. Essentially, reducing *within participant* cue variability for the same target item should reduce the decline in performance. Mäntylä and Nilsson (1988) asked participants to focus in particular on distinctive properties of the target when generating a cue in an attempt to reduce the intrasubject variance (and so make it more likely that the exact same cue will be produced on more than one occasion). They showed that when cues are generated with distinctive features in mind, then the decline in performance over time is much smaller (in comparison to a group who generated their own cues according to personal experience as an appropriate description of the target word) than has been previously suggested (e.g. in Mäntylä, 1986). This effect persists throughout a retention interval of up to six weeks. This suggests that asking learners to focus specifically on distinctive aspects of the to-be-recalled information during encoding results in self-generated cues which maximize distinctiveness in a way that is unaffected by changes in context (reduced levels of encoding-retrieval match), and in turn ensures that levels of performance are maintained over time (Mäntylä & Nilsson, 1988).

Self-generated cues have also been shown to be effective in recalling more complex stimuli. For example, recall of paragraphs of text has been showed to improve with use of self-generated cues. Van Dam, Brinkerink-Carlier, and Kok (1987, experiment 1) asked participants to study twenty standalone paragraphs in a factual narrative. Recall of the contents of each paragraph was more complete when participants were able to generate a list of keywords (from memory) that they felt represented the content of each paragraph (i.e. the generated keywords did not have to be present in the paragraph) compared to when recall was attempted without this cueing stage (note generation of keywords improved recall whether keywords were generated

before or after the initial recall attempt). Interestingly, this was only effective when keyword generation took place *before* the first full recall attempt. When an initial recall of the paragraph contents was attempted, and then the keywords were generated to supplement this attempt, self-generated cues had no impact on the amount recalled.

Furthermore, research has suggested that there is a potential benefit of self-generated cues for those experiencing the beginnings of cognitive decline. For example, use of self-generated cues has been shown to facilitate the recall of a word list in both young adults (aged 20-39) and older adults (aged 70-89). Learners generated cues that were either semantic or phonetic (rhyming) dependent upon the instructions given. A benefit of self-generated cues was shown regardless of the level of processing at which the cue was generated. However, the benefit was more pronounced for older adults, and in particular self-generated semantic cues greatly reduced age-related differences in performance (Sauzéon, Rodrigues, Corsini, & N'Kaoua, 2013). The fact that self-generated cues may benefit older adults more than younger adults is particularly striking, and further distinguishes self-generated cues from self-referent cues. For example, while both younger and older adults have been shown to benefit from encoding items to be recalled with reference to the self, research has suggested that older adults benefit less from self-referent processing than younger adults. In particular, it has been suggested that the effectiveness of self-referent encoding varies dependent upon the availability of cognitive resources, and that older adults are more limited in their ability to use this technique flexibly (Gutchess, Kensinger, Yoon, & Schacter, 2007).

In addition, training in the use of a mnemonic, whether this was an established mnemonic or a self-generated strategy, has been shown to improve four-digit number recall of older adults. Older adults were trained using a number-consonant mnemonic (whereby a series of number-consonant pairs are memorized, and a word-phrase generation technique used to memorize number strings) or asked to use a systematic approach during practice sessions to develop an effective strategy for recalling the target digit-strings. The self-generated strategy group were asked to monitor their encoding processes and to make a note of the strategy they adopted to memorize each four-digit number string. For example, in attempting to memorize 2,468 participants might enter "my birth year (24), my wife's age (68)", "digit sequence beginning at 2 and adding 2", etc. If participants were unable to think of a specific strategy they might report

"repeated the numbers", etc. In this way the participants retrieval strategies, and the reporting of these strategies, was not constrained in any way. Both trained groups outperformed a control (who received no training or practice time) at pre-test and post-test, both with and without cognitive support (cognitive support consisted of the generation of a word cue to prompt recall). Between the two training groups, the mnemonic group showed an improvement in performance from pre-test to post-test, and this improvement was magnified when post-test support was provided. In contrast, the self-generated strategy group showed a (non-significant) improvement from pre-test to post-test without support. This reached significance when post-test support was provided. The fact that both groups showed broadly similar levels of improvement from pre- to post-test is particularly striking when it is considered that the self-generated strategy group received slightly less training than the mnemonic strategy group (Derwinger, Neely, Persson, Hill, & Bäckman, 2003). The gains in performance made by both the trained groups were also shown to persist after an eight-month delay (Derwinger, Neely, & Bäckman, 2005). This gain persisted for the self-generated strategy group even when cognitive support was removed (the trained mnemonic group in contrast showed a decline in performance at this stage). These findings suggest that cognitive support is less necessary for the benefit of self-generated strategies to be maintained, in comparison to a more cognitively demanding mnemonic technique (Derwinger et al., 2005).

Although self-generated cues and self-generated mnemonic strategies have been used successfully by older adults, it is important to note that this finding is not as clear cut as might first appear. For example, Mäntylä and Bäckman (1990, Experiment 2) demonstrated that when participants were asked to recall a target word in response to presentation of a cue word self-generated three weeks prior, younger adults outperformed older adults. Mäntylä and Bäckman argue that these results reflect an age-related increase in encoding variability. For example, when both younger and older adults were asked to generate properties for target words in two sessions up to three weeks apart (with the instruction in the second session to generate properties describing their current interpretation of the target word, rather than trying to recall the descriptions generated in the first session), older adults were less consistent in the properties generated. Older adults also tended to rely on more generic properties, rather than utilizing more distinctive idiosyncratic properties (Mäntylä & Bäckman, 1990,

Experiment 1). They suggest that this increase in age-related encoding variability is likely to contribute to the decline in episodic recall performance. Despite this, the potential benefit of self-generated cues in facilitating recall of both younger and older adults is something which merits further research.

## 2: Theoretical Underpinnings of Self-Generated Cue Mnemonics

The research outlined thus far suggests a clear benefit of the use of self-generated cues (particularly those generated at the time of encoding) on retrieval. I now address the theory underlying this approach. There are three key principles of memory which contribute to explaining the effectiveness of self-generated cues: the spreading activation theory of memory, the encoding-specificity principle of memory, and cue distinctiveness. I outline each of these in turn in the sections that follow and speculate on how these principles of memory relate to the success of self-generated cues in aiding retrieval.

### 2.1: Spreading activation theory of memory

In attempting to recall information from episodic memory we have to access long-term memory, a relatively slow process in comparison to other human information processing systems (Anderson, 1983b). Spreading activation models view information in long-term memory as being represented by a network of associated concepts. The assumption is then that it is possible to recall a given item from memory by recalling other information associated with the target. This is made possible through the process of activation spreading through the network (Anderson, 1983b; Crestani, 1997).

Memory is generally viewed as a network of interlinked nodes (as in Anderson, 1983a; Collins & Loftus, 1975). Within these networks, units of memory are conceptualized as cognitive units, made up of a unit and its associated elements (or key properties of the node). Cognitive units make up the essential units of encoding and retrieval. During encoding, a cognitive unit is formed via a copy in working memory, which is later transferred as a more permanent long-term memory trace (Anderson, 1983a). Associative networks are formed of generic nodes, representing concepts or categories and knowledge about the category member, and episodic nodes, representing specific instances of generic nodes, connected by associative links (Tuckey & Brewer, 2003).

There has been some debate around the number of linked elements cognitive units are able to contain. Anderson (1983a) argued that a key feature of cognitive units is that they are limited in terms of the number of elements they are able to contain. This limit was initially suggested to be five elements. As noted by Anderson this makes the idea of unit nodes functionally similar to units of memory proposed by other memory researchers, for example Miller's (1956) concept of memory "chunks" (Anderson, 1983a). In contrast to Anderson (1983a), Collins and Loftus (1975) suggest that as the information represented by concept nodes can contain an indefinite amount of information, and that a large amount of these nodes are likely to exist within a memory network. Irrespective of the amount of information an individual node can contain, it is likely that memory networks represent a complex structure of links between concepts and associated properties.

Spreading activation models generally assume that when information is encoded in memory it is also incorporated into a semantic network. In other words, information can be considered as being organized around semantic similarities. If this is the case, then the extent to which any one concept primes activation of another is a function of the number of connections between the two concepts. In other words, as activation spreads between semantically related memories during a recall attempt, the recall of one item often primes the recall of other semantically related items and so on (for further discussion of this assumption and the underlying experimental data see Collins & Loftus, 1975).

Further support for the assumption of semantic organization of memory networks is shown through the use of category clustering recall techniques. Paulo, Albuquerque, and Bull, (2016) examined whether recall of a complex eyewitness event could be improved by asking participants to recall the target event in terms of the person, object, action, and location details of the event. Their results suggest that this category clustering is an effective mnemonic technique. Paulo et al. (2016) suggest that according to Collins and Loftus' (1975) spreading activation theory of semantic processing, a key benefit of recalling via semantic (or category) clusters is that this approach gradually allows activation within the network to reach a level which triggers other semantically related information which may not otherwise have been activated and recalled.

It is generally accepted among spreading activation theorists that there is an overlap between working memory and long-term memory content. This is a result of new traces being stored in working memory prior to being permanently encoded in long-term memory, and of the likelihood of traces recalled from long-term memory being activated in working memory. This means that at any one time a memory trace is likely to be active in working memory, and this activation frequently spreads from working memory to long-term memory stores (Anderson 1983a). The relationship between information in working memory and long-term memory is depicted in Figure 4 (from Anderson 1983a) below. The units on the left of the diagram (Units 1 & 2) and their associated elements (Elements 1 to 5) are active in working memory, and this activation spreads from these elements to units and elements in long-term memory (Units 3 onwards, and Elements 6 onwards). The spread of activation begins with units that are the focus of attention (termed sources of activation, in this cases Units 1 & 2 within working memory) and travels throughout the long-term memory network.
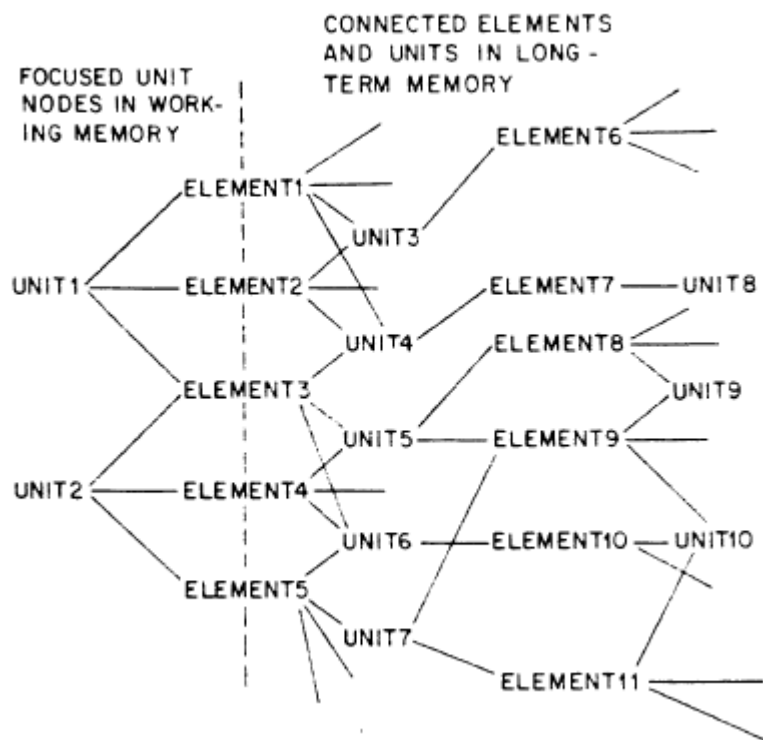


*Figure 4*. Memory network in working memory and long-term memory (from Anderson, 1983b). Reprinted from Journal of Verbal Learning and Verbal Behavior, 22 (3), Anderson, J. R., A spreading activation theory of memory, 261-295., Copyright (1983), with permission from Elsevier.

Spreading activation models of memory all generally view a memory search as the process of spreading activation from concept nodes along associative links throughout a semantic network until a threshold is reached (Collins & Loftus, 1975). The original spreading activation theory was proposed by Quillian (1962, 1967) who attempted to develop computer simulations of human memory search (see also developments by Anderson, 1983a; Collins & Loftus, 1975). It is generally accepted that a memory cue (sometimes termed a memory probe) triggers a memory search beginning at the node or nodes originally activated by the cue. The activation then spreads to all nodes connected to the initial node, and then to all nodes linked to these first tier activated nodes, and so on (Collins & Loftus, 1975). As activation spreads throughout the network information associated with the sources of activation becomes available (Anderson & Pirolli, 1984). This process is shown in Figure 5 below. In this example, the cue triggers activation of the black node; this activation then spreads to the three dark grey nodes connected to the initial node (the first tier or spreading activation), and from there the activation continues down all pathways connected to the first tier activated nodes to reach the light grey second tier of activated nodes. Anderson (1983b) suggests that the transmission of activation is bidirectional; as shown in Figure 5, nodes can rebound activation back upon nodes which are already activated. The level of activation reached by each node begins to decrease as soon as the information contained in the node drops from the focus of attention (Anderson, 1983a) and continues to decrease with the passage of time (Collins & Loftus, 1975).
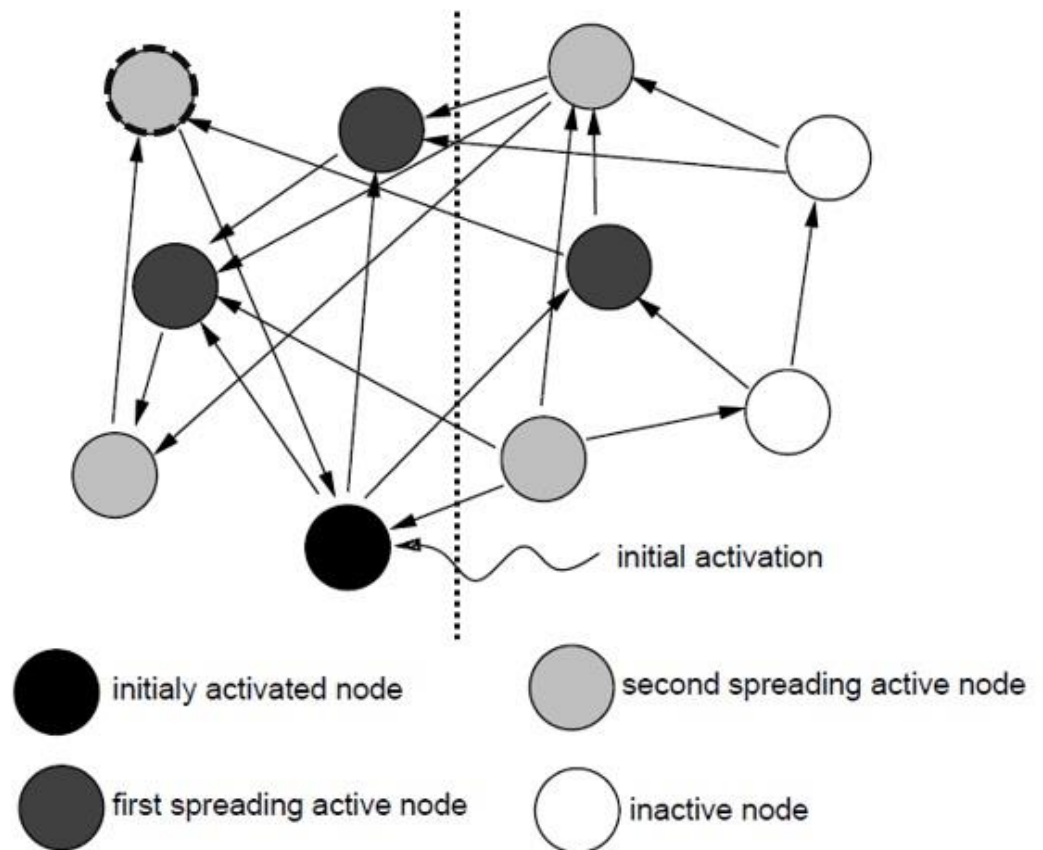
*Figure 5*. The spread of activation through a memory network (adapted from Crestani, 1997 by permission from Springer Nature: Springer, Artificial Intelligence Review, Application of Spreading Activation Techniques in Information Retrieval, Crestani, F. Copyright 1997).

Figure 5 also depicts the fanning of activation down parallel paths. Activation begins at the initially activated node and continues out along multiple parallel paths. Where an active concept node has links to multiple other nodes (these links are referred to as the fan of the concept), the activation spreads in parallel among these pathways. For example, the level of activation initially received at the source node (in black) splits simultaneously down the three pathways leading to the dark grey first tier activated nodes. Anderson (1983b) argues that nodes have a finite capacity for activation, and so the more paths a node is connected to, the less activation it is able to send down any one path (as the level of activation transmitted out along the path is a function of the amount of activation received minus the total number of paths connected to the node), and so the slower the recall process is. In essence, this means that where the fan effect occurs the amount of activation available for any one pathway decreases, and the time taken to retrieve information increases. The more facts that are linked to a given concept, the

longer it takes to recall any one fact associated with that concept (Anderson & Reder, 1999).

Targets are recognized (or recalled) when a threshold level of activation has been reached (Anderson, 1983b). The overall amount of activation a given node receives predicts the amount of time it will take to accurately recall the information contained within that node (Anderson, 1983a). The level of activation that a node receives can be considered as a product of the strength of their associations. Nodes which are more closely or strongly related to the source of activation receive more activation than those which are further removed. In other words, as activation spreads throughout the network, its strength decreases. As Collins and Loftus (1975, p. 411) state "activation is like a signal from a source that is attenuated as it travels outwards". In this way, the level of activation of other nodes within the network varies in terms of their degree of association to the source nodes. The activation arriving from multiple sources at a single node will sum. As such, information contained within any given node is processed more quickly when multiple sources spread activation to the target node (Anderson & Pirolli, 1984). Ultimately the level of activation within a given area of the network predicts the speed and accuracy with which information within that area can be recalled (Anderson 1983a). To illustrate, in Figure 5 the information stored in nodes to the left of the vertical dotted line is more likely to be recalled quickly and accurately than the information stored in nodes on the right (all else being equal, the activation received by nodes on the left is greater than that received by those on the right). Individuals can also capitalize upon the gathering of activation within specific areas of a network by refocusing activation from the initial node to a more active subnode to enable faster a spread of activation. For example, during recall attempts of specific details, individuals are able to refocus activation within the network on specific subnodes (the most active node linked to others already activated within the network), rather than the original input nodes. In this way, the spread of activation is refocused from the most active node, rather than from the initial input node to enable faster spread of activation and facilitate recall of the target information (see Anderson, 1983a for discussion).

Within spreading activation models of memory there has been some debate around which factor ultimately predicts the time taken to recall a target item. It has previously been assumed that the time taken to recall an item is a function of the

amount of time it takes activation to spread throughout the network. For example, Ratcliff and McKoon (1981) argued that response times decrease when a target is primed by a word situated further away in the semantic network compared to when it is primed with a word more strongly associated with the target (and so likely to be situated nearer to the target in the network). Despite this, they suggest that in general activation spreads much more quickly through a network than had been previously thought (Ratcliff & McKoon, 1981). In contrast, Anderson (1983a) suggests that processing time can be explained as the time taken for activation to reach a peak (an asymptotic level of activation). This argument is based primarily on the findings of priming studies (see Anderson 1983a for discussion) and is a key feature distinguishing Anderson's (1983a) model of spreading activation from other spreading activation models.

The strength of individual nodes and their associated links also contributes to understanding of how some nodes reach higher levels of activation sooner than others. One assumption of the fan effect described above is that as a node becomes active, each path from the concept node to its properties is equally activated. However, data suggests that this might not always be the case. As stated above, both Anderson (1983a, 1983b) and Collins and Loftus (1975) argue that the strength of the relationship (and so the distance between) a node and the source of activation predicts how much activation that node is likely to receive. As a result, it can be assumed that not all concepts and links are of equal strength (Anderson 1983a, 1983b). For example, Anderson (1983b) suggests that activation is allocated among competing paths based upon their relative strength. He gives the example of slower response times for two-fan facts studied four times, when an alternative has been studied more frequently, and takes this as the basis for the argument that activation is allocated based upon the relative strength of each possible pathway (see Anderson, 1983b for further discussion).

While proponents of spreading activation theories of memory generally agree that individual nodes vary in strength, a number of explanations as to how this occurs have been put forward. For example, node strength may be predicted by frequency of exposure. When facts about concepts are studied and tested more frequently, the individual nodes containing these facts (and their associated memory traces) become stronger, resulting in faster, more accurate recall. It can be assumed the strength of memory traces begins at one unit and increases by a further unit for every subsequent trial (Anderson, 1983a; Tuckey & Brewer, 2003). This strengthening effect occurs even

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when practice sessions occur in quick succession (Anderson, 1983b). Practice is also suggested as being one of the only determinants of the likelihood of a memory trace contained within working memory being transferred to long-term memory, with no impact shown of intention or motivation, or the length of time the node has been active within working memory (for further discussion of practice effects see Anderson, 1983a; Tuckey & Brewer, 2003). Anderson (1983a) argues that once formed traces are not lost, but their strength does decrease gradually over time. In this way, Schacter (1999) suggests that spreading activation theories of memory can go some way towards explaining what he refers to as "the sin of transience", or gradual forgetting over time. Forgetting over time can be considered an adaptation to an information-heavy environment; information that has been encoded but is no longer needed is generally not retrieved and rehearsed (Anderson & Schooler, 1991, cited in Schacter, 1999). When not bolstered by the strengthening effects that both retrieval attempts and practice can have, the associated memory traces begin to gradually weaken, and so to become less accessible over time.

Tuckey and Brewer (2003) extend this argument and suggest that the strength of associative links is also in part determined by how schema consistent or inconsistent the items encoded are. For example, aspects of an event that are schema consistent are more likely to be rehearsed and so are more likely to be strongly encoded than those that are schema inconsistent. This is supported by their finding that schema inconsistent information shows greater levels of decay than schema consistent information. Regardless of the reason for their strength, stronger nodes are able to transmit and receive greater levels of activation, and thus allow more activation to gather in areas of the network containing stronger nodes (Anderson, 1983a). The implication of this for retrieval processes is that the most salient cues are the ones which are most likely to enable fast, accurate retrieval of information.

### 2.1.1: Spreading activation theory and self-generated cues.

Spreading activation theories underpin the effectiveness of retrieval cues based upon a number of key properties. As has been previously discussed, a high-quality retrieval cue generally has a strong association with the target memory, whilst also being able to easily incorporate new related information as necessary. These associations should also be bidirectional, whereby the cue recalls the target information,

and the target information recalls the cue (Bellezza & Hoyt, 1992). When the effectiveness of a retrieval cue is described in terms of these properties, then it is clear that the spreading activation theory of memory is of critical importance in explaining successful recall. I suggest that self-generated cues offer the opportunity to maximise the benefit of these properties, and briefly outline how this may be the case below.

It is well established that recall of one item can prompt further recall of semantically related items (Collins & Loftus, 1975). This occurs through the spread of activation through the associative links of the memory network. When the associative links are stronger, then information is recalled faster and more accurately. For example, when recall of a target word is cued by a word more closely associated with the target then the target is recalled faster, than when the target is cued by a word situated further away in the network (Ratcliff & McKoon, 1981). The benefit of strongly associated semantic clusters has also been demonstrated through category clustering recall. In line with the spreading activation theory, if memory is indeed organised according to semantic similarity, then focusing on and recalling information by semantic cluster is likely to produce enough activation to cue associated items. When individuals are asked to make a second or third recall attempt using category clustering (i.e. attempting to recall further information one semantic category at a time, for example person details, action details, and so on), then recall improves without a cost to accuracy, compared to recall attempts using other established mnemonic techniques such as the change order mnemonic (Paulo et al., 2016). The prime benefit of this approach is that it is relatively intuitive; individuals often spontaneously encode, organise, and recall information in semantic clusters (see Paulo et al., 2016 for further discussion).

Although further research is needed to test these assumptions, I propose that self-generated cues represent a prime opportunity to capitalize upon the semantic organisation of memory. In allowing individuals to define their own semantic clusters, we give individuals the opportunity to focus their recall attempts on clusters most compatible with their own encoding of the target material. Self-generated cues also present the opportunity to cue recall using strong associative links. In allowing individuals to generate their own cues we maximise the opportunity to trigger activation from the point most critical to the recall of the target material. For example, by allowing individuals to select their own cues we can capitalize upon the strongest associative links and minimise the distance in the network between cue and target.

The importance of the bidirectionality of associative links becomes apparent when we consider "recognition failure", where associative links do not have bidirectionality, then it is possible that a target memory will not be selected in a recognition context without the associated learned cue or context. Interestingly, this means that individuals may be able to recall details of the target memory given an associated concept that they are not able to provide in a recognition task (Tulving & Thomson, 1973; Wiseman & Tulving, 1976). Similarly, where a cue and target evoke each other with high frequency (e.g. tree cues oak, and vice versa) then the target is recalled more quickly when a cue is provided, than when a cue and target evoke each other with low frequency (e.g. cloth cueing orlon, or vice versa). Importantly, where the cue and target evoke each other with equal frequency then either word can be used to prompt recall of the other (i.e. it does not matter which is presented as the cue, and which as the target). In contrast, where there is an imbalance in this strength of association, and so the cue evokes the target at a higher frequency than the inverse (as with seafood-shrimp; seafood evokes the word shrimp at a higher frequency than shrimp does seafood), then reaction time varies significantly dependent upon which word was used to cue which (Collins & Loftus, 1975). This demonstrates the importance of bidirectional relationships. I suggest that if self-generated cues do indeed offer the opportunity to minimise the distance between cue and target within the semantic network, then it is also plausible that they can contribute to maximizing the bidirectionality of associative links.

### 2.2.: Encoding-specificity principle of memory.

Initially developed by Tulving and colleagues, the encoding-specificity principle of memory (or encoding-retrieval specificity) refers to the idea that retrieval cues are effective only to the extent that information within the memory cue is also contained within the target memory trace created at the time of encoding. As Tulving and Thomson (1973, p. 353) note "what is stored is determined by what is perceived and how it is encoded, and what is stored determines what retrieval cues are effective in providing access to what is stored." Put another way, the encoding-specificity principle of memory takes as its core the idea that it is only possible to retrieve what has been stored in memory, and that the way this information has been encoded and stored governs the ways in which this information can be retrieved (Tulving & Thomson, 1973).

Tulving and Thomson (1973) agreed with the principles of memory outlined in spreading activation theories that: (a) information within memory is stored as a memory trace; (b) a memory trace is a collection of elements, features, or attributes of the encoded information; and (c) that an encoding phase is situated between the perception of an event, and the creation of a memory trace. However, they viewed retrieval as a selective process, relying on a complex interaction between encoded information and features of the retrieval environment (Tulving & Thomson, 1973). Tulving and Thomson argue that it is well established that identical information encoded under different conditions can lead to differences in recall and recognition performance. Likewise, the information present at retrieval can greatly influence the recall and recognition of items stored under identical encoding conditions. These findings, as well as more general forgetting, can be explained through encoding-specificity in terms of the accessibility of information in memory; information may not be lost, so much as inaccessible given the cues available at the time of the recall attempt (Brown & Craik, 2000). Together, these ideas suggest that different cues might make different memory traces more accessible than others, which in turn raises the question of what constitutes an effective retrieval cue.

Tulving and Thomson (1973) argue that the spreading activation explanation of differences in recall performance as being caused by differing strengths of memory traces is of little practical value. For example, if trace strength is estimated from observed levels of recall and recognition, but those levels vary with changing retrieval conditions then the trace strength explanation has little to contribute. Tulving and colleagues also suggest that the benefit of a strong cue-target association is likely to be lost if the cue is not also encoded alongside the target information (for further discussion see Thomson & Tulving, 1970; Tulving & Osler, 1968; Tulving & Thomson, 1973). If information is not salient at the time of encoding, then it will not act as an effective memory cue for the target, regardless of how central the cue might be to the target in general terms (Brown & Craik, 2000). In essence, this means that the match between features of recall and features of encoding is more important for a successful retrieval attempt than the strength of the association between the cue and the target information (Pansky et al., 2005; Roediger & Guynn, 1996).

A number of studies have demonstrated support for this concept. For example, across a series of three studies, Thomson and Tulving (1970) demonstrated that when

weakly associated cues were encoded alongside target information, then strongly associated cues provided at recall (but not at encoding) did not facilitate retrieval of the target information. In addition, Higham (2002) found strongly associated retrieval cues not presented at encoding produced less correctly recalled information and more incorrect recall than weakly associated cues which had been previously presented at study. Furthermore, Rosenbluth-Mor (2001 cited in Pansky et al., 2005) found that weakly associated cues presented at both encoding and retrieval facilitated recall in comparison to a no cue control, whereas presenting a new (not seen at encoding) weakly associated cue at retrieval impaired performance in comparison to a no cue control. Taken together, these findings demonstrate that mismatch between encoding and retrieval cues impairs recall, rather than the more conventional view that increasing the match improves recall (Pansky et al., 2005). It is however important to note that this view is not universally shared by researchers. For example, research has shown that an encoding-retrieval mismatch has a more detrimental effect on those with high working memory capacity than those of low working memory capacity. It has been suggested that this effect is seen because individuals with high working memory capacity are more likely to encode information strategically, and to utilize these strategies at recall, and so experience a decline in performance when their planned strategies are disrupted (Unsworth, Brewer, & Spillers, 2011). In addition, some researchers have found means of improving recall performance using strongly associated cues not presented at the time of encoding (see Higham, 2002, for discussion of this).

It is not the case that the encoding-specificity principle ignores the role that semantic relationships between cues and items to be recalled can play. Rather, this is seen as a part of the cognitive encoding environment. For example, when encoding a wordlist for later recall we can assume that information is encoded about the appearance of a given word in the present context. This might or might not include encoding information about the semantic relationships between wordlist items: if so then another item on the wordlist might constitute an effective retrieval cue, if not then this will not be the case. Tulving and Thomson (1973) tested this assumption in a series of studies on the recall of wordlists. Three wordlists were each encoded in the context of another list (i.e. as word-pairs). Target words were displayed briefly alongside a weakly associated cue word. Following this, participants were presented with a series of word cues and asked to provide the associated target word. Strikingly, performance was markedly

higher on a cued recall task than on a recognition memory task. That is, several individuals were able to produce target words on a cued recall memory test that they had earlier failed to note on a recognition test. Tulving and Thomson also found substantial differences in the rates with which individual target words were recognised (some more than half the time, and some never), despite each word having been generated by multiple participants. Tulving and colleagues suggest that these findings can be explained in part by encoding-specificity. Where target words are encoded alongside cue words, there is often an assumption that these cues will reappear at test, and as such the cue word forms part of the context in which the target is encoded. This means that the target memory trace cannot always be readily accessed in a recognition context, where the memory cue provided consists solely of the target word itself without the associated encoding context. This is termed "recognition failure" (see Wiseman & Tulving, 1976 for further discussion of recognition failure).

It should be noted that the encoding-specificity principle and the spreading activation theory are not necessarily mutually exclusive. Anderson (1983a) argues that the findings of encoding-specificity studies (such as Tulving & Thomson, 1973) can still be incorporated into a spreading activation framework. In particular, when a cue has multiple possible interpretations (e.g. the word "jam" might be interpreted differently dependent upon whether it is presented alongside the associated word "raspberry" or "traffic"), then the encoding context determines which interpretation is encoded (potentially alongside other cues from the encoding context itself). At retrieval, context can then be used to determine the appropriate interpretation to activate, and the activation spreads from this point out into the network. The probability of recall or recognition is therefore higher when the same interpretation is selected at both encoding and retrieval, thus allowing activation to spread directly from the node directly linked to the memory trace and reducing levels of activation sent down pathways linked to alternative interpretations.

### 2.2.1: Encoding-specificity principle of memory and self-generated cues.

As previously noted, the encoding-specificity principle of memory and spreading activation theory are not mutually exclusive. Context can be used to activate appropriate concepts within memory (Anderson, 1983a), and facilitate the spread of activation through a memory network (Hershkowitz, Orbach, Lamb, Sternberg, &

Horowitz, 2002). Research around the generation of cues for the self versus another individual suggests that self-generated cues contain more idiosyncratic episodic details than cues generated by, or for use by, others. The latter tend to contain more generic, semantic details (Mäntylä, 1986; Mäntylä & Nilsson 1988). Interestingly, cues generated by older adults to cue their own memory also tend to show this same generic focus (Mäntylä & Bäckman, 1990). In addition, when learners recall an incorrect target in response to a self-generated cue this seems to be driven by a strong associative relationship between the cue and the incorrect response (Tullis, 2013). Taken together, these findings suggest that spreading activation can be considered as a "back-up" route in cue generation, seemingly forming a default option when cognitive resources are low, or when recall via a more efficient means (such as encoding-specificity or cue distinctiveness) has failed. In this sense, spreading activation theory can essentially be viewed as the foundation upon which effective retrieval cues, whether generated by the self or another, can be built, with encoding-specificity and cue distinctiveness providing an additional benefit beyond this default route.

The encoding-specificity principle of memory suggests that good quality retrieval cues have a high level of overlap between encoding and retrieval. This allows cues generated at encoding to be reproduced at retrieval reliably and consistently. These qualities, combined with the benefit of semantic clustering, make for highly effective retrieval techniques. For example, while the category clustering recall technique previously outlined allows recall to be cued using strongly associated semantic clusters, this technique provides the additional benefit of framing recall in an encoding compatible manner. The same benefit is provided by self-generated cues; indeed, I would suggest that this benefit is magnified in the case of self-generated cues. According to the principle of encoding-retrieval specificity, effective cueing relies on a knowledge of the most salient aspects of information to be recalled. If this is the case then it follows logically that the best cues are generated by the self to guide recall, than by an other.

### 2.3: Cue distinctiveness.

Overall, the idea that the same material may be encoded differently in a different cognitive context, resulting in different routes through which to access the information, lies at the heart of the encoding-specificity principle of memory. Yet, Tulving and

Thomson (1973) also highlight the influence of other, somewhat indefinable factors. They demonstrate that an additional factor is likely to operate alongside the properties of an encoded item, and that this unknown factor further impacts upon the chance of successful retrieval. As Nairne (2002) states, even when we ensure a *nominal* match between encoding and retrieval (e.g. through use of identical cues), this does not guarantee a *functional* match between the cue and the memory trace for the target item. Therefore, despite the widely accepted beliefs that once encoding has been completed it is the match between encoding and retrieval conditions that is the primary predictor of memory performance, data from memory studies suggest that there must be other factors also at play. For example, both the list length effect (whereby retention decreases as the number of items to be recalled increases) and the category size effect (where an increase in the number of target items in a category results in a decrease in the number of items recalled, even when the category heading is presented as a cue) demonstrate the influence of factors other than encoding-retrieval match on memory performance (see Nairne, 2002). One candidate which may help to explain the differences in recall performance not captured by encoding-specificity, is cue distinctiveness.

At this point, it becomes important to note that while the terms "unique", and "distinctive" are sometimes used interchangeably, some theorists have distinguished between these concepts. The concept of "uniqueness" is often used to describe the stimulus or encoding event itself. This has led researchers to discuss different encoding experiences as being "more (or less) unique" than one another. Mäntylä and Nilsson (1983) argue that "uniqueness" is a dichotomous concept, and so suggest that what is actually being discussed in these cases is distinctiveness. They highlight that terms such as uniqueness are used inconsistently in the literature and suggest that ultimately a conceptual analysis of these terms is required. While I agree with Mäntylä and Nilsson (1983) that a careful conceptual analysis of these terms is needed, this is beyond the scope of this research. Therefore, throughout this chapter I use the terms unique and distinctive interchangeably to describe a retrieval cue which recalls one particular memory at the exclusion of others, and as such can be considered to have diagnostic value.

Returning to the importance of cue distinctiveness, Nairne (2002, p. 390) considers the process of remembering to be "an active process of discrimination" during

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which we use retrieval cues to guide us towards viable retrieval candidates. He argues that although the encoding-specificity principle of memory is of some practical value, its theoretical relevance is limited. The rationale behind this claim is that the relationship between encoding and retrieval is correlational rather than causal. Instead Nairne (2002) argues that cue distinctiveness has a stronger influence on retrieval. Increasing the overlap between encoding and retrieval benefits recall through increasing the probability that distinctive features unique to the target will be utilized. He is not alone in this belief; it has been suggested that a key property of an effective retrieval cue is discriminability (Bellezza & Hoyt, 1992). Retrieval cues which are distinct from each other are more likely to prompt the recall of target information, and more likely to result in the recall of verbatim, rather than gist-based information (Anderson, 1983b; Anderson & Reder, 1999; Tuckey & Brewer, 2003). Cue distinctiveness is based upon similar principles.

Cue distinctiveness (or an absence of cue overload) refers to whether a cue is uniquely associated with a target memory. If a cue is linked to multiple memory traces (and so is "overloaded"), then it becomes more difficult for that cue to activate the current target trace. This clearly will reduce the effectiveness of the cue in facilitating recall of the target information (Watkins & Watkins, 1975). In other words, a retrieval cue is useful only to the extent that it provides diagnostic information about the occurrence of a target item (Pansky et al., 2005). Cue distinctiveness is also entwined with the encoding process. Encoding information in ways that lead to a more precise memory trace, and in doing so separating one encoding experience from others contained within memory, facilitates recall. Distinctiveness is critical to this process (see Schmidt, 1991, for a review of the distinctiveness literature). When unique elements of an event (those which do not overlap with other events) are encoded, then these elements form a unique identifier for the target event, and so increase the likelihood that it can be discriminated from other events stored in memory. Where this distinct element is available at retrieval then the unique cue reinstates the original memory trace, provided that the context (of the distinctive element) is the same (Hunt & Smith, 1996).

Most researchers currently favour a two-factor account, which accepts that both encoding-retrieval match (encoding-specificity) and cue overload (or cue distinctiveness) combine to influence memory performance. However, Nairne (2002)

argues that this approach impedes our ability to make practical predictions about memory performance. He gives an example of trying to recall a target event ($E_1$) from a series of events ($E_2$, $E_3$, and so on). If a participant is cued with an event feature unique to the target event (feature $X_1$), then this is likely to facilitate recall. However, if the feature used as a cue was present for events one, two, and three ($E_1$, $E_2$, $E_3$), then this cue (feature $X_2$) loses its diagnostic value, making it more difficult to discriminate the target event memory from other competing event memories. In this case, we can reasonably expect recall performance to decline. In short, memory performance is equal to the match between cue ($X_1$) and target ($E_1$) and declines as the number of items associated with cue ($X_1$) increases (Nairne, 2002). The critical aspect of the cue distinctiveness principle then is that cue-target match is *necessary* but not *sufficient* for accurate retrieval. Nairne (2002) and other advocates of the benefit of cue distinctiveness (e.g. Moscovitch & Craik, 1976) accept that retrieval cues are effective only if they match the memory trace of the target item (as in the encoding-specificity principle of memory), but suggest that diagnostic cues, which specify a single target item and exclude others, are key in predicting recall performance. In other words, if a retrieval cue is specific to the encoded event, then this is more likely to result in accurate recall than a more generic cue, and it is this diagnostic value that is key (Goh & Lu, 2012; Nairne, 2002).

Several studies have shown support for cue distinctiveness as a predictor of recall performance. For example, Moscovitch and Craik (1976, Experiments 2 & 3) manipulated cue distinctiveness by adjusting the number of targets paired with a cue, and the similarity of this cue to others encoded. Participants encoded questions as cues alongside target words across three conditions: a unique condition (wherein target words were associated with a cue question unique in both form and substance), a similar condition (target words were associated with a question cue unique in form, but similar in substance for a set of six target words), and a shared condition (target words were associated with a question cue shared exactly between all the target words in a set). Participants were then asked to recall the target words given the question cue. When cues were shared among a set of ten targets, recall performance was lower than when each target was prompted by a distinct cue question. This is consistent with other research (e.g. Watkins & Watkins, 1975) and with well documented effects such as the list length effect. However, Moscovitch and Craik's findings suggest that this effect was

not universal across all stimuli. For example, the positive impact of unique cues was greater for semantically encoded words, or items associated with a positive response to the cue question. In addition, recall of rhyme-encoded words showed little decline in response to the shared cue manipulation. Moscovitch and Craik argue that this suggests that there are "levels" of distinctiveness, and that surface level distinctiveness is of little importance in comparison to more meaningful forms of distinctiveness. For example, when relying on surface level distinctiveness (such as physical or phonetic features) to develop unique cues individuals are constrained by the rules governing language use, and so are more likely to rely on cues shared by other information stored in memory, whereas more substantial, semantic levels of uniqueness are less limited in scope.

Additional support for the role of cue distinctiveness in predicting recall performance comes from Goh and Lu (2012), who manipulated both encoding-retrieval match and the degree of cue overload in a 2 (overload: high, low) X 2 (encoding-retrieval match: high, low) design. In each condition participants learned a list of word pairs and were later tested on these pairs in a cued recall task. In high encoding-retrieval match conditions participants were provided with the originally encoded cue word, alongside a second cue of the semantic category the target word belonged to. In low encoding-retrieval match conditions, only the originally encoded cue was provided. To manipulate cue overload, Goh and Lu (2012) ensured that the semantic category cue provided at test applied to several (in some cases all) of the words learned at encoding (high cue overload) or was unique to the target word (low cue overload). Goh and Lu's (2012) results suggest that high encoding-retrieval match does not necessarily facilitate recall, showing instead that high encoding-retrieval match improves performance only when cue overload is low.

Cue distinctiveness, even at a feature-based level, has however been shown to influence performance on prospective memory tasks. For example, Brandimonte and Passolunghi (1994) manipulated cue familiarity (determined by word frequency) and cue distinctiveness. Cue distinctiveness was manipulated semantically (presentation of a familiar item in the context of all unfamiliar items or vice versa) or perceptually (presentation of a target word in uppercase letters in a lowercase list). They found that unfamiliar and/or distinctive cues benefitted prospective memory, and that this benefit remained whether distinctiveness was a product of semantic or perceptual differences (although perceptual distinctiveness was shown to have the strongest impact upon

prospective remembering. The opposite pattern is generally suggested within retrospective memory research).

### 2.3.1: Cue distinctiveness and self-generated cues.

The principles of encoding-specificity and cue distinctiveness can be difficult to disentangle in terms of their contribution to the effectiveness of retrieval cues, and of self-generated cues in particular. It is clear however, that cue distinctiveness adds to the effectiveness of cues with a high degree of encoding-retrieval overlap. For example, while the effectiveness of a cue which has a high level of overlap with the target and which contains idiosyncratic details about the encoding context can be understood in terms of encoding-specificity, maintaining this advantage can be seen as a product of cue distinctiveness. In other words, the best retrieval cues are those which emphasize distinctive aspects of the target, resulting in increased consistency with which targets are produced in response to cues over a longer retention interval. Where this consistency is lost, we see increased encoding variability, and poorer memory performance over time (Anderson & Reder, 1999; Mäntylä & Bäckman, 1990; Watkins & Watkins, 1975). Asking learners to focus specifically on distinctive aspects of the to-be-recalled information during encoding results in self-generated cues which maximize distinctiveness in a way that is unaffected by changes in context (reduced levels of encoding-retrieval match), and in turn ensures that levels of performance are maintained over time (Mäntylä & Nilsson, 1988). In addition, the idiosyncratic nature of self-generated cues means that one individual's cues that are given to another individual at test would be unlikely to benefit their performance, even if the same information had been presented at encoding. This additional benefit of cue distinctiveness beyond merely cue-target overlap demonstrates the separate qualities that cue distinctiveness and encoding-specificity bring to effective self-generated cues. Cue distinctiveness is naturally maximized where cues are self-generated. Where individuals generate cues for use by others, they tend to revert back to more general, semantic, gist-based aspects of the target information, rather than the more specific idiosyncratic episodic details incorporated into self-generated cues. In this way, self-generated retrieval cues capitalize upon cue distinctiveness, and so maximise the effectiveness of the cue (Hunt & Smith, 1996; Mäntylä, 1986).

## 3: Conclusion

Successful recall of information from memory is often dependent upon the provision of retrieval cues. Retrieval cues might form part of the retrieval context, and can be self or other-generated (Pansky et al., 2005). In line with the spreading activation theory of memory, and the principles of encoding-specificity, and cue distinctiveness, effective retrieval cues are often strongly associated with the target item, have a strong cue-target overlap, and differentiate between different items stored within memory (Bellezza & Hoyt, 1992; Tullis & Benjamin, 2015a). Based upon the literature discussed, I argue that if self-generated cues are taken to be cues containing details salient to the individual, and actively generated by the individual themselves, which serve to facilitate more complete retrieval of a target memory, and as such represent the critical properties of the target memory, then it follows logically that self-generated retrieval cues represent our best opportunity to capitalize upon these three principles of memory. In particular, it is in relation to the principle of cue distinctiveness that self-generated cues offer an advantage over other-generated cues. While other-generated cues rely heavily upon more general, semantic, gist-based aspects of the target information, self-generated cues are able to incorporate more specific idiosyncratic episodic details to maximize the diagnostic value of a cue (Nairne, 2002).

Overall, the literature discussed suggests that self-generated cues represent an effective and viable mnemonic technique which can aid recall in a variety of settings. The high level of compatibility of self-generated cues with individual requirements and abilities means they do not require complex training or regular practice to be used effectively. As a result, I suggest that self-generated cues represent a promising development in episodic memory domains. Throughout the preceding discussion I have speculated on the effectiveness of self-generated cues, however further research is needed to establish the extent of the contribution self-generated cues are able to make to the field. First, to establish whether the retrieval benefit of cues generated at the time of encoding remains when the cue is generated at the time of recall (i.e. after encoding has taken place). Second, research is needed which extends current knowledge of the most effective means of self-generating retrieval cues. For example, through establishing the qualities of an effective cue generation technique, and by contrasting existing methods of cue generation. Therefore, Chapter 4 explores (i) the effectiveness of cues generated at recall, rather than encoding, and (ii) the effectiveness of three distinct self-generated

cue mnemonic techniques in an eyewitness memory context. It is also important to consider the boundary conditions of effective self-generated cues. For example, what impact does varying the delay between encoding, cue generation, and recall have upon retrieval? Chapter 4 also begins to explore the impact of increased delay on recall.

## Chapter 4: Using a Self-Generated Cue Mnemonic to Enhance Eyewitness Retrieval: An empirical evaluation

*Drawing on the associative network model of memory and the principles of encoding-specificity and cue distinctiveness, I present a series of theoretically driven self-generated cue mnemonics, which offer an intuitive means of facilitating reliable eyewitness recall. Across two experiments I exposed participants to a staged event and tested whether a self-generated cue mnemonic would enhance reporting of details of the witnessed event. One of three distinct self-generated cue mnemonics was utilized (a keyword grid, an event-line, and a concept map), and performance compared to two control conditions (no cues, and other-generated cue keywords). Study 1a (N = 55) served as proof-of-concept, demonstrating that self-generated cue mnemonics result in the recall of more correct details than cues provided by others or no cues. As such self-generated cues represent a promising technique for facilitating eyewitness recall. Study 1b (N = 170) served as a more controlled test of these cue generation techniques, with a slightly longer delay between witnessing the event, and the recall attempt (24 hours in Study 1b, compared to 4 hours in Study 1a). Participants in self-generated cue conditions reported significantly more correct information at no cost to accuracy in comparison to participants in control conditions. Overall, self-generated cue techniques increased the amount of correct information reported, without a cost to accuracy, in comparison to cues generated by another witness (other-generated cues), or free recall alone and could be incorporated into a Cognitive Interview as an intuitive means of eliciting reliable eyewitness recall.[5]*

## 1: Introduction

Chapter 3 discusses the theoretical rationale behind self-generated retrieval cues and suggests that these cues could provide a useful opportunity to maximise recall by capitalising on both the spreading activation nature of memory, and the principles of encoding-specificity and cue distinctiveness. The theoretical advantage of self-generated cues over other-generated cues means that a self-generated cue mnemonic may be particularly valuable in an eyewitness setting, where the complete, detailed, and accurate recall of events is of paramount importance. As outlined in Chapter 2, research

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[5] Please note, some of the material in this chapter has previously been submitted for publication: Wheeler, R. L., Gabbert, F., Hope, L., Jones, S., & Valentine, T. Evaluating a Self-Generated Cue Mnemonic to Enhance Eyewitness Retrieval. Manuscript in Preparation. Please also note that within this manuscript Study 1A does not appear and Study 1B is referred to as Study 2.

has established that the Cognitive Interview (and in particular techniques such as Mental Reinstatement of Context) are highly effective, but often difficult to incorporate into police practice (Brown et al., 2008; Kebbell et al., 1999; Memon et al., 2010). Throughout the following chapter, I empirically test an alternative cognitive mnemonic strategy, similarly grounded in memory theory; a self-generated cue mnemonic. In doing so I aim to provide an effective and easily implemented method of facilitating reliable eyewitness recall.

For the purposes of the current research (and as proposed in Chapter 3), I define a self-generated cue as a cue actively generated by the individual themselves, which represents the critical properties of the target memory and is generated with the purpose of facilitating more complete retrieval of a target memory. This might involve highlighting details salient to the individual, making use of idiosyncratic private (rather than public) information, or any other strategy which suits the individual's needs. Within the present research I instructed participants to self-generate retrieval cues through considering the details of the target event which sprang immediately to mind, and to use these details to build a complete picture of the event before proceeding with a full recall attempt.

The considerable body of experimental research supporting the effectiveness of self-generated cues in increasing recall in a variety of contexts (see Chapter 3) suggests that self-generated cues promote comparable levels of performance to trained mnemonic strategies. The effectiveness of this approach, combined with (i) the apparent ease of use of self-generated cues (highlighted by Memon et al., 2010 as being a key consideration for the investigating officer), and (ii) the potential to optimize this strategy to suit the individual's needs, suggests that self-generated cue techniques may be of value in an eyewitness context. If we assume that this is the case, then the question then arises of how best to assist witnesses in developing a self-generated cue as a mnemonic device. The present research therefore aims to examine different methods of eliciting self-generated cues. A number of different strategies have previously been employed in the literature (for example keyword generation as in Tullis & Benjamin, 2015b, or The Timeline Technique as in Hope et al., 2013), yet little or no research has sought to examine the differences between various cue generation techniques in terms of recall performance. Here, I identify three different methods of eliciting self-generated cues from the analogous literature; (i) self-generated keywords, (ii) an event-line, and

(iii) a concept map. These techniques (each of which is outlined in turn below) were then compared in order to identify the most effective means of cue generation.

### 1.1: Keyword Generation

Within experimental literature, keyword generation has been suggested as a simple yet effective recall strategy. Through encouraging participants to generate keywords which are salient to them, and which represent the stimulus to-be-recalled, experimenters can capitalize upon the associative network nature of memory, while also maximizing cue distinctiveness. For example, Van Dam et al. (1987) demonstrated that allowing participants to generate a list of keywords which they felt represented the contents of twenty single (standalone) paragraphs facilitated recall, but only when the self-generated keywords were generated *prior* to the initial recall attempt (see Chapter 3 for further discussion of this study). In addition, Gabbert and MacPherson (unpublished data. This data also appears as Study 1 in Wheeler-Mundy et al., in preparation) compared eyewitness recall performance after use of self-generated cues (produced via a keyword generation task in which participants were asked to list the six most salient details of the target event), a mental reinstatement of context task (using written instructions as a guide), or using no special mnemonic technique (control). In the free recall task that followed those participants using a self-generated cue technique recalled significantly more correct details than those using a standard mental reinstatement of context or no cue technique.

Here, I adapt the self-generated keywords method used by Gabbert and MacPherson and extend this through inclusion of the headings of Person, Action, Object and Location. The spreading-activation theory of semantic processing (Collins & Loftus, 1975) suggests that these categories themselves may act as primes for successive recall. In addition, recent research has suggested that similar use of category clustering at a second retrieval stage may increase information recalled without a cost to accuracy (Paulo et al., 2016; Paulo, Albuquerque, Vittorino, & Bull, 2017; Thorley, 2018). In including these headings I aim to improve the effectiveness of self-generated cues by incorporating simplified category clustering.

### 1.2: Event-Line Generation

I also include a self-generated cue event-line condition. The use of retrieval aids providing personal cues as to the temporal context of a target event (for example

timeline or calendar instruments) have been shown to be beneficial in facilitating retrospective retrieval of autobiographical events. For example, Van Der Vaart and Glasner (2007) found that the use of a timeline technique facilitated recall of retrospective reports about purchases of glasses (see Glasner & Van Der Vaart, 2009 for a review). Belli, Bilgen, and Al Baghal (2013) argue that the use of calendar instruments in interviewing promotes increased use of retrieval cues and conversational probes, resulting in higher quality recall, provided that the target event is sufficiently complex. In an eyewitness domain, police interviewers often use an event-line when note-taking during an interview (College of Policing, n.d.). In addition, the use of a timeline to temporally structure retrieval has been shown to be effective in recalling episodic events rich in temporal detail or involving multiple actors. For example, Hope et al. (2013) found that use of the Timeline Technique facilitated retrieval after participants were exposed to a staged event. The Timeline Technique involves use of a physical cardboard timeline alongside person description cards and action cards to assist witnesses in recalling the individuals, actions, and sequences involved in a complex event. Taken together, research on calendar techniques and the Timeline Technique show that temporally ordered strategies can facilitate retrieval of past events. Within the current research, I include an event-line as a self-generated cue mnemonic to establish whether allowing the temporal structuring of retrieval cues facilitates free recall to a greater extent than self-generated cue keywords alone.

### 1.3: Concept Map Generation

The final self-generated cue technique involves use of a concept map. Concept maps have previously been used within educational research to enable students to make use of learned concepts and to build connections between these concepts (Polancos, 2012). A concept map provides a graphical representation of, and an organizational framework for, knowledge. Concepts are enclosed within boxes, with relationships between concepts represented by annotated interconnecting lines, or cross-links. In addition, concept maps incorporate a hierarchical structure, with more general concepts at the top, gradually progressing to more specific concepts (Cañas & Novak, 2006). The innate hierarchical structure of concept maps has similarities with the associated network organization of memory and might therefore facilitate witnesses to access increasingly specific information that might prove vital for an investigation (e.g., a general description of a perpetrator, becoming increasingly detailed, and thus more

informative). In addition, the effectiveness of concept maps as a means of communicating the structure of complex ideas (Kinchin, 2000) suggests that they may prove to be effective in the organization of knowledge about a complex event (such as who did what in a crime event). I therefore incorporate the concept map into the present research as a means of organizing previously generated concepts (in the form of keywords), in order to establish whether the benefit demonstrated throughout educational research is applicable in an eyewitness setting. As with the self-generated cue keyword condition, the self-generated cue event-line condition incorporates simplified category clustering through inclusion of the headings person, action, object, and location.

### 1.4: Control Conditions

In order to establish whether the benefit of the self-generated cue keywords suggested by the extant literature is the result of the generation of the cue, or the mere presence of the cue itself, I include two control conditions here; a free recall alone condition, and an "other-generated" cue condition. The other-generated cues take the form of keywords generated by a previous pilot participant. I include an "other-generated cue" control condition to represent those scenarios where an individual may be asked to focus on cues generated by someone other than the individual themselves. For example, in a witness interview context, a witness may be asked to consider certain contextual details in response to a prompt from the interviewer. In both studies it was hypothesized that use of a self-generated cue mnemonic would facilitate a more complete and accurate free recall account than both the other-generated cue and no-cue conditions.

### 2: General Method

### 2.1: Design

Both studies outlined below incorporated a fully between-participants design, with participants randomly assigned to one of five recall cue conditions; self-generated cue keywords, self-generated cue event-line, self-generated cue concept map, other-generated cue keywords (control) and no cue (control). Participants in all conditions completed a free recall account which was assessed according to a number of key criteria (see the section below on coding).

## 2.2: Materials

### 2.2.1: Stimulus events.

Both studies incorporated a live event. This was staged during the opening ten minutes of an undergraduate lecture. Two actors, both wearing distinctive (yet still "everyday") outfits with a range of colours and a number of accessories (see Figure 6 & Figure 7) staged a short verbal confrontation over a lost bag at the front of the lecture hall. A female entered the lecture as it began and approached the lecturer (a confederate) holding a satchel-style bag (see Figure 8) she had purportedly found unattended outside. When none of the students claimed ownership of the bag, the two began to go through the contents, holding up items supposedly to prompt a response from the owner. At this point a male entered, asking if anyone had seen his bag, and expressed annoyance that the female had taken it and begun going through the contents. After a short verbal altercation, during which he frequently interrupted the female as she attempted to explain, he gathered his belongings and left. The female briefly apologized to the lecturer and followed the male out (as did the lead researcher who had been present in the lecture theatre to covertly film the event), leaving the lecturer to resume his lecture. Both the event and the actors were kept constant across the two studies, and clothing was kept as similar as possible as demonstrated in Figure 6 and Figure 7.
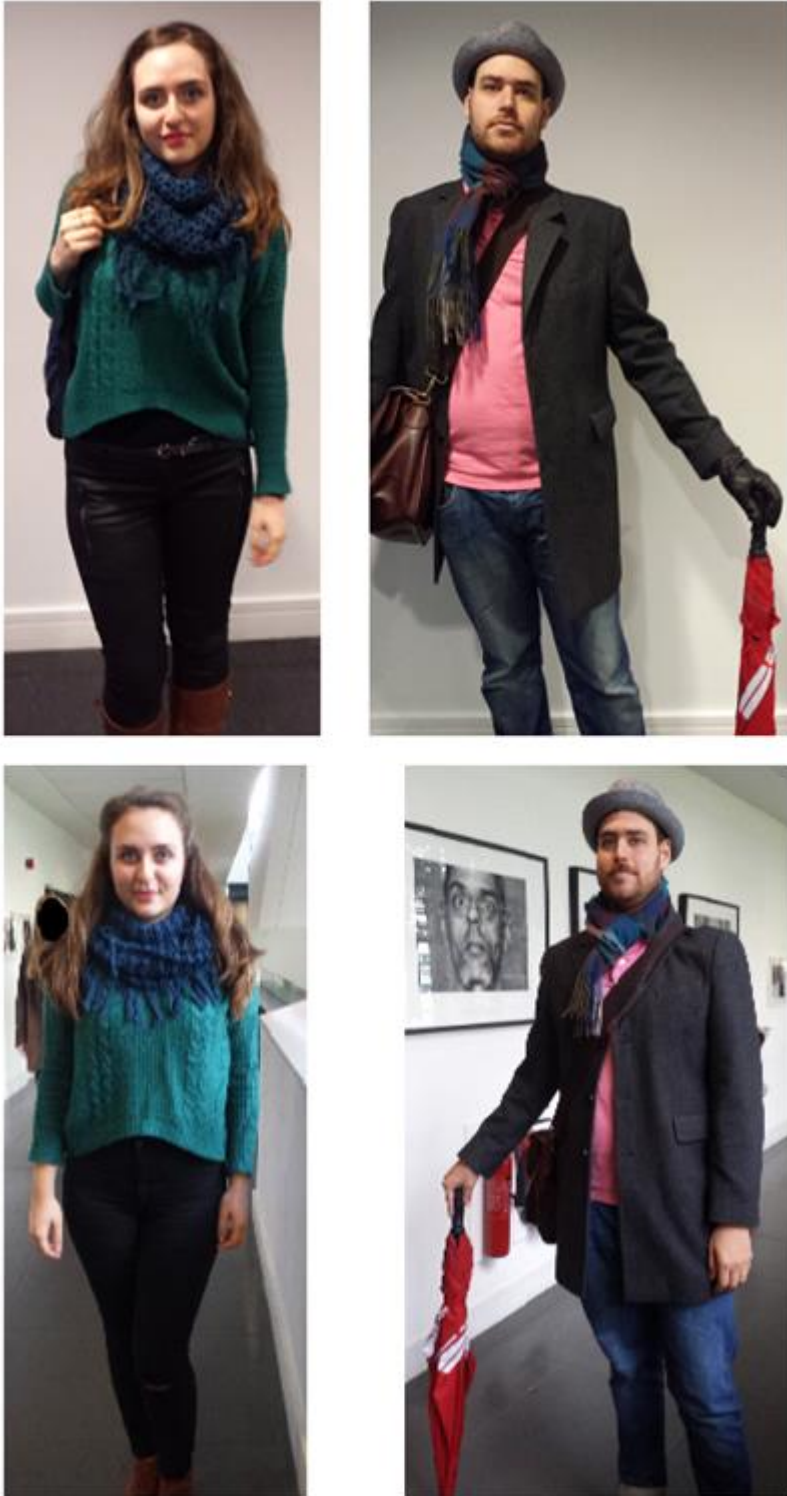
*Figure 6.* Stimulus event: Actors (top row: Study 1a; bottom row: Study 1b).

*Figure 7*. Stimulus event: Female actor's bag (top row: Study 1a; bottom row: Study 1b).



*Figure 8*. Stimulus event: Male actor's bag (Study 1a and Study 1b).

### 2.2.2: Cue generation booklets.

For each of the self-generated cue conditions participants were prompted to generate short keywords relating to the event in order to guide their free recall. In keeping with our definition of self-generated cues as cues actively generated to guide future recall attempts, participants across all experimental conditions were made aware that a more exhaustive recall attempt would follow the cue generation phase.

Comprehensive written instructions were given to participants to assist them in generating retrieval cues. Checkboxes were included after key instructions. Participants were asked to tick the checkbox to confirm that they had read and understood the instructions. In each condition participants were asked to spend minimal time thinking about these cues and were instructed that they should be the details that came most immediately to mind, regardless of their central importance to the event, or the potential personally-relevant context of the cues. All participants were also instructed that cues generated should take the form of short words or phrases (rather than more detailed "chunks" of text). Cue-generation instructions are briefly outlined below. All cue generation and free recall instructions can be viewed on the Open Science Framework (see Appendix A).

The **keyword** instructions directed participants to list up to five details under one of four feeder headings in order to guide their free recall. Participants were provided with a blank table to record their cues with the following headings and instructions: Location (list up to five details about where the event took place), person or people (list up to five details about the person or people involved in the event), object(s) (list up to five details about any object(s) that was/were involved in the event), and action(s) (list up to five details about what happened during the event).

The **event-line** instructions encouraged participants to note key stages of the event by delineating a horizontal line, where the leftmost point represented the beginning of the event, and the rightmost point the event end. The instructions made clear that it was not essential for the event-line to be completed in chronological order. Participants were also asked to provide brief descriptions of each key stage, with a focus on making clear "who did what, and when". The event-line condition also included a section for additional details which did not fit neatly on the event-line, for example person descriptions.

Finally, the **concept map** instructions explained concept maps as being useful in illustrating complex ideas in a similar way to a spider diagram. Participants were asked to note down up to 25 key details (using the feeder headings of person or people, object(s), location, and action(s) if required), but not to spend more than five minutes on this task. Following this, participants were guided in using their notes to complete a concept map. In creating their concept maps participants were instructed that (i) key

details (concepts) should be enclosed within a box, (ii) concepts should be linked by lines or arrows (cross links), and that (iii) cross links should be labelled with one or two words to explain the relationship. An example concept map for an unrelated topic was provided. The feeder headings (seed concept labels) of person or people, object(s), location, and action(s) were provided at the top of a blank page to assist with construction of the concept map.

**Two control conditions** were also included: (i) an other-generated cue table, and (ii) a no cue condition. The **other-generated keyword** condition encouraged participants to consider cues generated by a small number of participants in a pilot study. These were presented in a table under feeder headings of location, person or people, object(s), and action(s) as in the self-generated cue keyword condition. Participants were asked to think about each of these details in turn, with a focus on whether the details listed led to recall of additional details. After building a clear picture of the event in their mind, participants proceeded to the free recall stage. Finally, the **no cue** control condition provided no guidance on retrieval cue strategies.

### 2.2.3: Free recall booklet.

All participants completed a free recall account using standard free recall instructions as guidance. As with the cue generation booklets, checkboxes were included to allow participants to confirm that they had read and understood the instructions. Instructions guided participants to (i) focus on each of the details they had just listed (where applicable), spending at least 30s considering each cue in turn, in order to build a clear picture of the event in their minds eye, and then (ii) to write down everything they could remember as it came to mind, regardless of the temporal order, without leaving out any details or guessing at anything that they were not sure of, in order to provide a complete and accurate report. Participants were also prompted to work alone without seeking the assistance of others.

## 2.3: Procedure

The event was staged during the opening ten minutes of a lecture. The recall session took place after a short delay (Study 1a: 4 hrs; Study 1b: 24 hrs) in a different lecture theatre. Participants were not forewarned that they would be asked about the live event in the second (recall) session. During the recall session participants were randomly allocated to one of the five conditions. Participants were asked to work under

exam conditions while completing their recall task (although experimenters were available to answer any queries that arose). Participants provided written consent, and basic demographic details. Following this, and dependent upon condition, participants were given written instructions on the method they should use to facilitate recall. These instructions had been previously piloted with a small group of participants to check that cue generation instructions were sufficiently clear and detailed. All participants then completed a free recall account using standard free recall instructions as guidance. For example, participants were instructed to write down everything they could remember, recalling out of order if necessary, without leaving out any details or guessing at anything that they were not sure of, in order to provide a complete and accurate report. The recall task was self-paced, although the nature of the session meant that participants were limited to around thirty minutes on the task.

### 3: Study 1a

Study 1a represents proof-of-concept for the use of the proposed cue generation techniques. Here the use of three self-generated cue mnemonics (self-generated cue keywords; self-generated cue event-line; self-generated cue concept map) are compared to two control conditions (other-generated cue keywords; no cue). It was hypothesised that use of a self-generated cue mnemonic would facilitate recall of more correct details than either control condition.

### 3.1: Method

#### 3.1.1: Participants.

A convenience sample of 55 first year psychology students (15 male and 40 female; mean age = 22.04 years, SD = 5.70 years) at Goldsmiths University of London took part in exchange for course credit. The participants were randomly allocated to one of five conditions (three experimental and two control conditions). A prerequisite for participation was that participants had attended a lecture earlier that morning at which the event to be recalled was staged. Upon inspection of the data one participant was found to have described an event in which a lost bike was presented; this participant was therefore assumed to not have met the prerequisites for participation and was subsequently excluded from analyses. This left a total of 54 participants, 15 male and 39 females (mean age = 22.11 years, SD = 5.73 years, min. = 17 years, max. = 42 years).

Please note that as a result of the small sample size and so limited power of this study, Study 1a is treated as "proof-of-concept".

### 3.1.2: Procedural variations from the general method.

Following the event staged in a morning lecture, participants experienced a four-hour delay during which they continued with a standard university day (this period included two lectures and a break of at least one hour). Immediately following this four-hour period an optional questionnaire session was scheduled, allowing students to remain behind for an hour at the end of a lecture to complete questionnaire-based studies in exchange for course credit. It is within this questionnaire session that the free recall accounts were collected. It is important to note that students were not forewarned that they would be asked about the morning's event in this session.

### 3.1.3: Coding.

Prior to coding, responses were screened to ensure that (i) participants had ticked the checkbox to confirm that they had read and understood the instructions, and (ii) that cues provided were in-line with the instructions provided (i.e. those participants in the eventline condition had provided their cues on the eventline provided). Free recall responses were then coded for the amount, accuracy, and level of detail of information recalled. The type of information recalled was also coded. The amount of information recalled was measured in terms of total number of correct items recalled and total number of incorrect items recalled. An accuracy rate was then calculated to allow comparison of the overall accuracy of accounts between conditions. The accuracy rate was calculated as *total number of correct items recalled / (total number of correct items recalled + total number of incorrect items recalled)*. This figure was then converted to a percentage. Ambiguous or subjective responses were also coded, although these were not included in the calculation of accuracy rates. Finally, the type of information recalled was coded as Person, Action, or Setting (Object and Location) details. A total correct recall score was then calculated for each of these categories.

A coding protocol was developed to ensure that responses were coded consistently and accurately. This was developed in relation to a recording and photographs from the live event. Information was coded against this protocol for accuracy and ambiguity (or subjectivity) of responses. Following the coding of the free recall responses, any additional details listed in the cue generation booklets but *not* the

free recall accounts were coded alongside the relevant free recall account. During this process, each detail reported was coded only once (i.e. only cue-generation details *not* already reported in the free recall account were coded). For example, if a participant's free recall account mentioned an umbrella then this was coded as one correct object detail; if this detail also appeared in the cue generation booklet, then this item was not scored a second time. However, if the participant's cue generation booklet mentioned a notebook, which had not already been described in their free recall account, then this was added to the participant's total score as one object detail.

Coded data was assessed for inter-coder reliability. A sample of 15 free recall responses (3 per condition) were coded independently by two coders. Scores showed a high level of agreement: Pearson's $r = .96$.

**3.2: Results & Discussion**

The principle analysis addressed the total amount of accurate details reported in the free recall accounts. The mean scores for the total recall of accurate and inaccurate items, and the associated accuracy rate for each of the five conditions can be seen in Table 2.

Table 2.

*Mean amount of information reported and accuracy rates (Study 1a)*

| | | Items Recalled | | Accuracy Rate (%) |
| | | Correct | Incorrect | |
| Condition | N | M (SD; SE) [95% CI] | M (SD; SE) [95% CI] | M (SD; SE) [95% CI] |
| --- | --- | --- | --- | --- |
| Self-Generated Cue Keywords | 10 | 40.60 (8.37; 2.65) [34.61-46.59] | 4.10 (2.23; .71) [2.50-5.70] | 90.90 (4.29; 1.36) [87.82-93.97] |
| Self-Generated Cue Event-line | 7 | 31.14 (7.08; 2.68) [24.59-37.69] | 2.57 (.79; .30) [1.84-3.30] | 92.29 (1.71; .65) [90.70-93.87] |
| Self-Generated Cue Concept Map | 10 | 29.90 (6.33; 2.00) [25.37-34.43] | 3.60 (2.68; .85) [1.69-5.51] | 90.14 (5.14; 1.63) [86.46-93.81] |
| Other-Generated Cue Keywords (Control) | 13 | 26.77 (8.52; 2.36) [21.62-31.92] | 3.08 (1.89; .53) [1.93-4.22] | 89.15 (6.91; 1.92) [84.98-93.33] |
| No Cue (Control) | 13 | 25.23 (7.75; 2.15) [20.55-29.91] | 2.77 (1.42; .40) [1.91-3.63] | 90.58 (4.38; 1.22) [87.94-93.23] |

As can be seen in Table 2, the mean scores for the total amount of correct details recalled suggest that more accurate details are reported with use of self-generated cues overall than with the other-generated cue or no cue control conditions. An ANOVA confirmed that this difference was significant; $F (4, 48) = 6.51$, $p < .001$, $\eta_p^2 = .35$, 90% CI [.13, .46]. Bonferroni post-hoc tests reveal that these differences lay between the self-generated cue keyword condition, and the other-generated cue control ($p = .001$, Cohen's $d = 1.64$, 95% CI [.67, 2.59]), the no cue control ($p < .001$, Cohen's $d = 1.90$, 95% CI [.88, 2.89]), and the self-generated cue concept map ($p = .034$, Cohen's $d = 1.44$, 95% CI [.43, 2.42]). Mean scores also suggest a slight overall increase in the total number of incorrect details recalled, however this difference was not significant; $F (4, 48) = 1.00$, $p = .416$, $\eta_p^2 = .08$, 90% CI [.00, .15]. There was no significant difference in accuracy rates across the five conditions; $F (4, 48) = .48$, $p = .478$, $\eta_p^2 = .04$, 90% CI [.00, .08].

The results of Study 1a support the premise that self-generated cues represent a promising technique for facilitating eyewitness recall. Overall, more correct details were recalled when using a self-generated cue mnemonic technique than when using cues provided by others or no cues. These findings therefore serve as proof-of-concept for the use of self-generated cues to elicit reliable recall. A second study was therefore conducted to replicate these results with a larger sample size.

## 4: Study 1b

Study 1b aimed to replicate the findings of Study 1a using a larger sample of participants. As in Study 1a, it was hypothesised that use of a self-generated cue mnemonic would facilitate recall of more correct details than either control condition.

### 4.1: Method

#### 4.1.1: Participants.

A convenience sample of 170 first year psychology undergraduates (25 males, 144 females, and one participant who did not select either gender category, mean age 20.17 years, SD = 4.38 years) at Goldsmiths University of London took part in exchange for course credit. As in Study 1a, the participants were randomly allocated to one of five conditions (three experimental and two control conditions). A prerequisite for participation was that participants had attended a lecture the previous day at which the event to be recalled was staged.

#### 4.1.2: Procedural variations from the general method.

As in Study 1a, the event was staged during the opening ten minutes of an afternoon lecture. However, the requirements of the event (a lecture in which it was possible to stage the event during the opening ten minutes, shortly followed by an optional questionnaire session for data collection) meant that Study 1b incorporated a slightly longer delay between the event and free recall account collection. As a result, the recall session for Study 1b took place approximately 24-hours later. As in Study 1a the recall session took place in a different lecture theatre to the event itself. All other aspects of the event were kept as consistent as possible between Study 1a and Study 1b.

#### 4.1.3: Coding.

In a development of Study 1a's coding procedures, Study 1b incorporated blind-coding procedures. Participant free recall accounts were collected in a separate booklet to those used for cue generation. This allowed free recall accounts to be blind coded in

order to reduce experimenter bias. As in Study 1b, responses were screened prior to coding to ensure that (i) the checkbox had been ticked to confirm instructions had been read and understood and (ii) that cues had been generated in-line with the instructions provided. Coding frameworks were updated to reflect changes in the actors' clothing and accessories between Study 1a and Study 1b.

In addition, within Study 1b free recall accounts were coded for grain size, or the level of specificity provided within an item (Goldsmith, Koriat, & Weinberg-Eliezer, 2002; Koriat & Goldsmith, 1996a, 1996b). Item-specific parameters were agreed by the research team (primarily RW & FG) to define when responses were considered fine-grained or coarse-grained. Colour-based details were considered fine-grained if they were specific (e.g. dark brown, light beige) and coarse-grained if they were less detailed (e.g. pink, green). Number-based details were coded in one of two ways. Where participants could reasonably be expected to give an accurate answer (e.g. two people entered, two buckles on a bag), then fine-grained details indicated a single value, and coarse-grained details indicated a range. In contrast, where answers were somewhat more difficult to accurately report (e.g. the height or age of the individuals involved) then fine-grained responses were within a narrow range including three possible values (e.g. 5'5" to 5'7", 24-26), while a coarse-grained response consisted of a wider range, or a vague response (e.g. mid-twenties). In these cases, a response was deemed correct when the reported value was the actual value +/- 1 unit. This allowed a total to be calculated for fine-grained (sufficiently detailed and specific) and coarse-grained (less specific and less detailed) correct items (as in Weber & Brewer, 2008; Sauer & Hope, 2016). Otherwise coding procedures remained consistent between Study 1a and Study 1b.

To assess inter-coder reliability a sample of 17 responses (10% of the overall sample) was scored by an independent coder. As in Study 1a, Pearson correlations were calculated between the scores of the primary coder and independent coder for total correct items ($r = .83$, $p < .001$). In addition, inter-coder reliability was calculated for total incorrect items ($r = .72$, $p = .001$). This change was made to reflect developments in experimental rigour. On the basis of this inter-coder reliability was deemed to be of an acceptable level.

### 4.2: Results & Discussion

Mean scores suggest that overall self-generated cues facilitate recall of more accurate details than either control condition (other-generated cue or no cue). The difference between conditions was shown to be statistically significant; Welch's $F$ (4, 80) = 4.52, $p$ = .002, $\eta_p^2$ = .18, 90% CI [.04, .27] (Please note, Levene's test showed a violation of the assumption of homogeneity of variance, therefore it was deemed most appropriate to conduct a Welch's $F$ test and post-hoc Games-Howell tests). The pattern of means can be seen in Table 3.

Table 3.

*Mean amount of information reported and accuracy rates (Study 1b)*

| | | Items Recalled | | Accuracy Rate (%) |
|---|---|---|---|---|
| | | Correct | Incorrect | |
| Condition | *n* | *M (SD; SE)* [95% CI] | *M (SD; SE)* [95% CI] | *M (SD; SE)* [95% CI] |
| Self-Generated Cue Keywords | 29 | 41.83 (12.21; 2.27) *[37.18-46.47]* | 2.28 (2.30; 0.43) *[1.40-3.15]* | 95.12 (4.34; 0.81) *[93.47-96.77]* |
| Self-Generated Cue Event-line | 36 | 45.33 (8.35; 1.39) *[42.51-48.16]* | 2.67 (2.75; 0.46) *[1.74-3.60]* | 94.67 (5.10; 0.85) *[92.94-96.39]* |
| Self-Generated Cue Concept Map | 35 | 45.60 (9.02; 1.52) *[42.50-48.70]* | 3.86 (3.06; 0.52) *[2.81-4.91]* | 92.48 (5.30; 0.90) *[90.66-94.30]* |
| Other-Generated Cue Keywords | 37 | 38.11 (8.96; 1.47) *[35.12-41.09]* | 2.76 (2.54; 0.42) *[1.91-3.60]* | 93.40 (6.07; 1.00) *[91.38-95.42]* |
| No Cue (Control) | 33 | 40.48 (10.20; 1.78) *[36.87-44.10]* | 2.79 (2.37; 0.41) *[1.95-3.63]* | 93.96 (4.28; 0.75) *[92.44-95.48]* |

Games-Howell post-hoc tests suggest that this difference actually lay between the other-generated cue control condition, and both the self-generated cue event-line ($p$ = .006, Cohen's $d$ = .83, 95% CI [.35, 1.31]) and self-generated cue concept map ($p$ = .006, Cohen's $d$ = .83, 95% CI [.35, 1.31]). It should be noted however, that there is a degree of overlap of the confidence intervals around the mean across the five conditions. While the findings demonstrated here are (i) in line with the findings of an

early proof-of-concept study (see Study 1a) and (ii) in line with the results of a considerable body of research demonstrating the effectiveness of self-generated cues, this does suggest that a degree of caution is needed in interpreting this pattern of results. Future research should seek to replicate and extend the research presented here in order to confirm that these findings are not the result of a Type 1 error.

Data screening revealed that data for the total amount of incorrect details recalled, and the amount of ambiguous or subjective details recalled violated assumptions of normality, therefore Kruskal-Wallis $H$ tests were conducted. A Kruskal-Wallis $H$ test showed no significant difference in either the amount of inaccurate details recalled ($X^2$ (4) = 6.70, $p$ = .153, est. $\mathcal{E}^2$ = .04), or the overall accuracy rate ($X^2$ (4) = 5.22, $p$ = .265, est. $\mathcal{E}^2$ = .03). I also examined differences in the amount of ambiguous or subjective information recalled by condition. These patterns of means can be seen in Table 4. A Kruskal-Wallis $H$ test revealed no significant difference in the amount of ambiguous or subjective details reported; $X^2$ (4) = 2.85, $p$ = .583, est. $\mathcal{E}^2$ = .02.

Table 4.

*Mean amount of correct information reported by grain size (Study 1b)*

| Condition | $n$ | Accurate Information Grain Size | | Ambiguous Details |
| | | Fine-Grain | Coarse-Grain | |
| | | *M (SD; SE)* *[95% CI]* | *M (SD; SE)* *[95% CI]* | *M (SD; SE)* *[95% CI]* |
|---|---|---|---|---|
| Self-Generated Cue Keywords | 29 | 19.93 (6.94;1.29) *[17.29-22.57]* | 21.90 (6.09; 1.13) *[19.58-24.21]* | 3.45 (2.80; 0.52) *[2.38-4.51]* |
| Self-Generated Cue Event-line | 36 | 23.22 (5.46; 0.91) *[21.38-25.07]* | 22.11 (3.94; 0.66) *[20.78-23.44]* | 3.14 (2.30; 0.38) *[2.36-3.92]* |
| Self-Generated Cue Concept Map | 35 | 21.11 (5.94; 1.00) *[19.07-23.15]* | 24.49 (4.27; 0.72) *[23.02-25.95]* | 3.20 (2.31; 0.39) *[2.41-3.99]* |
| Other-Generated Cue Keywords | 37 | 17.73 (6.88; 1.13) *[15.44-20.02]* | 20.38 (3.78; 0.62) *[19.12-21.64]* | 2.41 (1.71; 0.28) *[1.84-2.97]* |
| No Cue (Control) | 33 | 20.18 (6.37; 1.11) *[17.92-22.44]* | 20.30 (4.84; 0.84) *[18.59-22.02]* | 2.85 (2.24; 0.39) *[2.06-3.64]* |

A final series of one-way ANOVAs examined whether use of different self-generated cue techniques resulted in the recall of different levels of detailed information (fine or coarse-grained). The amount of fine-grain information elicited varied significantly between conditions; $F(4, 165) = 3.61$ $p = .008$, $\eta_p^2 = .08$, 90% CI [.01, .13]. Bonferroni post hoc tests showed that participants in the self-generated cue event-line condition generated significantly more fine-grain detailed information than those in the other-generated cue keywords condition ($p = .003$, Cohen's $d = .88$, 90% CI [.40, 1.36]). No other significant differences existed between conditions (all $ps > .244$). Likewise, the amount of coarse-grain information generated significantly varied by condition; $F(4, 165) = 4.82$, $p = .001$, $\eta_p^2 = .10$, 95% CI [.03, .16]. Bonferroni post hoc tests revealed that participants in the self-generated cue concept map condition outperformed those in both the other-generated cue keywords condition ($p = .002$, Cohen's $d = 1.02$, 95% CI [.53, 1.51]) and the no-cue control condition ($p = .002$, Cohen's $d = .92$, 95% CI [.42, 1.42]). Again, no other significant differences existed between other conditions (all $ps > .258$). This pattern of means is shown in Table 4.

Within Study 1b widespread differences were seen within the conditions in terms of whether cues generated were idiosyncratic or more descriptive of the linear stages of the event. It is possible that these different cues types result in different types of information being recalled. See Table 5 for this pattern of results.

Finally, analyses explored the possibility that generation of different types of cues may result in different types of information being. Data screening revealed that data for the total amount of correct person details and the total amount of correct setting details recalled violated assumptions of normality, therefore a Kruskal-Wallis $H$ test was conducted. A Kruskal-Wallis $H$ test showed no significant difference in the amount of correct person details recalled ($X^2(4) = 8.17$, $p = .086$, est. $\mathcal{E}^2 = .05$). However, a Kruskal-Wallis $H$ test revealed a significant difference in the amount of correct setting details reported; $X^2(4) = 21.97$, $p < .001$, est. $\mathcal{E}^2 = 0.13$. Bonferroni post-hoc tests (10 comparisons, significance level = .005) revealed participants in the self-generated cue concept map condition recalled significantly more correct setting details than participants in either the self-generated cue event-line condition ($u = 250.50$, $p < .001$, $r = .52$) or the no cue control condition ($u = 281.00$, $p < .001$, $r = .44$). No other significant differences existed between conditions (all $ps$ between .024 and .846). A final one-way ANOVA showed that the amount of correct action details elicited varied

significantly between conditions; $F(4, 165) = 7.72$ $p < .001$, $\eta_p^2 = .16$, 90% CI [.07, .23]. Bonferroni post-hoc tests suggest that participants in the self-generated cue event-line condition recalled significantly more correct action details than participants in either the self-generated cue keyword condition ($p = .002$, Cohen's $d = 0.98$, 95% CI [0.46, 1.50]) or the other-generated cue keywords condition ($p < .001$, Cohen's $d = 1.21$, 95% CI [0.71, 1.71]). No other significant differences existed between conditions (all $ps$ between .067 and 1.00).

Table 5.

*Mean amount of correct information reported within each information category (Study 1b)*

| | | Information Category | | |
| | | Person | Action | Setting |
| Condition | $n$ | *M (SD; SE)* [95% CI] | *M (SD; SE)* [95% CI] | *M (SD; SE)* [95% CI] |
| --- | --- | --- | --- | --- |
| Self-Generated Cue Keywords | 29 | 8.31 (4.77; 0.89) *[6.49-10.13]* | 22.86 (6.58; 1.22) *[20.36-25.37]* | 10.66 (4.65; 0.86) *[8.89-12.42]* |
| Self-Generated Cue Event-line | 36 | 7.78 (3.79; 0.63) *[6.50-9.06]* | 28.83 (5.63; 0.94) *[26.93-30.74]* | 8.72 (2.30; 0.38) *[7.94-9.50]* |
| Self-Generated Cue Concept Map | 35 | 8.49 (3.22; 0.54) *[7.38-9.59]* | 24.80 (5.65; 0.96) *[22.86-26.74]* | 12.31 (4.02; 0.68) *[10.93-13.70]* |
| Other-Generated Cue Keywords | 37 | 6.89 (2.84; 0.47) *[5.95-7.84]* | 20.97 (7.25; 1.19) *[18.56-23.39]* | 10.24 (2.88; 0.47) *[9.28-11.20]* |
| No Cue (Control) | 33 | 6.36 (3.44; 0.60) *[5.15-7.58]* | 25.12 (6.30; 1.10) *[22.89-27.36]* | 9.00 (3.24; 0.56) *[7.85-10.15]* |

*Note.* The setting category refers to both object and location details.

Overall, Study 1a and Study 1b demonstrate the potential for use of a self-generated cue mnemonic in increasing the amount of correct details reported in a free recall account, without a cost to accuracy. In addition, the findings of Study 1b suggest that different self-generated cue techniques may elicit different levels of detail (coarse-grained global information, and more fine-grain detailed information), and as such,

could be utilized strategically prior to a full interview, in order to aid the retrieval of details most pertinent to the investigation.

It should be noted that while the cell sizes of Study 1b are perhaps smaller than is desirable, there is some evidence that the study was sufficiently powered to detect a small effect. It should be noted that an a priori power analysis was not conducted, in part because group sizes were determined in this case by factors outside of experimental control (i.e. participants were students who could only participate if they had been present in one of their regularly scheduled lectures at which the event was staged). In such cases it can be considered appropriate to provide a sensitivity analysis (Faul, Erdfelder, Lang, & Buchner, 2007; Lakens, 2014). Therefore, a post-hoc sensitivity analysis has been conducted using G*Power (Faul et al., 2007). Given the sample size (170 participants split across 5 groups), an alpha error probability of .05, and an assumed power value of .35 to .5 (the average power of psychological studies has previously been suggested to be 35-50%; Bakker, van Dijk, & Wicherts, 2012; Lakens, 2014) suggests that the study design is sensitive enough to detect a small effect; Cohen's $f = 0.16 - 0.20$. This equates to a $\eta_p^2$ value of .03 to.04 (see Lenhard & Lenhard, 2016 for transformation of effect sizes). This suggests that the main finding (the comparison of correct details recalled using self-generated cues in comparison to the control conditions) can be considered reliable (both the observed effect size and the effect sizes captured within the 90% confidence interval are at least equivalent to these values; $\eta_p^2 = .18$, 90% CI [.04, .27]).

### 5: General Discussion

Across two experiments, the effectiveness of self-generated cues as a retrieval mnemonic in an eyewitness testimony context has been demonstrated. Study 1a found that use of a self-generated cue mnemonic can increase the amount of correct information recalled in comparison to an other-generated cue or no cue control condition. In particular, the use of self-generated cue keywords appeared particularly effective. No significant increase was shown in the amount of incorrect details recalled. This suggests that the use of self-generated cues can benefit recall without a cost to accuracy. The findings of Study 1a therefore served as proof-of-concept for the use of self-generated cues to increase free recall output. Study 1b replicated the principle finding of Study 1 (that self-generated cues can benefit recall beyond control conditions) with a larger sample size. The results show that use of self-generated cues

produced significantly more correct information overall than the use of other-generated keyword cues. In particular, the self-generated cue concept map and self-generated cue event-line were shown to be more effective in facilitating the recall of correct details. Again, no corresponding increase in the number of incorrect details recalled was seen.

It is worth noting that unlike Study 1a, the self-generated cue keyword condition did not significantly outperform either control condition (other-generated cue or no cue) in Study 1b. I speculate that this is likely to be the result of subtle procedural differences. Firstly, the delay increased significantly from four hours in Study 1a to approximately 24 hours in Study 1b. It is possible that the use of self-generated cue keywords is not sufficient to improve recall over longer delays, and as such recall performance in this condition reduced to the level of a no cue or other-generated cue control (as suggested by the pattern of means; Table 3). This may be a product of the cue generation process. For instance, it is likely that more intensive forms of cue generation (such as the event-line or concept map) promote higher levels of task engagement, leading to higher quality cues, and improving recall performance. It may also be the case that the number of cues participants were asked to generate (up to 20 in both studies) impacted their effectiveness in the context of a longer delay. For example, where more cues have been generated it becomes a more onerous task to consider each of these cues in turn in building a clear picture of the event. If this were the case, then it is plausible that the structured approach offered by the event-line and concept map offers an advantage over the self-generated cue keywords condition in terms of the organization of event knowledge for ease of processing (both have previously been used effectively to represent complex information).

Finally, subtle differences in the free recall procedures of the two experiments may account for these differences. Across both experiments participants were encouraged to consider each cue previously generated (or provided in the case of other-generated cues), and to build a clear picture of the event in their mind's eye before providing a full account of the target event. While in Study 1a this instruction was only given to those participants provided with retrieval support (in the form of self-generated or other-generated cues), the blind coding procedures incorporated in Study 1b necessitated all participants receiving this instruction. It is possible that the instruction to build a clear picture of the event prompted the control participants to consider the event in detail before beginning their account and as such improved recall of the no cue

control condition to the level of the self-generated cue keyword condition. Future research will control for these differences in order to establish the underlying cause of this difference in performance (or lack thereof) between self-generated cue keywords and no cue control conditions.

One possible explanation for the increase in recall performance shown by self-generated cue mnemonic conditions is that cues generated by participants were written down and remained available to participants throughout the writing of their free recall accounts. This makes it difficult to ascertain whether it is the generation or the presence of the cue which improves recall. To combat this, I included an other-generated cue condition which provided participants with cues generated by a pilot participant (i.e. cues were *provided*, but not *generated*). These cues remained available throughout the free recall period. The findings of both studies suggest a benefit of self-generated cues over other-generated cues. It is likely that the power of self-generated cues lie in the combination of the cue and the cue generation process, rather than the cue alone. Presenting participants with cues that other participants have generated, whether for word lists (as in Mäntylä, 1986; Tullis & Benjamin 2015b), or for more complex stimulus events (as in the present study) seems to have no beneficial impact on recall. It is also possible that the benefit of self-generated cues shown across both experiments represents the tendency for individuals to recall more information overall across repeated retrieval attempts (hypermnesia or reminiscence; see for example Odinot, Memon, La Rooy, & Millen, 2013). While the benefit of self-generated cues demonstrated (both here, and in pre-existing research) is of some practical value regardless of the underlying cause, future research should explore this possibility, and seek to disentangle these two concepts (effects of repeated recall, and self-generation of retrieval cues).

It is interesting that the self-generated cue concept map condition appeared stronger in terms of accessing broader, more coarse-grained information in comparison to control conditions. In education research, concept maps have been used to assess levels of knowledge for complex ideas, and generally have a hierarchical structure (Cañas & Novak, 2006; Kinchin, 2000). However, to be used effectively, individuals often receive training on how to develop concept maps, and are generally allowed a relatively long period of time to draw their concept map (Barney, Mintzes, & Yen, 2005). In the present study, limited time was available either for training or for the

development of the concept map. It is possible therefore, that more detailed, hierarchical concept maps may have been shown had these time constraints been lifted. Nonetheless, in education research, concept maps have been described as practical, readily accessible, and allowing the assessment of conceptual understanding and meaningful learning to the same degree as more elaborate assessment methods (e.g. clinical interviews; Barney et al., 2005). This success suggests that it may be worthwhile to investigate whether these benefits can be balanced against time constraints.

Overall, self-generated cues represent a promising development in eyewitness testimony research. The results presented here suggest that self-generated cue mnemonics facilitate recall of more correct details than other-generated cues or free recall alone, while maintaining high levels of accuracy. While the overall pattern of results is complex, these findings can (at least in part) be understood in terms of extant theoretical accounts. Self-generated cues represent a unique opportunity to capitalise upon both the spreading activation of memory (Anderson, 1983a) and the diagnostic value of a distinctive cue (Goh & Lu, 2012; Nairne, 2002). In addition, the inclusion of the prompts (location; person/people; object/s; action/s) allows the opportunity to benefit from the semantically clustered nature of memory (as in the spreading-activation theory of semantic processing; Collins & Loftus, 1975, and recent experimental work on category clustering Paulo et al., 2016; Paulo et al., 2017; Thorley, 2018). The present research addresses the potential benefit of utilising self-generated cues to facilitate recall from an empirical perspective. While these findings can be considered as consistent with established principles of memory (as discussed in Chapter 3), further research, both theoretical and empirical, is necessary to establish the extent of the effectiveness of self-generated cue mnemonic techniques and the theoretical underpinnings of this effectiveness.

As far as I am aware the present work is the first to directly compare different means of self-generating retrieval cues within an eyewitness testimony context. In doing so, my aim was to find the most intuitive (in terms of clear, accessible instructions) and effective (in terms of usability and retrieval benefits) self-generated cue technique. One potential applied benefit of self-generated cues lies in the ease with which they could be utilised in an investigative interview setting. At present, the time usually allocated for initial police interview training is relatively short, generally a one week interview course (Dando & Milne, 2009). This constraint on the amount of time available for

training, combined with the complexity of the Cognitive Interview techniques means that aspects of the Cognitive Interview generally regarded as useful, but difficult to incorporate in the field are likely to be neglected (e.g. Mental Reinstatement of Context; Brown et al., 2008; Kebbell et al., 1999). For example, Brown and colleagues (2008) surveyed 78 UK police officers and found that 44% reported never or rarely using mental reinstatement of context. It should be noted however that 50% of officers surveyed reported usually or almost always using this technique. The reasons behind this may differ dependent upon each individual case, but it is likely that the complexity of the mental reinstatement of context technique and the lack of knowledge of the underpinning theory plays a role. This led Memon et al. (2010) to argue for new mnemonics being developed, with the ease of use for investigating officers in mind. Given this context, I argue that the use of a self-generated cue mnemonic technique might be particularly beneficial. The mnemonic techniques proposed here are both relatively intuitive and quick to implement (within the present studies participants were asked to spend approximately five to ten minutes generating their retrieval cues before moving on to give their full free recall account). In addition, best practice interview guidance advocates the use of note-taking and adopting a witness-led approach which allows the witness to provide an initial account relatively uninfluenced by the interviewer (Ministry of Justice, 2011). The use of self-generated cue mnemonics complements this guidance through encouraging a witness-led approach and in particular allowing the interviewee's own words to be used as prompts throughout a structured interview, while also effectively facilitating retrieval.

In the curent work I collected data through use of free recall statements to directly assess the impact of the self-generated mnemonics on output. This approach constitutes an important first step in demonstrating the value of self-generated cues for eliciting information about witnessed events. Future work should incorporate the use of self-generated cues within a structured interview and in particular within the Cognitive Interview to determine whether use of a self-generated cue mnemonic enhances performance in formal interview context. Incorporating a self-generated cue mnemonic alongside the Cognitive Interview will also provide the opportunity to directly compare different means of cue generation and the mental reinstatement of context instruction. Given the reported lack of engagement amongst officers with some of the Cognitive Interview mnemonics (Brown et al., 2008; Kebbell et al., 1999), it would also be of

interest to address whether the self-generated cue mnemonics presented here would be effectively trained and implemented by investigating officers as an useful and intutivive addition to an investigative interviewing toolkit.

## 6: Conclusions

Overall, self-generated cues represent a promising development for facilitating recall of witnessed events. The present work compares three self-generated cue mnemonic techniques and suggests that on the whole such self-generated cue techniques increase the overall amount of information recalled in comparison to other-generated cues. In addition, it seems that different self-generated cue mnemonics may have the potential to elicit different types of information (broader, coarse-grained information, and more detailed, fine-grained information). If this is the case, then these mnemonic devices could then be utilised strategically prior to interview to access the information most pertinent to the investigation. Overall, these findings represent a promising step towards developing effective methods of incorporating witness-led cueing techniques into investigative interviewing contexts. It is however vital that these findings are replicated and extended to establish the boundaries of the effectiveness of self-generated cues, in order to develop a strong evidence base for the practical application of these techniques.

**Chapter 5: Reluctant Witnesses: A literature review**

*The previous chapters have focused on the vital role that eyewitness evidence plays in the criminal justice system (CJS), the responsibility of the police to elicit reliable information and evidence, and the role psychology can play in facilitating and enhancing this process. The value of self-generated cues to retrieval was discussed and empirically tested; this topic will be returned to later in the thesis. However, while self-generated cues are a promising means of facilitating recall with cooperative witnesses, many witnesses are categorised as uncooperative, or reluctant. Therefore, the following chapters now address how best to elicit information and evidence from reluctant witnesses. A reluctant witness is one who is believed to have witnessed an offence, or events closely connected to it, but who is unwilling to become involved in the investigative process. Although recognised in official documentation as a police witness category, there is very little research on reluctant witnesses. The review that follows outlines what is already known about witness reporting behaviours and begins to explore some of the factors believed to impact witness reluctance. These topics are explored further in Chapters 6 and 7, which present the findings of a survey conducted in collaboration with two large UK police forces.*

**1: Reluctant Witnesses**

The critical role that eyewitnesses play in the criminal justice system (CJS) has now been established (see Chapter 2 for an overview). However, cooperation is crucial in allowing witnesses to fulfil this role. A particular challenge is therefore presented by those witnesses who are unwilling to come forward during investigations or unwilling to testify in court (Kebbell & Milne, 1998; Spencer & Stern, 2001). These witnesses are officially referred to as reluctant witnesses. A *reluctant witness* is defined in the Achieving Best Evidence guidance as an individual "believed to have witnessed an offence, part of an offence, or events closely connected with it, but who is reluctant to become involved in the investigative process" (Ministry of Justice, 2011, pp. 45).

At this stage it is worth clarifying additional terminology introduced throughout this chapter. In official policing documentation, a witness is defined as a person, other than the defendant likely to give evidence in court, and as such all victims are also classed as witnesses (College of Policing, 2017). Throughout this chapter I will follow College of Policing guidance and use the term *victim* when referring only to the

individual harmed by the crime, and the term *witness* to mean any individual other than the defendant who holds information about the crime. Witnesses are also sometimes referred to in the general literature as *informers*. This is somewhat appropriate as informers are technically witnesses, albeit a very distinct kind of witness (Billingsley, Nemitz, & Bean, 2001). There are two key types of informer; the professional informer who gives information in return for a personal gain such as reward money or a reduced sentence, and the public-spirited informer who gives information out of duty or occasionally self-interest (Billingsley et al., 2001).

## 1.1: Existing Knowledge of Witness Reporting Behaviour

There has been limited research conducted on reluctant witnesses, however it has been established that not all victims and witnesses report crimes. For example, one survey on victim and witness experiences of the CJS found that over the preceding year 33% of victims and 61% of witnesses failed to report the most recent crime they experienced (Audit Commission, 2003). This figure varies with the type of criminal activity witnessed, with vehicle crime considerably more likely to be reported (83% reporting rate) than hooliganism (55% reporting rate) or harassment (47% reporting rate). Others suggest reporting rates are highest for those who have evidence of a break in (61%) and lowest for those who have witnessed an assault (15%; Spencer & Stern, 2001). The finding that witnesses to more serious crimes may be less likely to report them is in direct contrast to findings from research on whistleblowing, where it has been suggested that the perceived seriousness of the wrongdoing is one of the two most influential factors in individual's decision to "blow the whistle" (the second being perceived personal victimisation; Cassematis & Wortley, 2013). Despite the lack of consensus on the reporting behaviour of witnesses to serious incidents, the possibility that more serious crimes may be less likely to be reported is a concerning one, particularly when it is considered that information from the public is a key contributor to the solving of crimes (Reiner, 1992, cited in Spencer & Stern, 2001).

The Audit Commission (2003) report suggests three distinct witness typologies in terms of their likelihood of engaging with the CJS. Those most likely to engage ("the firmly committed") often have positive prior experience of the CJS and so some understanding of the process. In addition, they are likely to have been a victim or witness to a serious crime, but to have a strong support network in place who are able to

help them overcome some of the barriers to reporting. In contrast, those least likely to engage ("the disengaged") are likely to know, or be in close proximity to, the offender, and to be at risk of intimidation. They are also likely to have had prior negative experiences of the CJS or have poor access to channels through which to make their report (perhaps as a result of being a member of a deprived community). The report also suggested that these witnesses are likely to have been a victim or witness of a more minor crime. In addition, the Audit Commission (2003) report suggested a group of individuals falling between "the firmly committed" and "the disengaged". This group, drawn from a diverse range of demographics, believe it is their duty to report criminal activity to the police, and as such are likely to have a strong sense of civic duty. In addition, they are likely to have limited knowledge of the CJS, but optimistic expectations of potential outcomes.

## 1.2: Factors Underpinning Reluctance

Research has begun to explore potential reasons why some individuals engage more readily with the CJS than others. When considering reasons for non-reporting behaviours, several underpinning concerns have been identified. These include distrust or dislike of the police, the belief that the incident is not worth reporting or should be handled privately, a disinclination to become involved in the criminal justice process, and any number of concerns related to potential repercussions, court attendance, or violation of "anti-snitching" community norms (ACPO, 2006; Audit Commission, 2003; Clayman & Skinns, 2011; Spencer & Stern, 2001). It has also been suggested that witnesses may experience confusion around the role they play within the CJS, which in term may lead to reluctance to provide information (ACPO, 2006).

### 1.2.1: Distrust of the police.

Taken first, distrust of the police has been suggested as a common reason for non-reporting by witnesses. This may be based on experience or popular perception (ACPO, 2006). Trust in the police has often been linked to procedural justice and police legitimacy; that is public judgements on the fairness of police conduct and procedures (Goldsmith, 2005). In addition, a consistent link between trust in the police (in terms of their procedural fairness and legitimacy) and public cooperation has been demonstrated (Bradford, 2014; Clayman & Skinns, 2011; Koster, 2017; Sunshine & Tyler, 2003). In effect, this means that when the public view the police as a legitimate and trustworthy

institution, then increased police-public cooperation is likely to occur, which further increases the likelihood of a desirable outcome (Goldsmith, 2005). Indeed, recent research has demonstrated that trust in the police is the strongest predictor of willingness to cooperate (Papp, Smith, Wareham, & Wu, 2017). In addition, perceptions of the fairness of the police have been suggested to be the primary driving force behind police trust, with perception of police effectiveness (in terms of police response to incidents, and the prevention and detection of crime) having less of an impact (Myhill & Quinton, 2011). Others have suggested that perceptions of procedural justice and police effectiveness as the most important predictors of how likely individuals are to report a crime, even beyond perceptions of their most recent police encounter as (i) fair and (ii) resulting in a satisfactory outcome (Murphy & Barkworth, 2014). However, it has also been acknowledged that perceptions of police legitimacy and procedural justice (and so willingness to engage with the CJS) are influenced by a wide range of demographic factors including age, gender, ethnicity, level of education, and professional or managerial social class (see Spencer & Stern, 2001 for a brief overview). A growing body of research has begun to address the link between procedural justice, police legitimacy, and trust and cooperation (see Koster, Kuijpers, Kunst, & Van der Leun, 2016 for a review of the police behaviour, police legitimacy, and cooperation literature) and improvements in these areas often seem to require systemic changes to the CJS. For this reason, I focus more on some of the less well-established factors within this chapter.

### 1.2.2: Not worth reporting.

Witnesses may fail to report criminal activity where the incident in question is considered (by the witness) to be not worth reporting. This may be for a number of reasons. For example, research has suggested that witnesses are likely to refrain from reporting incidents when they believe that an incident is too trivial or occurs too frequently to be worth reporting, and that as a result police would not respond appropriately (the first of these is a more common concern for victims than witnesses; Audit Commission, 2003). There may also be a perception that the police are too busy to deal with reports of more minor incidents (e.g. antisocial behaviour, vandalism, etc.). This often seems to result from a fear that the police would treat the witness as though they had wasted their time (Spencer & Stern, 2001). Research has suggested that this is

particularly the case with juvenile crimes, although the idea that the police are too busy is less of a concern for victims than for witnesses (Audit Commission, 2003).

However, these barriers may also prevent reporting of serious incidents such as domestic violence. One US study conducted using data from the 1992 to 1998 National Crime Victimisation Survey suggested that 71.9% of domestic violence incidents went unreported. Of this figure, 22.8% suggested that the primary reason for not calling the police was that the incident was a private matter, 18.1% that the incident was too trivial to report, and 4% that the incident would not be important to the police (Felson, Messner, Hoskin, & Deane, 2002). The view of an incident as being a private matter may arise from concerns over status and public perceptions of the victim. For example, individuals may be embarrassed to reveal that they have been involved in a domestic violence incident, regardless of the role they played within the incident. This concern is likely to be exacerbated where there is a close personal relationship between the victim and offender (Felson et al., 2002). The nature of the victim-offender relationship can also impact perceptions of the severity of the incident, and in doing so lead to concerns about whether the crime is too trivial to be reported (Felson et al., 2002). The demographic traits of those involved in the incident can also affect perceptions of offence severity. For example, offences committed against women, children, or the elderly (or indeed anyone perceived as being particularly vulnerable) are often perceived as more serious than those committed against men or youth (Felson et al., 2002; Spencer & Stern, 2001).

### 1.2.3: Disinclination for involvement.

Witnesses may show a disinclination for involvement. One of the most common reasons for not reporting a crime is the perception that the crime has already been reported or that the police are already dealing with the incident (Audit Commission, 2003; Willoughby, 2015). The perception that someone else could, report the crime has also been suggested as a contributing factor. In this case, the potential impact upon reporting behaviour is less clear cut. Focus group research has suggested that witnesses can view the presence of additional witnesses as "strength in numbers" meaning that the likelihood of reporting increases, or as an indicator that they are not responsible for reporting the incident thus reducing the likelihood of reporting (Spencer & Stern, 2001).

Furthermore, it is not uncommon for witnesses to refrain from reporting criminal activity because of the personal cost associated with this. Witnesses are less likely to report an incident when it is personally inconvenient to do so, or when they do not wish to become involved (Audit Commission, 2003). This implies that individuals undertake a form of cost-benefit analysis when making the decision to reveal information about criminal activity (Asbury, 2011). Witnesses may be more willing to report a crime in the first instance (whether to the police or to another relevant agency) than to become involved in an investigation at a later stage. For example, witnesses are more likely to be willing to give a statement than to give evidence in court or to provide other sources of assistance likely to be traced back to them (e.g. allowing CCTV surveillance to take place on their property; Amelin, 2000; Billingsley et al., 2001). This may be a result of the practicalities of becoming more involved in an investigation. Making a statement and going on to give evidence in court can be inconvenient and time-consuming. Furthermore, the financial compensation given for attending court is generally too low to cover the loss of earnings a witness might experience (Spencer & Stern, 2001). Together these factors contribute towards the belief held by some witnesses that contributing to an investigation is not worth the personal investment it requires.

### 1.2.4: Fear of reprisals.

Witnesses often experience a number of concerns around reporting. As has already been suggested, the relationship between witness and offender can impact the likelihood of reporting, with individuals being less likely to report offences committed by those people known to them (Felson et al., 2002; Fyfe & McKay, 2000; Spencer & Stern, 2001). Among the reasons for this is a concern about fear of reprisals. This may be in terms of repercussions from the suspect or the response of the local community (ACPO, 2006). It has been suggested that *likelihood* of reprisal is a relatively uncommon reason for non-reporting. In cases of domestic violence, Felson and colleagues (2002) suggested that this was given as the main reason for not reporting an incident in just 3.4% of cases surveyed. Consistent with this is the finding that witnesses are more likely to be concerned about reprisals than victims, but that this is relatively low in both cases (4% and 1% respectively; Audit Commission, 2003). Home Office reports put this figure marginally higher, suggesting that 9% of witnesses who report a crime experience actual intimidation (Maynard, 1994).Nonetheless, the *fear* of reprisals, however likely or unlikely this may actually be, can be enough to prevent cooperation

(Clayman & Skinns, 2011; Papp et al., 2017). If individuals do indeed engage in a cost-benefit analysis when deciding to report a crime, then it is probable that witnesses cooperate only when the benefit outweighs both the personal cost and potential for retribution (Asbury, 2011; Clayman & Skinns, 2011).

Cases involving reluctant witnesses are regularly reported in the mainstream media. Among the most well-known of these is the Stephen Lawrence case. While investigating the attack on Lawrence in 1993 (a stabbing, which resulted in his death), police investigators encountered witnesses reluctant to give information. This reluctance was thought in part to be a result of the reputation of the father of David Norris (one of the suspects later convicted of the attack), and fear of the retribution which might arise if the police were assisted in their investigation (Macpherson, 1999). This type of safety concern seems to be common among reluctant witnesses, and when recent cases are considered it is not difficult to see why that might be the case. For example, in January 2017, Leoandra Osemeke was fatally stabbed within 25 seconds of arriving at a house party in Peckham, South East London. Osemeke had been due to give evidence at the trial of the three teenagers later convicted of the manslaughter of Myron Yarde, who had been fatally wounded in a "punishment stabbing" in New Cross, South East London in April 2016 (Gayle, 2017a; Gayle, 2017b).

Despite the prominence of cases of this nature in mainstream media, the threat of reprisals against members of the public acting as witnesses is considered to be relatively low. Overall, the likelihood of repercussions can be considered in terms of three levels. First, a small number of individuals who require a high level of protection, followed by a larger group of individuals known to have assisted the police, and who consequently suffer non-life-threatening intimidation or harassment. Finally, there is an outer group of members of the public who perceive the risk of threats or harassment as a barrier to reporting. It is the perception of the risk (rather than the actual risk of reprisals) that is the main issue for this final group (Maynard, 1994). This demonstrates that despite the relatively low occurrence of actual intimidation among witnesses (it has been suggested that intimidation is more likely to be experienced vicariously than personally; Maynard, 1994; Whitman & Davis, 2007), the perceived risk of intimidation can create levels of fear sufficient to prevent the witness from cooperating (Clayman & Skinns, 2011). This perceived risk is likely to be viewed as a more "real" concern where the crime witnessed involves gangs or organised crime groups. This is because in these cases it is

not unknown for entire neighbourhoods to experience intimidation (rather than individuals), which increases the view that cooperation can lead to retribution. Maynard (1994) estimates that 22% of crimes witnessed across four high crime estates went unreported as a result of fear of intimidation. One such example of neighbourhood-wide intimidation occurred after the fatal shooting of 17-year old Sylvester Akapalara in Peckham, South East London in 2010. Shortly after the shooting, flyers were posted around a housing estate urging residents not to "rat" to the police and promoting distrust of Operation Trident ("Flyers in Peckham", 2011. See also Figure 9 below).
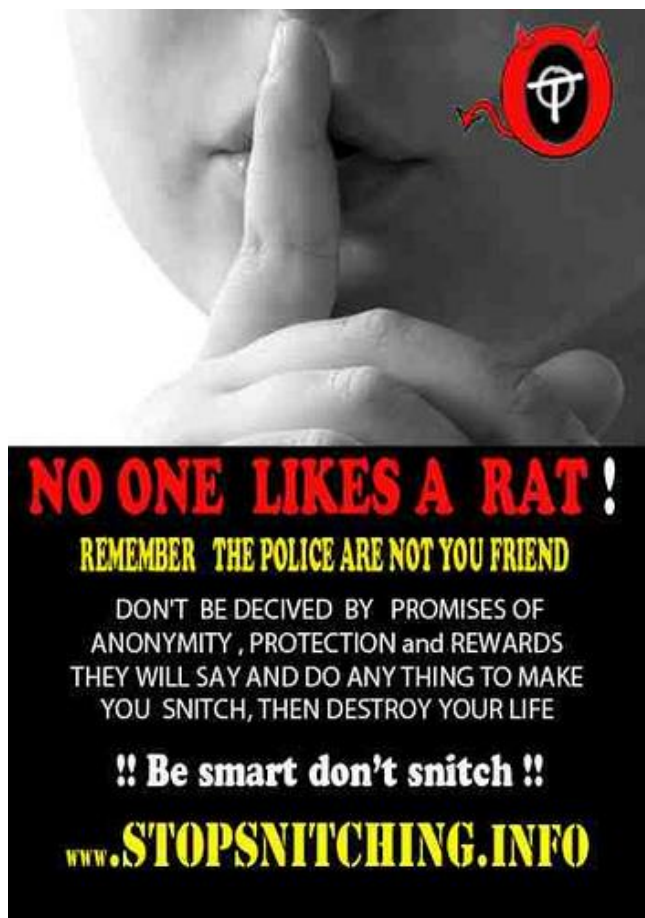


*Figure 9.* Flyers distributed in Peckham following the fatal shooting of Sylvester Akapalara (Stanko, 2013 in S. Clayman, personal communication, November 28, 2014).

However, there are factors that have been suggested to increase the risk of intimidation or harassment. For example, research estimates that one in three youths (aged 12-18 years of age) have heard of someone they know (from their school or neighbourhood) being threatened or harmed after reporting an incident. In addition,

around 45% of crimes witnessed by the students sampled were suspected to be gang-related, with 12% of those reporting gang crime indicating that they had experienced intimidation in the form of threats or harm as a result (Whitman & Davis, 2007). Further research suggests that the most serious threats of intimidation are associated with organised crime groups (including gangs) and domestic violence, and that witnesses are most likely to feel at risk of intimidation if the crime they witnessed was violent in nature, if they have an existing connection with the suspect, live in the same area as the suspect, or can be considered to be vulnerable due to any other personal characteristic (Spencer & Stern, 2001). Data collected by Strathclyde police between September 1996 and July 1998 note 55 individuals (from across 37 different cases) who were considered as being at a high risk of life-threatening intimidation. Of these, over half had witnessed murder or attempted murder, and two thirds lived near the intimidator. Where lower levels of intimidation (for example physical assaults or property damage) were experienced an increase in severity was often observed in the time leading up to a decision to prosecute or as a trial date approached (Fyfe & McKay, 2000).

### 1.2.5: Anti-snitching norms.

Another common theme surrounding non-reporting of incidents is that of anti-snitching norms. As Clayman and Skinns (2011) highlight, the potential repercussions of cooperating with the police include reputational damage, as well as physical harm (see also Woldoff & Weiss, 2010). In communities with strong social norms around engagement with the police then it is entirely possible that in choosing to report a crime, the individual is violating socially accepted standards of behaviour (often referred to as a "code of silence" or "wall of silence"), and in doing so can earn the reputation of being a "snitch" (Asbury, 2011; Clayman & Skinns, 2011). Instances of perceived "snitching" have resulted in revenge behaviours such as graffiti within the community identifying the individual responsible. This increases the risk of hostility from both the accused, and other members of the community (Fyfe & McKay, 2000). The backlash from communities can be understood in terms of betrayal of community norms. As Billingsley and colleagues state "Informers can poison communities because communities are built on trust while informers operate on the basis of betrayal" (2001, pp. 58).

Traditionally, a snitch has been viewed as one who engaged in illegal activities, and upon arrest gave the names of others, often their co-conspirators to lessen the severity of their own punishment (Asbury, 2011). A slightly broader definition describes a snitch as one who relies on authorities, particularly legal authorities to settle grievances (Felson et al., 2002). However, across recent years this definition has broadened further, and a snitch can now be seen as any individual who engages in "traitorous" behaviours through cooperating with group enemies, be these peers, rivals, outsiders, or formal authorities (Woldoff & Weiss, 2010). As such, this definition has moved from the insider revealing group knowledge (such as naming accomplices) to include any communication with authorities (particularly the police) after an incident (Fyfe & McKay, 2000). In other words, snitching can now be viewed as "a conscious decision by a casual observer, accomplice or acquaintance turned witness to actively cooperate [to report a crime or come forwards as a witness] and provide information about a crime that has either occurred or is about to occur, even if this goes against the codes of conduct within their peer group, gang or "community" (Clayman & Skinns, 2011, pp. 3).

The widening definition of individuals who may be branded a snitch can be seen as a product of the "stop snitching" movement (particularly prevalent within the USA). Despite this, founders of the movement suggest that this is an over-generalisation of the term (Asbury, 2011; Masten, 2009). Regardless, the stop snitching movement has had implications for the CJS. The portrayal of police as the enemy, makes it difficult for witnesses to come forward (certainly without assurances of anonymity), and as such the stop snitching movement has manifested as a refusal by local communities to cooperate with the police (Asbury, 2011; Woldoff & Weiss, 2010). Similarly, anti-snitching norms are strongly embedded from childhood onwards. Very early in life, children learn to protect the secrets of friends and refuse to "tell" on friends in school (Woldoff & Weiss, 2010). This often manifests in later life in the development of codes of silence such as the "code of the street" which prevents community cooperation with police after a crime, or the "blue wall of silence" whereby police officers protect other officers (Palmiotto 2011; Woldoff & Weiss, 2010). In this sense, the decision to provide information can be viewed in terms of competing loyalties; cooperating with the police demonstrates loyalty to the state, and a refusal to "snitch" as loyalty to the community (Asbury, 2011). The latter explains why even altruistic or moral motives for providing

information to the police are often interpreted by communities as betrayal, thus leaving would-be cooperative witnesses with a moral dilemma to reveal information or to uphold community norms (Clayman & Skinns, 2011; Woldoff & Weiss, 2010). As a result, requests for information are often greeted with the response of "that's not my problem" as a means of distancing the individual from this decision (Clayman & Skinns, 2011). That being said, there are some circumstances where it is more permissible to give information, for example when an injured victim needs help, where close family members have been affected, or where the suspect is unlikely to know who reported them (leading to a lower risk of retaliation; Clayman & Skinns, 2011; Whitman & Davis, 2007).

There are also a number of factors which are particularly inhibiting (in terms of cooperation) within a given demographic. For example, young people's decisions to cooperate with the police can be influenced by feelings of personal safety, the attitudes of peers and "elders" (more senior members of the peer group), and to a lesser degree family, and music (Clayman & Skinns, 2011). Mainstream media (including music) has been suggested to be particularly influential in urban Black communities (Asbury, 2011) with several high-profile rappers and hip-hop artists endorsing a lack of cooperation with the police in all contexts from reporting a crime to becoming an informant (see O'Flaherty & Sethi, 2007 & Woldoff & Weiss, 2010 for more detailed discussion of this).

### 1.2.6: Anxiety about the CJS.

Witnesses may express anxiety about the CJS itself. This is somewhat unsurprising given the given the paradoxical position witnesses hold within the justice system; witnesses are widely recognised as being crucial both within police investigations and successful court proceedings, whilst simultaneously having their participation taken for granted (Fyfe & McKay, 2000). In essence, communities are asked to make a charitable contribution of time and in some cases risk their safety, and it is this civic altruism that is crucial to the smooth running of the CJS (O'Flaherty & Sethi, 2007). Despite this, estimates suggest that approximately 40% of witnesses who act as a witness in court would be unwilling to do so again (Audit Commission, 2003; Sparks & Spencer, 2002). Even court officials (generally prosecutors) suggest that the court system is not friendly towards witnesses, with levels of satisfaction strongly

related to how much information the witness received prior to court attendance, and whether regular updates were provided during this process (Spencer & Stern, 2001). Dissatisfaction also occasionally arises as a response to feelings of not being taken seriously when reporting a crime, or as a result of intimidation prior to a court date (see Audit Commission, 2003 and Spencer & Stern, 2001 for an overview).

In sum, the reluctance of witnesses or victims to engage with the police presents a significant problem for the CJS. The official definition of a reluctant witness is (understandably) broad, therefore guidelines for managing these interactions focus predominantly on establishing the reasons for witness reluctance. In order to allow more specific evidence-based interventions to be developed it is vital that a clearer understanding is developed of the factors effecting witness decisions to (i) give information (or intelligence) and (ii) give evidence. As outlined above, a number of suggestions have been made as to why witnesses may not report crimes or cooperate with requests for information. However, much of this research is somewhat dated stemming primarily from the early 2000s (e.g. Spencer & Stern, 2001; Sparks & Spencer, 2002). During this period (and as a direct result of some of this research) some changes have been made to policing processes and the ways in which witnesses are able to provide evidence (e.g. the introduction of the non-emergency telephone number). Therefore, Chapter 6 addresses practitioner views on reluctant witnesses and in doing so is able to offer some understanding of how the nature and extent of the problem presented by reluctant witnesses has changed as a result of these developments within the CJS.

**Chapter 6: Characteristics of Reluctant Witnesses: A practitioner perspective**

*A reluctant witness is one who is believed to have witnessed an offence, or events closely connected to it, but who is unwilling to become involved in the investigative process. Chapter 5 reviews existing literature on reluctant witnesses in terms of (i) what is known about witness reporting behaviours and (ii) factors believed to impact witness reluctance. However, much of this research pre-dates a number of changes to policing processes (e.g. the introduction of the non-emergency telephone number). Moreover, existing research generally focuses on general requests for cooperation, rather than more specific requests for intelligence or evidence. Therefore, Chapters 6 and 7 present the findings of a collaboration with two large UK police forces, which examines the current nature and scale of the problem presented by reluctant witnesses. This survey of practitioner respondents (N = 47) focused on three key areas (1) the perceived frequency with which reluctant witnesses are encountered, and if these encounters share any particular features, (2) the approaches which officers take when encouraging a witness to give information or evidence, and (3) how these differ when the witness is classified as reluctant. Analyses highlight the perceived prevalence of encounters with reluctant witnesses in UK criminal investigations, as well as some of the key challenges faced by interviewing officers. Results are discussed in terms of the role that applied researchers can play in supporting investigators in handling encounters with reluctant witnesses, both within the police and in wider investigative contexts.*

<div align="center">

**1: Introduction**

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As outlined in Chapter 5, the reluctance of witnesses or victims to engage with the police presents a significant problem for the CJS. While a number of suggestions have been made as to why witnesses may not report crimes or cooperate with requests for information, much of this research is somewhat dated stemming primarily from the early 2000s (e.g. Spencer & Stern, 2001; Sparks & Spencer, 2002). As a result, the existing literature does not account for changes made to policing practice (e.g. the introduction of the non-emergency telephone number). Furthermore, existing research often focuses on general cooperation with police requests (or general reporting behaviours), rather than cooperation with specific requests for either intelligence or evidence. Given some of the concerns around "snitching" and fear of reprisals (outlined in Chapter 5), it is possible that different factors may underpin witness willingness to provide information or evidence, particularly where it is possible to provide information

anonymously or "off the record". The present study therefore seeks practitioner views on reluctant witnesses with the aim of (i) improving understanding of how the nature and extent of the problem presented by reluctant witnesses has changed as a result of developments within the CJS, and (ii) exploring witness willingness to give intelligence and evidence as separate facets of the investigative process. Study 2 presents the results of a survey of police officers from two UK-based metropolitan forces on their views of how often, and under what circumstances reluctant witnesses are likely to be encountered, and the key challenges these encounters present. Officers were also asked to outline their perception of the factors which might compel or prevent witnesses from giving information. Through this study I hope to establish practitioner perceptions of the extent of the problem reluctant witnesses present to the CJS. In doing so the present study seeks to confirm and extend current knowledge around witness willingness to cooperate with two key stages of the investigative process (information-gathering and evidence-gathering). This work is largely exploratory in nature, although conversations with practitioner partners during the development stages of this project, and a review of extant literature, suggest that encounters with reluctant witnesses will be perceived as relatively commonplace, and that reluctance can occur for a wide variety of reasons.

There is limited guidance available on managing interactions with reluctant witnesses, therefore the present research further aims to establish the techniques perceived to represent effective practice in encouraging reluctant witnesses to give information or evidence after an incident (this is discussed further in Chapter 7). As the survey presented below addresses two distinct aspects of witness reluctance (i) perceived prevalence and causes of reluctance and (ii) perceived effective practice in these instances, these findings are presented across Chapter 6 (frequency and characteristics of reluctant witness encounters) and Chapter 7 (effective practice). However, the methodology and participants are presented in their entirety below.

## 2: Study 2

## 2.1: Method

### 2.1.1: Participants.

A survey on reluctant witnesses was distributed via email to police officers from two large metropolitan forces in the UK. The survey link was distributed broadly across the forces, as well as being sent to select working groups likely to have encountered

reluctant witnesses in their daily roles (for example two specialist gun and gang related crime units, one within each force). Participation was entirely voluntary.

Data were collected between May and December 2015. Seventy-five responses were collected during this period, however of these 28 respondents gave only demographic details and so were excluded from analyses. This left 47 usable responses. Response rates varied from question to question, therefore the number of responses for a given question will be introduced in the results section. However, the number of responses to open-ended questions always exceeded 21. The final sample ($N = 47$) were predominantly male (72%) and aged from 26 to 59 years (M = 39.34, SD = 7.46). The respondents' length of service ranged from 6 to 40 years (M = 15.34, SD = 7.36). In terms of role, over half of the respondents reported being secondary investigators (highly trained interviewers dealing with more complex interviews; 55%), with just under a third working as first contact or response officers (32%). The remaining respondents reported working for third party organisations (2%), or working in a supervisory, or specialist role (11%). The vast majority of the respondents reported conducting interviews on a weekly basis (79%). In terms of training most respondents (72%) reported having completed PIP2 or Tier 2 or 3 training; as outlined in the National Investigative Interviewing Strategy (ACPO & NPIA, 2009) this indicates training beyond that of basic interview training and represents competency in conducting either core or specialist investigative duties. Core functions refer to interviewing victims and witnesses or suspects in relation to serious and complex investigations (relevant to CID officers or others is specific interviewing roles), while specialist roles involve conducting specialist interviews with victims and witnesses (e.g. vulnerable witnesses) or suspects (e.g. suspected Category A murderers[6]). Of the remaining respondents 17% had completed basic training required for volume investigators such as patrol officers (interviewing victims and witnesses or suspects in relation to priority or volume crime) and 13% had completed more advanced training required for interview advisors and as such are able to manage and coordinate interviews for serious, complex, or major investigations. The remaining respondents (4%) were unsure of the level of training they had received.

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[6] A Category A murder is defined in the Murder Investigation Manual as one "which is of grave public concern or where vulnerable members of the public are at risk, where the identity of the offender(s) is not apparent, or the investigation and securing of evidence requires significant resource allocation" (ACPO, 2006, pp. 77].

### 2.1.2: Materials and procedure.

#### *2.1.2.1: Reluctant witness survey*.

The survey was developed in collaboration with senior officers at two large metropolitan police forces in order to gather data on officers' experiences of reluctant witnesses and their views on the effectiveness of various techniques which could be helpful in situations involving reluctant witnesses. Questions were presented in four key sections; (i) demographic details; (ii) reluctant witnesses, focusing on the perceived prevalence of these encounters and the challenges they present; (iii) perceived effective practice, focusing on techniques for gaining intelligence, evidence, and building rapport with reluctant witnesses; and (iv) intelligence versus evidence, focusing on the percentage of reluctant witnesses that can be persuaded to give information or evidence, and perceptions of factors that may affect these decisions[7]. These sections were presented in a specific order to allow central items to be presented first (given the anticipated attrition based on prior police surveys e.g. Vallano, Evans, Schreiber Compo, & Kieckhaefer, 2015), and to allow later items to build upon information given earlier in the survey. The specific questions included in each section were developed in collaboration with senior colleagues in both forces surveyed. Both open-ended and closed questions were included as appropriate. The complete survey can be found on the OSF (see Appendix A). Each section is outlined in more detail below (although please note that sections one, two, and four will predominantly be addressed within the current chapter, and section three will predominantly be addressed within Chapter 7.)

Section 1 ***demographic details*** requested details (generally in a free-response format) on the respondents' affiliations, role, years of service, and highest level of training. Section 2 on ***reluctant witnesses*** presented a key definition of this witness category, before asking respondents to freely estimate the percentage of witnesses they generally encounter that could be classified as reluctant. This section also included a free-response section on any common features of these encounters (for example, whether they usually occur following a particular type of crime). The final question in this section listed four key challenges reluctant witnesses may present. These challenges

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[7] Please note that the survey also included a section on criminal justice support for official approaches (focusing on respondent use of official protective measures and perceptions of court support for each of these), however this offered limited scope for psychological interventions and so was excluded from analyses.

had been previously suggested by senior colleagues in forces surveyed. Respondents were asked to rank these in terms of the challenge each presented (from most to least challenging), and to use a free-response textbox to add any additional challenges they had encountered.

The third section on *effective practice* required respondents to provide details (in a free-response format) of techniques they find particularly effective when trying to encourage a reluctant witness to give intelligence, and when encouraging them to give formal evidence. This section also referenced the importance of rapport building in gaining cooperation (based upon previous research, for example Alison, Alison, Noone, Elntib, & Christiansen, 2013; Holmberg & Madsen, 2014) and asked respondents to outline the approach generally taken to build rapport, and how this might differ with a reluctant witness. The results of this section will be discussed in Chapter 7.

In section 4, *intelligence versus evidence*, respondents were asked to estimate based upon their own experience the percentage of witnesses initially classified as reluctant who go on to give (a) intelligence, and (b) evidence. Respondents were then asked in a free-response format to list the factors which might compel individuals to give intelligence and evidence, and the factors that might prevent this. Respondents were also asked to consider any factors common among witnesses willing to provide evidence in court.

### 2.1.3: Data coding.

Free-response data were coded using a category-based approach (as in Vallano et al., 2015). These responses were initially reviewed by RW and a series of categories which captured the content of responses were devised. As limited previous research discusses information gathering with reluctant witnesses, all of these categories were devised on the basis of data collected, rather than being established a priori (this is in contrast to the approach adopted by Vallano et al., 2015, where pre-existing literature guided the development of a minority of categories prior to data collection). Categories were devised on a question-by-question basis, rather than representing overarching themes. A research assistant (ET) then completed secondary coding of a small sample of responses against the categories and agreed that these accurately represented the data collected. Throughout this process any additional categories suggested by ET were incorporated into the category list while avoiding duplicate or overlapping categories.

This final set of categories was then used to categorise all free-response data. The primary coder (RW) calculated frequency counts for each category that is how many responses fell within each particular category. A second independent coder (RA) was asked to code data associated with key questions. This coder was not provided with the original category list. The categories generated by the primary coder (RW) and the two independent coders (ET & RA) showed a high level of agreement (i.e. very few additional categories were identified by the independent coders).

The frequency counts presented represent response categories for each individual question. The exception to this is for data gathered through section 5 *intelligence versus evidence*. Here, respondents were asked to list separately the factors which may compel or prevent witnesses from giving evidence or intelligence. These responses showed considerable overlap, and so the category list was collapsed (again, while minimising overlapping or duplicate categories) between the questions to allow speculation about the overall underpinning factors. These data were coded by RW and are now presented as (i) factors underpinning the desire to give evidence or intelligence, and (ii) factors underpinning a reluctance to give evidence or intelligence.

**2.2: Results**

Throughout the results that follow two key types of percentages will be used to describe the data. *Category* percentages describe the proportion of responses which fell within the specified coding category (i.e. of all responses received for the question, how many referenced the main category in their answer). *Subcategory* percentages break this *category* percentage down further and describe the subtopics which make up each primary coding category. In the majority of cases responses referred to more than one category or subcategory (e.g. a single response to a given question might reference multiple techniques for gaining information, and so be included in multiple categories), as such percentages may total more than 100%.Throughout the results section *N* refers to the number of responses to a given question.

**2.2.1: Reluctant witnesses: Perceptions of prevalence and common features.**

Respondents were first asked what percentage of witnesses they have contact with could be classed as reluctant, and whether these encounters share any common features, for example following a particular crime type. Estimates for encounters with

reluctant witnesses ($N = 45$) ranged from 5% to 90% (likely as a result of the varied roles of our respondents), with a mean response of 49.11% (SD = 24.16%, median = 50%[8]). Forty-five respondents addressed common features of encounters with reluctant witnesses. These included the type of crime witnessed, the individuals involved, the neighbourhood in which the incident was witnessed, cultural factors, and those related to fear and minimising risk. Each of these will be discussed in turn below in descending order in terms of percentage of mentions by respondents, alongside indicative quotes. Key categories can be seen in Table 6 and the full range of categories and subcategories can be seen in Appendix B.

Table 6.

*Common features of encounters with reluctant witnesses: Key categories*

|  | Reluctant Witness Encounters | |
| --- | --- | --- |
| Category | Count | % |
| Crime Type | 39 | 87% |
| Individuals Involved | 16 | 36% |
| Neighbourhood | 11 | 24% |
| Fear and Minimising Risk | 10 | 22% |
| Culture and Social Norms | 6 | 13% |

### *2.2.1.1: Crime type.*

The majority of responses about common features of encounters with reluctant witnesses referenced the type of crime witnessed. These made frequent references to violent crime, particularly gang, gun, and knife crime. In addition, responses highlighted serious violence (including murder) as increasing the likelihood of witnesses being considered reluctant or hostile. Cases involving domestic violence were also considered a contributing factor. Taken together, these responses suggest a widely held belief that incidents involving serious violence make a significant contribution to the proportion of encounters with reluctant witnesses.

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[8] Please note that several respondents gave a range when estimating the frequency of encounters with reluctant witnesses. In calculating a mean value for overall responses, the midpoint of this range of values was given (rounded to the nearest whole number).

One respondent within a specialist gun and gang crime unit described encounters with reluctant witnesses as follows: "witnesses to gang related crime (who are often local residents) are reluctant to give evidence as they fear for their family or themselves being targeted. So often [reluctant witnesses are] witnesses to gang related crime and gun crime" (Respondent 20, specialist gun and gang crime unit, 20 years of experience).

### 2.2.1.2: Individuals involved.

Respondents made frequent references to those involved in the incident. In particular, respondents referred to witness affiliations to gangs (or organised crime networks) as being causes of reluctance. "I deal with shootings and stabbings between gang members. The gang members are nearly always reluctant if not hostile witnesses. Occasionally a member of the public who witnesses the attack will be happy to provide evidence" (Respondent 10, specialist gun and gang crime unit, 14 years of experience).

Respondents also used the phrase "witness-suspect profile overlap" (those witnesses who are involved in criminality themselves, and who may be suspects in investigations) when describing reluctant witnesses. One respondent with a specialist gun and gang crime unit described reluctant victims as follows: "many are involved in gang criminality themselves, thus do not wish to assist police as are often suspects themselves" (Respondent 17, specialist gun and gang crime unit, 17 years of experience).

Responses also suggest that independent witnesses (third parties unconnected to the events or those involved) are potential reluctant witnesses. This seems somewhat counter intuitive. It is possible that the likelihood of this is mediated by some of the factors discussed later. It is also worth noting that one respondent did suggest that independent witnesses are less likely to be reluctant witnesses:

> This occurs in all types of crime, a lot of domestic victims and a lot of the time if an incident happens in public. If in public then this will worsen with the larger the amount of people who witnessed it [sic]. An apathy towards the incident will occur with mutterings of "I DON'T WANT TO GET INVOLVED, THEY SAW IT ASK THEM" often repeated. People don't usually want to get involved and provide accounts if the victim or incident isn't personal to them. (Respondent 38, response team, seven years of experience)

### 2.2.1.3: Neighbourhood.

Respondents referred to neighbourhood factors as contributing to the likelihood of witness reluctance. For example, one officer serving with a specialist gang and gun crime unit described neighbourhood factors as follows:

> Reluctance is usually associated with witnessing violent crime, especially when it has been committed close to the witnesses' home. In many cases the victim or perpetrator is recognised by the witness. The witness is often at home or very close by and so are naturally worried about repercussions. In the case of victims, they are likely to avoid police contact all together for the same type of crime. (Respondent 8, specialist gang and gun crime unit, eight years of experience)

As illustrated above, reluctant witnesses were likely to have witnessed a crime close to home, or in an area known to have high levels of gang crime and anti-social behaviour. Where the incident has been witnessed close to home it is also possible that this will be seen as "a local issue":

> In my experience you tend to get a reluctant witness when the crime is a local issue i.e. the standard response is "I have to live around here, you don't" and that is the response regardless of the seriousness of the crime. (Respondent 39, response team, eight years of experience)

Reluctant witnesses were also likely to live in close proximity to the victim or suspect or to have witnessed the crime in a public place with a high possibility of other witnesses being present.

### 2.2.1.4: Fear and minimising risk.

Several factors common to encounters with reluctant witnesses related to fear and minimizing risk. Responses within this category overwhelmingly suggested a fear of repercussions among reluctant witnesses. This may include cases where intimidation is likely, where the fear is a result of being recognised as someone who has helped the police, or where this is a general fear resulting from an awareness of the reputations of those involved.

> Serious assaults and murder committed on and by young people within a community where the inevitably young witnesses are themselves living within that community and understandably unwilling to jeopardise their own and their family's quality of life through fear of reprisals. Invariably the youngsters are from homes with strong Christian values and they do not want their parent(s) to know that they are exposed to violence. They are practiced at keeping their home and outside home lives completely separate. (Respondent 47, homicide and serious crime command, 27 years of experience)

In addition, responses suggest that reluctant witnesses are likely to be encountered where fear (regardless of the underlying reason) outweighs the desire for a conviction. For example, one respondent working within a homicide unit suggested that reluctant witnesses are often encountered when investigating:

> Gang offences, [and] murders within the Black community. Often fights where a murder results, but the victims could be considered the "losers" of the fight rather than victims in the normal sense. The threat of retribution is often higher than a desire to give evidence and see the killer of their friend convicted. The occasions when a member of the suspect's gang give evidence as a witness are extremely rare. (Respondent 41, homicide and serious crime command, 30 years of experience)

### 2.2.1.5: Culture and social norms.

Respondents frequently referenced common cultural or social norms which increase witness reluctance. These factors are likely to manifest as a lack of interest in becoming involved in the investigative process or adherence to a community anti-snitching culture or code of non-cooperation. For example, one respondent stated "Any crimes, people don't like to get involved, especially if they haven't been affected. It also starts at school with bullying incidents in school and the fear and consequences from peers about snitching" (Respondent 15, specialist gun and gang crime unit, 11 years of experience).

### 2.2.2: Challenges presented by reluctant witnesses.

Respondents were presented with four key challenges prevalent in investigations involving reluctant witnesses (suggested by senior colleagues in the two forces surveyed) and asked to rank these from most to least challenging. The challenges were (i) encouraging witnesses to come forward through appeals, (ii) gaining information from witnesses known to be present, (iii) gaining an appropriate level of detail from witnesses, and (iv) obtaining formal evidence from witnesses who have given intelligence. The latter of these (encountering witnesses who have given intelligence but are reluctant to give formal evidence) was ranked as the main challenge presented by encounters with reluctant witnesses by the majority of respondents (57% of 46 respondents). However, less consensus was shown for the remaining challenges. This is demonstrated below in Figure 10.
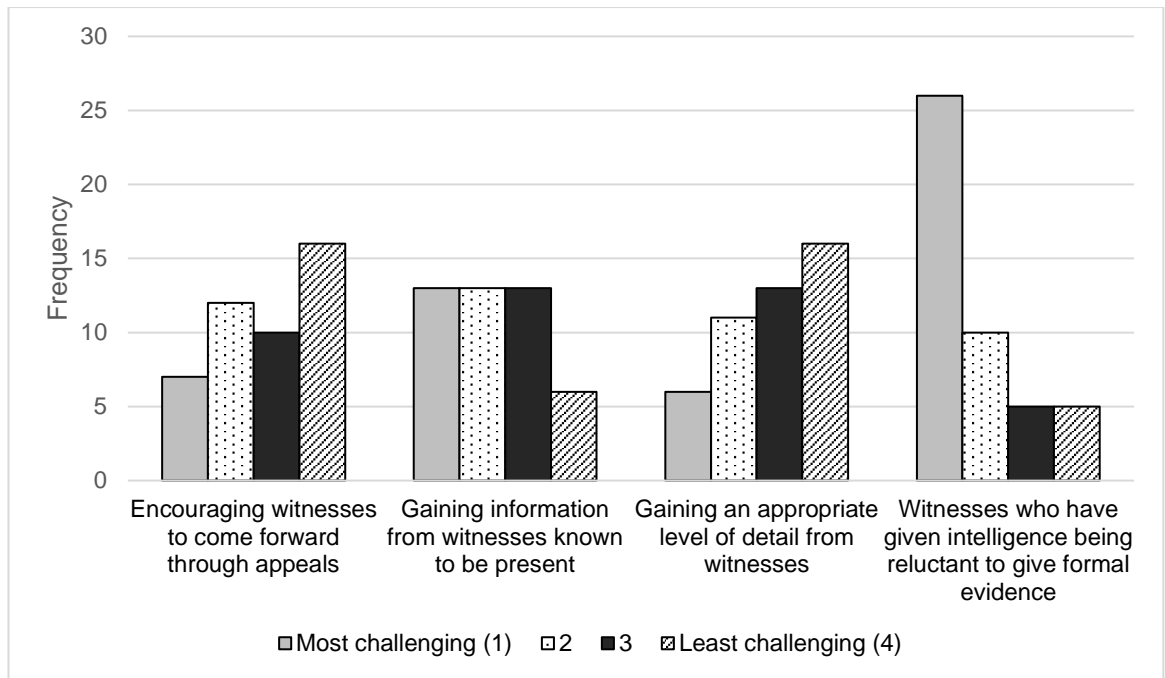
*Figure 10.* Respondent rankings of the challenges associated with reluctant witnesses (bars show response frequencies).

Despite this, mean and median responses demonstrate a broad trend (please note, lower mean and median scores indicate a higher ranking in terms of the difficulty a challenge presented). Gaining evidence for those witnesses who have given intelligence remained the most challenging aspect of encounters with reluctant witnesses (M = 1.76, SD = 1.04, Median = 1). The second most challenging aspect of these encounters was rated as being gaining information from witnesses known to be present (M = 2.27, SD = 1.03, Median = 2). Finally, encouraging witnesses to come forward through appeals (M = 2.78, SD = 1.11, Median = 3) and gaining an appropriate level of detail from witnesses (M = 2.85, SD = 1.05, Median = 3) were rated as being the least challenging aspects of encounters with reluctant witnesses.

Respondents were also given the option to add additional challenges in a free response format. Two respondents took this opportunity to reiterate and expand upon two of the challenges previously presented; overcoming reluctance to provide formal evidence in the form of a statement (suggested to be one of the least challenging aspects of these encounters, with a rank of 4), and using Trace and Interview procedures to gain information from witnesses known to be present (suggested to be one of the most challenging aspect of these encounters, with a rank of 1). A further two respondents referenced overcoming beliefs about police legitimacy; overcoming the view that police

are "corrupt or biased" (suggested to be one of the more challenging aspects of encounters with reluctant witnesses, ranked 2), and providing reassurance to overcome general distrust in the police or court system (suggested to be the least challenging aspect of reluctant witness encounters, ranked 5).

### 2.2.3: Giving intelligence and evidence.

Respondents were then asked to consider the percentage of witnesses initially classified as reluctant go on to give intelligence ($N = 36$), and evidence ($N = 34$). Estimates for the number of reluctant witnesses who go on to give intelligence ranged from 2% to 90%, with a mean estimate of 38% (SD = 25.08%). Figures for those initially classified as reluctant who go on to give evidence were slightly lower, ranging from 2% to 80%, with a mean of 22.56% (SD = 20.61%).

#### 2.2.3.1: Compelling factors.

Respondents were asked to consider the factors that might underpin witness willingness to give intelligence ($N = 36$) or evidence ($N = 34$). These responses showed considerable overlap therefore responses were collapsed between these two questions ($N = 70$). Responses are represented in terms of seven broad categories: personal gain, justice or prosocial motivations, procedural justice and police legitimacy, understanding of the CJS, emotional motivations, interpersonal factors, and practical motivations. Each of these is discussed in turn below alongside indicative quotes. Key categories can be seen in Table 7 and the full range of categories and subcategories can be seen in Appendix C.

Table 7.

*Giving intelligence or evidence: Compelling factors (key categories)*

| Category and Subcategory | Count | % |
|---|---|---|
| Justice or prosocial motives | 53 | 76% |
| Interpersonal factors | 45 | 64% |
| *Event-related* | *31* | *69%* |
| *Investigation-Related* | *14* | *20%* |
| Personal gain | 18 | 26% |
| Practical considerations | 16 | 23% |
| Emotion | 12 | 17% |
| *Fear* | *8* | *67%* |
| *Other* | *4* | *6%* |
| Procedural Justice & Police Legitimacy | 9 | 9% |
| Understanding of CJS | 6 | 9% |

*Note: Primary categories (& their associated n's) are shown in plain (body) text. Subcategories (& their associated n's) are italicised.*

　　*2.2.3.1.1: Justice or pro-social motives.* Around two thirds (76%) of responses referred to justice or prosocial motives. Responses within this category referred to morals or a desire to do the right thing as increasing the likelihood of giving intelligence or evidence. Responses referred to a sense of civic duty or personal responsibility, a desire for justice, or a desire to do something about the problem caused by suspects. Respondents also referred to a desire to help, whether a general desire, or a specific desire to help the police or a friend involved. These motives might vary depending upon the crime type and seriousness; for example, witnesses are particularly likely to help where the offence is morally wrong (e.g. when a child has been hurt). For example one respondent stated "a sense of responsibility and the belief that they are doing the right thing and will make a positive impact through assisting Police / Crown" (Respondent 30, specialist gun and gang crime unit, eight years of experience) while a second suggested "again, a feeling that it is the right thing to do, allied with a conviction that

their evidence is significant and that therefore giving it is worthwhile" (Respondent 44, homicide command, 11 years of experience).

*2.2.3.1.2: Interpersonal factors.* Respondents made frequent reference to interpersonal factors which may compel witnesses to cooperate. These can be broadly grouped into two subcategories: event-related and investigation-related factors. Taken first, event-related factors refer to interpersonal dynamics among those involved in the incident itself or other aspects of the witness' life unrelated to the investigation. For example, respondents referred to support or pressure from family and friends, and loyalty to (or concern for) the victim and their family as reasons for assisting with police investigations: "pressure/encouragement from relatives (particularly older generation, who show more respect for police / judicial process, and do not wish for suspects to "get away with it")" (Respondent 17, specialist gun and gang crime unit, 17 years of experience).

Respondents also referred to relationships between the witness, victim, and suspect, and suggested that witnesses are more likely to cooperate when they themselves or a person they are close to has been affected by the incident. Finally, responses suggest that the witness' own position can be a motivating factor, particularly where the witness is seeking to exit a gang culture: "Individuals that are genuinely seeking exit from a gang cultured existence. In order to reach this stage, there is a significant amount of commitment that is required from the investigation team" (Respondent 9, specialist gun and gang crime unit, 19 years of experience).

Other responses referred to the dynamics of the investigation itself. For example, responses suggest that consistent support and reassurance from the police (including specialists such as witness liaison officers) can be an important motivating factor. Consistent contact with and commitment from the investigative team (particularly where rapport has been built) are also important motivating factors: "Rapport with Investigator and understanding of the process that they are going to possibly become a part of" (Respondent 30, specialist gun and gang crime unit, eight years of experience). Assurances that the witness will not need to attend court, and allowing the time needed to make the decision can help witnesses to decide to give intelligence or evidence: "Support from family & friends, time to think without hassle from the Police; reflection and time are great healers" (Respondent 4, specialist gun and gang crime unit, 12 years of experience).

*2.2.3.1.3: Personal gain.* Several respondents referred to factors associated with personal gain as compelling witnesses to give information or evidence. For example, respondents suggest that witnesses may feel they stand to benefit from the prosecution of the offender. This may be the result of being "sick of the bad guys in an area" (Respondent 35, homicide & serious crime command, four years of experience). However, Respondent 33 (specialist gun and gang crime unit, ten years of experience) highlights that this personal gain can take a number of different forms: "Self-interest - e.g. anti-social behaviour, domestic life being [impacted by] drug dealing next door or neighbours having domestic disturbances."

Witnesses may also give information as a form of competition or retribution. For example, Respondent 3 (specialist gun and gang crime unit, 15 years of experience) noted that "often in [specialist gun and gang crime unit] investigations they [the witness] provide information in order to eliminate a rival gang member." The decision to cooperate may be motivated by a desire to improve the witness' own situation. As such this choice may be viewed as the best (personally) among a series of unappealing options ("Some kind of motivation that doing so is the 'least bad option' for them" – Respondent 41, homicide and serious crime command, 30 years of experience).

Finally, witnesses may be motivated by money (for example in the form of a reward or criminal injuries award), the opportunity for a "fresh start" through witness protection schemes, or a simple desire to talk about what they have seen: "Wanting to talk about what they saw, especially immediately afterwards. Key to early information" (Respondent 15, specialist gun and gang crime unit, 11 years of experience).

*2.2.3.1.4: Practical considerations.* A number of respondents referred to practical considerations impacting witness decisions to assist with investigations. Respondents referred in particular to the possibility of a summons or arrest warrant. Respondents also highlight the witness' perception of the strength of the evidence and how many other people they believe hold this information as influencing factors. The provision of special measures (including anonymity) or other factors that mean that others will not know that the witness came forward with information or evidence can encourage a witness to cooperate. Finally, responses suggest that it can be helpful when the witness is aware that they have the ability to help with the investigation, but that ultimately all witnesses will make their own decision on whether or not to come forward: "Reflection upon the event, support from the Police and family and friends.

Ultimately, they come to the decision themselves" (Respondent 4, specialist gun and gang crime unit, 12 years of experience).

*2.2.3.1.5: Emotion.* Respondents referred to emotion, and in particular to fear as a compelling factor. For example, responses highlight generic fear or fear of what the suspect will do next as motivating factors, as well as the witness' need to safeguard themselves and their family. Witnesses may be more likely to give intelligence or evidence when they feel safe in assisting the police and when the likelihood of repercussions is low: "Reluctant witnesses are often very willing to give information "off the record" as they usually want to help and are fully aware of the problems in their communities. However, they need to safeguard themselves and their family members" (Respondent 6, specialist gun and gang crime unit, 11 years of experience). Other responses suggest that other emotions may also play a role. For example, anger or disgust at suspects or excitement at being involved in the proceedings.

*2.2.3.1.6: Procedural justice & police legitimacy.* Respondents referred to procedural justice and police legitimacy. For example, witnesses may be more likely to give information or evidence where they have confidence in and a positive relationship with the police or CJS ("confidence in police prosecuting the offender" – Respondent 33, specialist gun and gang crime unit, ten years of experience). Similarly, respondents suggested that a level of fear or respect towards the police can sometimes manifest as willingness to comply with requests for assistance:

> Members of the public feel that they are doing the right thing. Gang members do so to get retribution on other gang members. I think some people have a respect or fear of the police and just do what they are asked to do by police (Respondent 10, specialist gun and gang crime unit, 14 years of experience)

Finally, witnesses are more likely to cooperate when they believe that their support is likely to have a positive impact on the investigation. For example, Respondent 26 (specialist gun and gang crime unit, 12 years of experience) stated that cooperative witnesses have "the sense that they should help the police in some way and they have the ability to help us investigate the offence."

*2.2.3.1.7: Understanding of CJS.* The final category refers to the witness' understanding of the CJS. Responses suggest that where the witness understands the justice process and the importance of their evidence then they may be more likely to assist with the investigation. In contrast Respondent 2 (specialist gun and gang crime

unit, 17 years of experience) suggested that a lack of understanding can be beneficial, for example a witness may give information as a result of not realising that they are not obliged to comply with this request: "ignorance of the fact that they do not have to".

### 2.2.3.2: Preventing factors.

Respondents were asked to consider the factors that might prevent witnesses from giving intelligence ($N = 36$) or evidence ($N = 33$). As above, these responses showed considerable overlap therefore responses were collapsed between these two questions ($N = 69$). These responses are represented in terms of eight broad categories: emotion (in particular fear), procedural justice and police legitimacy, reputation, personal cost, disinterest, interpersonal factors, differing ideas of justice, and practical considerations. Each of these is discussed in turn below alongside indicative quotes. Key categories can be seen in Table 8 and the full range of categories and subcategories can be seen in Appendix D.

Table 8.

*Giving intelligence or evidence: Preventing factors (key categories)*

| Category | Count | % |
| --- | --- | --- |
| Emotion - Fear | 63 | 91% |
| Procedural Justice & Police Legitimacy | 37 | 54% |
| Reputation | 18 | 26% |
| Personal cost | 14 | 20% |
| Disinterest | 14 | 20% |
| Interpersonal factors | 14 | 20% |
| *Event-related* | *8* | *57%* |
| *Investigation-Related* | *6* | *43%* |
| Ideas of Justice | 11 | 16% |
| Practical considerations | 1 | 1% |

*Note: Primary categories (& their associated n's) are shown in plain (body) text. Subcategories (& their associated n's) are italicised.*

*2.2.3.2.1: Emotion (fear).* Approximately two thirds (65%) of responses within this category referred to fear of retribution or threats to the witness themselves or their family. Respondent 2 (specialist gun and gang crime unit, 17 years of experience) highlighted that these threats could be real or imagined: "Because they're unlikely to be more safe as a result of giving information or evidence. Individuals quite understandably don't want to attract negative attention to themselves or their family. They are likely to be in fear of reprisals" (Respondent 13, specialist gun and gang crime unit, nine years of experience).

Several respondents also referenced a generic fear of cooperating, for example one respondent stated "Fear. There is a growing sense from the public that they don't want to get involved. If something has no direct impact on their lives then it is safer for them to turn a blind eye" (Respondent 26, specialist gun and gang crime unit, 12 years of experience). Others referred to fear of becoming involved, potentially leading to repercussions: "A fear that it will lead to them "getting involved", perhaps being identified as the provider of the info, and that there could be hostility or threats which occur as a consequence" (Respondent 44, homicide command, 11 years of experience).

Other respondents referred to fear of court-based aspects of investigations. These included fears of giving evidence and of cross-examination, particularly the witness' own issues being revealed in court. Respondent 13 (specialist gun and gang crime unit, nine years of experience) stresses that fear of public speaking can be a factor in preventing witnesses from giving information or evidence: "Concern that they will be made to look incompetent during cross examination. If people are scared to speak publicly then the concept of being in a court room is terrifying". Respondents also suggest that witnesses are likely to fear giving evidence in court, perhaps as a result of safety concerns:

> It depends on crime type. I would say that fear is the overwhelming factor - of having their dirty laundry aired in open court, of facing the defendants in court (even if granted special measures they still have to walk through the same doors, use the same toilets etc.) and of being seen as a "snitch", a "snake" or a "grass" within the community. (Respondent 6, specialist gun and gang crime unit, 11 years of experience)

*2.2.3.2.2: Procedural justice & police legitimacy.* Responses within this category frequently referenced mistrust of or lack of confidence in the police and CJS. In particular, witnesses may have concerns over the way that their information may be handled. For example, Respondent 6 (specialist gun and gang crime unit, 11 years of experience) suggests that this may be particularly problematic for informants: "lack of confidence in the police to correctly manage the information given (the identity of the informant inadvertently being released at some point in the future by officers unaware of the consequences)." Other respondents suggest that these concerns may be exacerbated by media reports of errors made by the police:

> And an ingrained distrust of the police. Note - I also believe that the general public are swayed heavily by the media. There should be transparency in everything we do. However, I believe the police service / senior management board are too quick to expose its own failings / shortcomings. In doing so, this has a negative impact. Disclosures such as for example "misconduct" by an officer should only be disclosed upon a finding of guilt. (Respondent 9, specialist gun and gang crime unit, 19 years of experience)

Respondents also highlighted the potential negative impact of previous experience with the judicial system, whether directly ("The court system, and judges in particular, treat witnesses very poorly. The police maxim that people are only ever a witness once has a lot of truth" – Respondent 41, homicide and serious crime command, 30 years of experience) or indirectly through family and friends: "Fear, not believing the police can protect them, poor previous bad handling of them or friends in witness care, so they adopt a mindset of 'Never again'" (Respondent 35, homicide & serious crime command, four years of experience). This might also include the belief that suspects will not receive any meaningful censure as well as more general dissatisfaction with the way the CJS operates:

> Not wanting to go to court, either due to being identified, but also due to previous bad experiences at court. For example, we have had a number of cases where counsel request that 6-7 witnesses be at court, available, and then only get through 2-3 in the day, leading to witnesses having to wait around and attend for 2-3 days in a row. If the process is not only intimidating, but also delayed and drawn out, it can be hard to inspire individuals to put themselves through it again (Respondent 44, homicide command, 11 years of experience)

Finally, respondents highlighted a lack of understanding of the criminal justice process or the safeguards available as factors likely to prevent witnesses from giving intelligence or evidence

*2.2.3.2.3: Reputation.* Around a quarter of the responses (26%) referenced reputational damage which witnesses might experience through giving intelligence or evidence. While a small number of respondents referred to gang membership or "street status" here, the majority of these responses highlighted the risk of being branded a "grass" or a "snitch". Respondents highlighted the contribution of cultural norms to this view ("the current social belief is that you do not grass to the police" – Respondent 1, specialist gun and gang crime unit, 25 years of experience) and the repercussions that witnesses may face if it is found they have assisted police. This includes social repercussions such as ostracism ("fear of being a grass. This comes down to being ostracised by their peers if it is discovered that they have provided information to the police" – Respondent 10, specialist gun and gang crime unit, 14 years of experience).

*2.2.3.2.4: Personal cost.* Respondents emphasised the time required for a court case and the longer-term impact that this can have on the witness' life: "the length of the court process also impacts on their life for an extended period which sometimes can be years" (Respondent 43, homicide and serious crime command, 12 years of experience). Other responses referenced witness unwillingness to incriminate themselves or their family or associate, as well as a desire to avoid press intrusion or harassment.

*2.2.3.2.5: Disinterest.* Responses predominantly referred to a lack of interest in involvement. For example, witnesses may be reluctant to get involved if they are not directly connected to events: "'not my problem' and a growing opinion in society of non-involvement" (Respondent 41, homicide and serious crime command, 30 years of experience). Witnesses may also be disinclined to give intelligence or evidence where the event is not particularly important to them directly ("usually if they simply "cannot be bothered" or it is not important to them" – Respondent 39, response team, eight years of experience) or where they believe that someone else is likely to provide the information.

*2.2.3.2.6: Interpersonal factors.* Responses within this category can be further divided into two subgroups: factors related to the event itself and factors related to the investigation. Event-related interpersonal factors generally referred to loyalties, and in particular loyalty to (or pressure from) family and friends to not give intelligence or evidence. In contrast, responses relating to interpersonal factors within the investigation suggested that police investigators need to take care to balance their approach. For example, respondents suggested that too little support or contact may create witness unwillingness to assist with the investigation. However, responses also highlight that "pestering" the witness or approaching the witness in a poor manner, for example speaking rudely or approaching while the witness is in a group can also create reluctance ("constant pestering from the Police, a rude and unconstructive approach" – Respondent 4, specialist gun and gang crime unit, 12 years of experience).

*2.2.3.2.7: Ideas of justice.* Responses often referred to an anti-snitching culture and the idea that it is inappropriate to assist with police investigations ("unwritten code not to help police" – Respondent 42, homicide and serious crime command, 13 years of experience). Some reluctant witnesses also have a different view of justice (they "live by a different code of ethics" – Respondent 46, homicide and serious crime command, 27 years of experience) and would prefer to deal with any retribution themselves rather than through official channels.

*2.2.3.2.8: Practical considerations.* Finally, responses referred to practical considerations which may impact reluctance to give intelligence or evidence. For example, the witness may consider their perceptions of the strength of the evidence when deciding whether or not to give intelligence or evidence.

**2.3: Discussion**

The present study addressed the problem presented by reluctant witnesses within the UK CJS by surveying 47 police officers based in one of two large metropolitan forces. Results suggest that while the perceived frequency with which reluctant witnesses are encountered varies with respondent role, on average around 50% of witnesses encountered could be classed as reluctant. These witnesses are often encountered after incidents involving serious violence and are likely to be criminally involved or connected to those who are. Respondents also suggested that reluctant witnesses are likely to be particularly afraid of the potential consequences of becoming involved in the investigation in terms of threats and physical violence or of being

branded a "snitch" and ostracised within their community. This culture of non-cooperation and anti-snitching norms was frequently referenced as a potential reason for reluctance. No clear consensus emerged regarding the likelihood of independent witnesses being reluctant or cooperative, with some respondents suggesting that third parties unconnected to the events or those involved are more likely to give evidence in court and other suggesting that it is not uncommon for such requests to be greeted with a "not my problem" response.

The perceived prevalence of encounters with reluctant witnesses suggested by respondents in the current study is higher than objective datasets might suggest. For example, knife crime data from the Metropolitan Police Service (MPS) for the year April 2014 to March 2015 suggests that the victim was unwilling to proceed in around 553 cases. This equates to 6.87% of cases ($N = 8047$; Metropolitan Police Service, 2015). However, it is worth noting that the MPS dataset includes only knife crime data (excluding domestic violence cases) while a large proportion of respondents in the present study worked specifically with gun and gang crime cases. The MPS dataset also records interactions with victims rather than witnesses. Taken together, these factors may explain the higher frequency of encounters suggested by respondents within the current study.

In terms of demographic makeup, the MPS knife crime dataset suggests that victims unwilling to proceed were generally under 40 years of age (under 16 years – 18%; 16-20 years – 27%; 21-30 years – 27%; 31-40 years – 18%), male (83.54%), and from White European (34%) or Black ethnic groups (31.65%). This provides some support for the view suggested by respondents of the present study that reluctant witnesses are likely to be younger than cooperative witnesses (specific mention was made of a higher sense of "civic duty" among the older generation). Respondents within the present survey suggest that victims of violent crime were likely to be unwilling to proceed. However, the MPS dataset suggests that the level of injury was likely to be minor (40.59%) if at all (no injury – 23.40%). This potentially fits with the Audit Commission (2003) view of a "disengaged" witness as one who has witnessed a more minor crime (in contrast to the serious violence suggested by respondents in the present study). The vast majority (90.40%) of the victims had not previously been a victim of crime in the preceding 12 months. This is interesting in light of the comments made by

respondents within the current study that repeat victimisation can lead an initially reluctant witness to give intelligence or evidence.

The picture is less clear when it comes to relationships between victims, witnesses, and suspects. Respondents within the present study cited interpersonal relationships between those involved in the event as having potential to compel or prevent witness engagement. MPS knife crime data also suggests that there is no clear pattern in terms of victim and suspect relationships. For example, over half of the victims who were unwilling to proceed did not know the suspect (60.58%), and for those who did the suspect was likely to be an acquaintance (43.12%) or other more distant relationship (30.28%; e.g. attend same school or workplace, neighbours, etc.) rather than friends (15.60%), family (15.60%) or partners/ex-partners (2.29%). It is possible that this reluctance stemmed from fear, regardless of the interpersonal relationships at play (please note the MPS dataset does not record the reason why the victim does not wish to proceed). This was a commonly cited reason for reluctance among respondents of the present survey. Previous research suggests that where there is an existing relationship between victim and suspect that this fear is not entirely unfounded. For example, Fyfe and McKay (2000) suggest that intimidation is more likely where the victim is a current or former friend, criminal associate or neighbour of the suspect. The Audit Commission (2003) also suggested that "disengaged" witnesses are likely to know or be in close proximity to the offender, and so are likely to be at risk of intimidation. This risk also increases where the incident is believed to have been gang-related (Whitman & Davis, 2007).

In discussing factors which prevent engagement with the CJS, 91% of responses referenced fear of retribution (against the witness or their family) or a generic fear of getting involved. This figure is higher than may be expected from previous research. For example, in domestic violence cases it has been suggested that fear of reprisals is the main reason for non-reporting in just 3.4% of cases (Felson et al., 2002). It may be that the current respondents (all of whom were practitioners rather than members of the public likely to be victims or witnesses) overestimate the extent to which fear prevents witnesses from engaging or that the close relationship between victim and suspect in domestic violence cases reduces this fear in comparison to cases involving gang and gun crime (the primary focus of the majority of the present respondents). It may also be that respondents believe that fear of reprisals (regardless of the likelihood of threats

being carried out) are enough to prevent cooperation. This view is certainly supported within the wider literature (see for example Clayman & Skinns, 2011; Papp et al., 2017).

Respondents made frequent reference to the reputational damage associated with "snitching" as preventing engagement. In a number of communities cooperating with the police means violating community norms, and as such risks hostility not only from the suspect but from the wider community (Fyfe & McKay, 2000). Responses within the present study showed some awareness of these risks and suggested that a common response to this moral dilemma (of upholding community norms or cooperating with police investigations) is the witness distancing themselves from the incident. As suggested by Clayman and Skinns (2011) this often leads to a response of "not my problem" among witnesses (respondents within the present study also highlighted witness concerns about "becoming involved"). In line with previous research (Clayman & Skinns, 2011; Whitman & Davis, 2007), respondents did however suggest that there are some occasions where the violation of community norms is considered more acceptable, for example where close family or friends are affected or where the risk of retaliation is low.

The present research explores practitioner perspectives on reluctant witnesses, and in doing so aims to identify some of the key factors which underpin reluctance to engage. This has been previously identified as necessary research. For example, Spencer and Stern (2001) highlighted the need for more comprehensive research on the reasons why witnesses do or do not engage with the CJS. As a result of the present research (as well as existing literature), it is apparent that there is no single factor associated with reluctance to engage. Reluctant witnesses can be found in a wide range of scenarios and a variety of demographic backgrounds (this view was expressed by a number of respondents within the present study). However, there are several risk factors that can increase the likelihood of reluctance. In particular, reluctance to engage increases when (i) the crime witnessed was a violent or gang-related incident, (ii) where the witness is fearful of "snitching" and of potential repercussions this may bring (particularly where the witness believes that they will be identifiable as a result of their testimony), (iii) where there is peer or familial pressure to withhold information, and (iv) where there is a lack of trust or confidence in either the investigative team or the CJS more generally. What is not yet established is the best practice approach in each of these cases, and

whether the effectiveness of existing practice can be improved with the addition of psychological evidence-based techniques. This is addressed in Chapter 7.

It is important to note that the nature of this survey means that only UK practitioner views were addressed. It is likely that this picture is slightly different in different cultures. It is of course also possible that those individuals likely to become reluctant witnesses may also have a different perspective on these issues. As such it is important that future research seeks to establish public perceptions of the factors which may compel or prevent cooperation with the CJS. Research should also explore factors surrounding reluctance in other investigatory contexts (e.g. workplace investigations[9]).

In conclusion, the present research sought to explore the perceived prevalence of reluctant witnesses in police investigations across two UK-based metropolitan police forces. The research further aimed to identify factors underpinning reluctance or willingness to give intelligence or evidence. The importance of witnesses to investigations within the CJS and wider investigative contexts highlight the need to increase witness cooperation. Research should use the factors identified as underpinning reluctance to give intelligence or evidence as a basis for developing best practice techniques for managing encounters with reluctant witnesses. This is further explored within Chapter 7: Effective Practice for Engaging with Reluctant Witnesses: A practitioner perspective.

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[9] Initial research with railway accident investigators has suggested that reluctant witnesses are often reluctant to implicate themselves or other close associates. This research also suggested that peer pressure, risk of ostracism or repercussions, or a lack of trust in the investigator can prevent cooperation, while a sense of duty and an understanding approach from the investigator (highlighting the need to prevent further incidents rather than assign blame) can compel witnesses to give information or evidence (Wheeler, Wade, & Gabbert, unpublished data). These findings echo those of the present study.

**Chapter 7: Effective Practice for Engaging with Reluctant Witnesses: A practitioner perspective**

*A reluctant witness is one who is believed to have witnessed an offence, or events closely connected to it, but who is unwilling to become involved in the investigative process. As outlined in Chapter 6, encounters with reluctant witnesses are relatively common. What is less clear is what represents effective practice in these encounters. Continuing on from Chapter 6, the present chapter explores the techniques considered by practitioners to represent effective practice in obtaining intelligence and evidence and building rapport. Respondents also considered common features among witnesses willing to give evidence in court. Results are discussed with a particular focus on the Engage and Explain phase of PEACE with a view to identifying theoretical approaches which have the potential to inform best practice.*

### 1: Reluctant Witnesses

The findings outlined in Chapter 6 highlight the prevalence of encounters with reluctant witnesses among two large metropolitan police forces and the wide variety of factors which may underpin the decision to give intelligence or evidence. These findings suggest that reluctant witnesses may come from a wide range of demographic backgrounds with no single cause of reluctance. However, the findings presented in Chapter 6 do propose a number of risk factors which may increase the likelihood of witness reluctance. Among these is the suggestion that reluctance is more likely where the crime witnessed was a violent or gang-related incident. The seriousness of these crimes means that it is imperative that techniques are developed to allow investigating officers to encourage witness engagement. Therefore, the current chapter focuses on existing effective practice and how this can be enhanced through psychological techniques.

Limited support is available to officers faced with a reluctant witness, and the limited official guidance available focuses on identifying the underlying reasons for the witness' reluctance. For example, the Murder Investigation Manual (ACPO, 2006) includes a short paragraph outlining appropriate steps to be taken when interacting with a reluctant witness. These steps include (i) outlining the offence under investigation, without discussing particulars believed to have been witnessed, (ii) providing enough information for the witness to make an informed choice without pressurising the witness to decide whether or not to cooperate, and (iii) recording all contact with reluctant

witnesses, including anything the witness says. The manual also specifically notes that the Crown Prosecution Service (CPS) should be made aware of witnesses unwilling to provide a formal statement to allow consideration to be given to applying for a witness summons.

Despite these practical recommendations, very little guidance exists on managing interactions with reluctant witnesses. As such, the present research aims to identify techniques perceived by practitioners as effective in encouraging reluctant witnesses to give information or evidence after an incident. The research outlined within the following chapter (combined with the findings discussed in Chapter 6) results from a survey of police officers from two UK-based metropolitan forces. This survey focused on practitioner views of the techniques believed (by respondents) to represent effective practice in (i) gaining intelligence, (ii) obtaining evidence, and (iii) building rapport. Respondents were also asked about additional support which could be provided to maintain witness engagement throughout investigations.

The aim of this research is to identify effective practice in encouraging reluctant witnesses to engage with investigations. The purpose of doing so is to identify where psychological techniques can further enhance the effectiveness of these approaches. These interventions can then be assessed in controlled experimental settings with a view to informing best practice in line with evidence-based policing guidelines (College of Policing, 2017. See also Sherman, 1998). While this work is largely exploratory in nature, conversations with practitioner partners during the development stages of this project combined with the limited official guidance available lead me to speculate that there will be limited consensus on how situations involving reluctant witnesses should be approached.

## 2: Method

Please note that the data described within this chapter are drawn from the practitioner survey outlined in Chapter 6. The survey itself was broad in scope in order to allow a more complete understanding of witness reluctance. For this reason, Chapter 6 explores practitioner perceptions of the prevalence and underlying causes of witness reluctance while Chapter 7 addresses perceived effective practice in these cases. For a complete overview of participant demographics, details of the procedure, and data coding processes please refer to Chapter 6.

# 3: Results

As in Chapter 6, within the results that follow two key types of percentages will be used to describe the data. *Category* percentages describe the proportion of responses which fell within the specified coding category (i.e. of all responses received for the question, how many referenced the main category in their answer). *Subcategory* percentages break this *category* percentage down further and describe the subtopics which make up each primary coding category. In the majority of cases responses fell into more than one category or subcategory (e.g. a single answer might reference multiple techniques for gaining information), as such percentages may total more than 100%.

## 3.1: Effective Techniques for Eliciting Intelligence and Evidence

Respondents were asked about the techniques they find particularly effective for gaining intelligence ($N = 34$) and evidence ($N = 29$) from reluctant witnesses. A degree of similarity existed between respondent answers to these two questions. For this reason, these questions are collapsed below and the discussion that follows centres for the most part on effective practice for obtaining both intelligence and evidence. Categories of responses include minimising risk, interpersonal factors, explanations required by the witness, aspects of the police role which can be beneficial, and additional considerations. Each of these will be discussed in turn below in descending order in terms of percentage of mentions by respondents (in terms of gaining intelligence responses), alongside indicative quotes. Key categories can be seen in Table 9 and the full range of categories and subcategories can be seen in Appendix E.

Table 9.

*Effective techniques for eliciting intelligence and evidence: Key categories*

| Category | Eliciting Intelligence | | Eliciting Evidence | |
|---|---|---|---|---|
| | Count | % | Count | % |
| Interpersonal Factors | 19 | 56% | 12 | 41% |
| Minimising risk | 17 | 50% | 17 | 59% |
| Necessary explanations | 13 | 38% | 9 | 31% |
| Police role | 6 | 18% | - | - |
| Additional considerations | 4 | 12% | 8 | 28% |

### 3.1.1: Interpersonal factors.

A wide range of responses were captured within this category and limited consensus was shown between participant responses, particularly those discussing techniques for obtaining evidence. Responses suggested that listening to the concerns of witnesses and offering reassurance is important, particularly in obtaining intelligence: "It is as simple as talking to them listening to their concerns and answering accordingly to hopefully reduce their concerns about being a witness" (Respondent 39, response team, eight years of experience).

Responses also referenced the importance of rapport in obtaining intelligence ("rapport is also very crucial" – Respondent 34, serious crime division, 30 years of experience) and highlighted introducing topics of conversation unrelated to the incident as a means of building rapport: "Trying to introduce something from a different aspect of their life into the conversation before asking anything of them (e.g. how are the children/did you have a good weekend etc. etc.)" (Respondent 8, specialist gun and gang crime unit, eight years of experience).

In addition, respondents recommended developing rapport slowly over a period of time, and strategically utilising officers who have built rapport with a witness. This was suggested to be a particularly useful approach where the incident involves domestic violence. Responses also highlight the importance of spending time with the witness and in maintaining this contact as a means of obtaining evidence: "Spending time with

them and providing a 24 hours mobile contact (to a specific person, not a duty phone)" (Respondent 22, specialist gun and gang crime unit, 16 years of experience).

Respondents also emphasised the importance of trust, suggesting that it is key to build trust with the witness, and that one method of doing so is to gain the trust of an individual close to the witness. For example, one respondent (Respondent 17 specialist gun and gang crime unit, 17 years of experience) suggested that it can be useful to "speak to relatives (especially mum) to gain some intelligence and slowly gain trust [in the investigating team]". This technique can provide officers with intelligence about the witness, as well as facilitating the officer in building trust with the witness directly. The suggestion that gaining information about a witness can facilitate the process of acquiring intelligence about an incident was repeated throughout these responses. For example, one respondent suggested that "it is also important to research the background of the interviewee if possible and pitch at a level they are comfortable with" (Respondent 34, serious crime division, 30 years of experience).

As suggested in the quote above, respondents also highlighted the importance of witness compatible speech, including limiting the use of jargon. Other responses suggest removal of "police" barriers such as corporate dress:

> Appeal to them on their level, talk to them like a normal person, DON'T act or speak like a Police officer, show yourself as a normal person, interact with them be that using their language or having a cigarette and cup of tea with them. Show them that you are not a corporate faceless person but actually genuinely trying to help. Avoid corporate dress, suits & uniforms as it appears stuffy and reluctant persons see that as such. They want to interact with someone like themselves, not a Police officer who they often see as hostile to them. (Respondent 4, specialist gun and gang crime unit, 12 years of experience)

> I feel that the biggest "turn off" for witnesses is using too much Police jargon. Removing the barriers of "Police", such as meeting at a suitable location away from the police station, not wearing uniform, avoiding police jargon, places potential witnesses at ease. (Respondent 30, specialist gun and gang crime unit, eight years of experience)

It should however be noted that one respondent suggested that in some circumstances corporate dress might be beneficial: "I find it important to break down barriers, for example wearing appropriate clothing. Sometimes the dress of an officer can be seen as too formal or indeed the opposite, depending who the interviewee is?" (Respondent 34, serious crime division, 30 years of experience). Respondents also note

that stressing the human side of the case ("I think stressing the human side of the case, the deceased family's need for justice and closure, can help encourage reluctant witnesses to give formal evidence" – Respondent 44, homicide command, 11 years of experience) and encouraging empathy can encourage witnesses to assist with the investigation ("Encouraging empathy, i.e.; if this event had happened to them or one of their relatives, how would they hope people would help the police." – Respondent 33, specialist gun and gang crime unit, ten years of experience).

Responses suggest that it can be beneficial to highlight the civic duty of the public to provide evidence. This may be achieved through personalising the request: "You have to personalise the request and demonstrate their importance to make a statement, use the words "you can make that difference, you can make this stop"" (Respondent 1, specialist gun and gang crime unit, 25 years of experience). Other respondents suggest that appealing to civic duty directly is more effective:

> "Much more difficult [to elicit evidence]. People almost always shy away at the mention of court etc. Stressing the importance of what they have to say can work. I sometimes use the phrase, 'Nobody ever asks to be a witness/victim of crime but unfortunately it happens to some people'... to engender a sense of duty in what they are being asked to do." (Respondent 8, specialist gun and gang crime unit, eight years of experience)

Responses also emphasise the importance of an appropriate police approach. For example, witnesses are more likely to cooperate with requests when the investigative team are seen to deliver on promises made, and maintain contact and support throughout:

> Warm communication and delivering on promises (calling back when you say you're going to, empathising with their experiences) is very effective, however we need to be realistic about the adversarial court process and how difficult it can be for witnesses. (Respondent 6, specialist gun and gang crime unit, 11 years of experience)

> Be honest with them about what can be offered and time frames. If they ask for time give it to them. Ask how much time they need to make a decision and discuss with the family....and call back on the agreed date/time. (Respondent 12, specialist gun and gang crime unit, ten years of experience)

Respondents also suggest ensuring the process is as convenient for the witness as possible, as highlighted by Respondent 16 (youth offending team, 11 years of experience): "Sometimes if you start writing it down straight away they don't have to

keep repeating the facts which can lead to reluctance. A quick approach to gaining the information before they become annoyed and the shutters come down."

### 3.1.2: Minimising risk.

At least half of the respondents referred to the importance of minimising risk to the witness. Responses suggest that it is important to consider the environment in which the interview (or request for intelligence) takes place. For example, respondents emphasise the importance of not inconveniencing witnesses: "Agreeing to meeting witnesses at their convenience, either at home or work so there is little disruption to their normal day to day routine" (Respondent 43, homicide and serious crime command, 12 years of experience). Other respondents suggested that a neutral interview environment is key (ideally one away from the witness's home, and often not at a police station). In terms of specifically gathering intelligence, respondents also suggest that a phone interview might be beneficial:

> Speaking to witnesses on the telephone or at a neutral place is often best. Witnesses are worried about being seen with police at their homes or places they often frequent. Being flexible around the witness is helpful. They are unlikely to meet appointments that are not convenient to them, especially if being asked to come to a police station. (Respondent 8, specialist gun and gang crime unit, eight years of experience)

The use of official measures was suggested to be important, particularly in eliciting evidence. For example, respondents discussed the importance of utilising witness protective measures, such as use of a pseudonym, or providing protection at the witness' home address. In some instances, this might include provision of full witness protection through relocating the witness: "It is imperative that the interviewing officer is fully conversant with what is available to the witness in terms of safety and "special measures". It is vital that the witness is fully aware of what they are buying in to" (Respondent 34, serious crime division, 30 years of experience).

In addition, respondents referenced court-based safety measures, for example use of voice distortion, or screening the witness from the offender when giving evidence in court:

> Offering special measures (screens, video link etc.) are effective in encouraging those witnesses who are merely nervous about being recognised in the street. However, this is not as effective when trying to encourage those who would easily be identified due to their associations, through living in an area or being

friends with the defendant etc. (Respondent 6, specialist gun and gang crime unit, 11 years of experience)

Specific reference was also made to ensuring witness anonymity ("offering anonymity where appropriate" – Respondent 10, specialist gun and gang crime unit, 14 years of experience). Despite the protective measures available, a small number of respondents highlighted the importance of acknowledging that in some instances intelligence is all that will be given:

> Sometimes intelligence or information is all that a witness will ever give as the consequences of going through the adversarial judicial process are too great for them. When dealing with violent crime and gang crime, witnesses will often need to be moved from the area, rehoused and will need to sever all links with their current community. (Respondent 6, specialist gun and gang crime unit, 11 years of experience)

Respondents also highlighted the effectiveness of using third party support agencies to provide further support to witnesses and of limiting the influence of peers on the witness whenever possible, including through only contacting the witness when they have not at the scene of the incident ("speaking to them in private away from others who may influence them away from assisting the police" – Respondent 33, specialist gun and gang crime unit, ten years of experience).

Finally, respondents highlighted specific interviewing practices as being effective in eliciting evidence. These included Achieving Best Evidence (ABE) interview procedures ("ABE interview so their taped interview is their predominant evidence at court" – Respondent 40, homicide and serious crime command, 25 years of experience), and gathering evidence from witnesses in groups (it should be noted that while the former represents best practice, the latter is not recommended due to the high risk of memory contamination):

> In a "gang fight scenario" there is occasionally the opportunity to get a number of people to give evidence together, and there is therefore support in numbers. This really only applies in terms of them being the friends of the victim. It is much harder when the witnesses are the friends of the suspect. Anonymity is (nearly) always a complete non-starter for legal reasons. Sometimes special measures can assist, but rarely, as they do not provide the protection long term outside of court. Few witnesses want to avail themselves of protection schemes as they mean a total break with family and community. (Respondent 41, homicide and serious crime command, 30 years of experience)

### 3.1.3: Necessary explanations.

Respondents emphasised the need to explain the criminal justice process and highlight the importance of witness engagement ("telling independent witnesses how important their information and cooperation is" – Respondent 8, specialist gun and gang crime unit, eight years of experience). It is also beneficial to explain intelligence and source handling procedures ("Detailing the various ways we can take that information. That it can be taken as intelligence only with their identity protected" – Respondent 26, specialist gun and gang crime unit, 12 years of experience), and the distinction between intelligence and evidence in information elicitation attempts: "Being honest about what will happen should they give intelligence and if they give a formal statement and the difference between the two regarding attending court etc." (Respondent 45, homicide and serious crime command, 15 years of experience).

It can also be important to fully explain the protective measures and special measures available, particularly when eliciting evidence ("detailing the steps we can take to protect them and their identity and explain to them more about the crime type and why it happens" – Respondent 26, specialist gun and gang crime unit, 12 years of experience). Taken together, these points emphasise the importance of the Engage and Explain phase of PEACE interviewing outlined in Chapter 2.

### 3.1.4: Police role.

As with section 1.3 above, responses within this category fall within the Engage and Explain phase of PEACE interviewing. In particular responses highlight the importance of defining the police role as being to establish the truth of events and ultimately to help ("explanation of the importance of engagement and providing information relating to an incident, we are only trying to find out what happened" – Respondent 1, specialist gun and gang crime unit, 25 years of experience), as well as the need to provide support at all stages of an investigation, from first contact through to post-court attendance ("assure them that we will support them before, during and AFTER the trial" – Respondent 40, homicide and serious crime command, 25 years of experience).

In terms of practical advice, respondents highlight providing honest explanations of the criminal justice process and likely outcomes ("Being totally honest with them from the start about what is involved" – Respondent 45, homicide and serious crime

command, 15 years of experience), and of researching the witness' background to maximise the effectiveness of techniques such as finding common ground to build trust and rapport (for more respondent suggestions on how to build rapport please see the section 3.2 on Effective Techniques for Building Rapport).

### 3.1.5: Additional considerations.

Respondents suggest that it is important to consider other issues which may impact the behaviour of the witness: "Find out what other issues affecting their behaviour - family/community/housing and ascertain if you can provide them with additional support around those matters. Put them in touch with someone who can help" (Respondent 18, specialist gun and gang crime unit, 14 years of experience). It can also be important to consider the witness' reasons for providing intelligence (e.g. to deflect police from their own role in the incident under investigation: "In a 'gang fight scenario' they will normally provide information that they know is already known. There is invariably a reason for providing intelligence, often around deflecting police from the role they may have played." – Respondent 41, homicide and serious crime command, 30 years of experience). Finally, witnesses may only provide information that they believe is already known to police, potentially in order to avoid some of the pressure associated with the desire to do the right thing without violating anti-snitching norms. Informing witnesses when the information provided is corroborated by other witnesses or sources of evidence may also help to ease this pressure.

In terms of obtaining evidence respondents highlight that court procedures (rather than police practice) are the primary issue, suggesting that the biggest barriers to cooperation are associated with witness reluctance to attend court. These barriers require systemic changes to the CJS. For example, respondents suggest that a law change around anonymity is key. By allowing officers to be more confident that anonymity applications will be accepted at the court stage, it is possible that those witnesses reluctant as a result of identity concerns might be more willing to give evidence. Finally, respondents suggest that best practice (including protective measures) are not appropriate in all situations and as such those witnesses willing to give information "off the record" should be encouraged to provide a statement at the time, rather than attempting to schedule this at a later date:

> The offer of special measures & witness anonymity is helpful but does not always apply to every incident. Sometimes it is just a matter of seizing the

opportunity of taking a statement at the time, even if this leads to a shorter or
less detailed statement than desirable - reluctant witnesses who have criminal
pasts or who are involved in gang related crime can often turn into hostile
witnesses once the initial experience has worn off and they have had a chance to
spend time with their peers. (Respondent 33, specialist gun and gang crime unit,
ten years of experience)

**3.2: Effective Techniques for Building Rapport**

Key categories can be seen in Table 10 and the full range of categories and
subcategories can be seen in Appendix F.

Table 10.

*Effective techniques for building rapport: Key categories*

| Category | Count | % |
| --- | --- | --- |
| *Rapport-Based Techniques* | | |
| Trust-Building & Approach-Based | 20 | 59% |
| Verbal Techniques | 19 | 56% |
| Non-Verbal & Demeanour-Based | 3 | 9% |
| *Non-Rapport-Based Techniques* | | |
| Does Not Fall Within Recognised Rapport Techniques | 10 | 29% |
| Unclassifiable | 7 | 21% |
| Explain | 6 | 18% |

**3.2.1: Trust-building and approach-based techniques.**

Respondents emphasised the need to listen to the witness' concerns and respond
appropriately, and to empathise with the witness. A non-judgemental, engaging, and
personal approach can be beneficial in building rapport: "I simply treat them as a valued
person in society and a human being; I don't judge them nor am I rude to them"
(Respondent 4, specialist gun and gang crime unit, 12 years of experience).

In addition, responses highlighted the need to build trust with the witness, and
that talking about a trusted member of the witness' community can facilitate this
process ("Occasionally talking about a trusted member of the community" –
Respondent 11, schools officer, ten years of experience). This process of developing
trust can be particularly beneficial in the early stages of rapport-building:

Rapport, to me, is established through obtaining an initial degree of trust. Manufacturing a position where the witness is able to relate to the investigator and the impact of the crime being investigated is important. I generally use empathy and generic conversation in order to develop the above. (Respondent 30, specialist gun and gang crime unit, eight years of experience)

Finally, Respondent 44 (homicide command, 11 years of experience) noted the importance of creating a feeling of rapport building and the interview in general as a two-way process.

### 3.2.2: Verbal techniques.

The most common technique respondents raised here is to discuss topics unrelated to the incident under investigation and show an interest in the witness and their life. This includes identifying the witness' interests, and where possible establishing common ground and shared interests between interviewer and interviewee:

Find out about them, ask personal questions, don't just show interest in the incident. Be open to what they want to talk about, something that concerns them (local or personal issues) often this is the source of their reluctance about talking to the police. Sometimes the best compliment they can give is that they can't believe, or they forget that you are a police officer. (Respondent 12, specialist gun and gang crime unit, ten years of experience)

Respondents made several references to the importance of using an appropriate style of speech, which mirrors the witness' own style: "To me it's quite obvious that there is a requirement for an officer engage using speech / appropriate dialogue that the individual is able to understand" (Respondent 9, specialist gun and gang crime unit, 19 years of experience).

### 3.2.3: Non-verbal and demeanour-based techniques.

A small number of responses referenced techniques best categorised as non-verbal or demeanour based. These included adopting a friendly manner of approach, and an appearance of being calm and relaxed ("Being calm and friendly and open from the beginning about the procedure, what will happen and what you expect", Respondent 45, homicide and serious crime command, 15 years of experience). Respondents also highlighted that non-corporate dress (not wearing police uniform or a suit) can be beneficial, as these can create a barrier to building rapport: "I will offer them and smoke with them, I avoid suits and ties as it instantly creates a barrier between us and them; they see it as authority and they do not relate or respect that" (Respondent 4, specialist gun and gang crime unit, 12 years of experience).

### 3.2.4: Non-rapport-based techniques.

A small number of respondents referred to techniques best categorised as being part of the explain phase of PEACE interviewing, techniques which do not fall within recognised rapport-based techniques, and techniques which are unclassifiable. These are briefly outlined with categories and subcategories, shown in Table 10.

#### *3.2.4.1: Not recognised as rapport.*

Ten respondents referred to techniques which are not recognised as rapport building. Of these, 30% referred to use of appropriate language with no jargon, and a further 10% highlighted the importance of open communication. In particular, respondents emphasise not interrupting the witness and asking open questions: "Asking open questions. Not interrupting with what YOU think the scenario might have been" (Respondent 6, specialist gun and gang crime unit, 11 years of experience). Respondents suggest taking a verbal account before a statement and adopting an Achieving Best Evidence interview approach. Respondents also highlight the importance of offering practical safety advice and of carefully considering the interview environment (including offering the interviewee the chance to meet their interviewer prior to giving evidence):

> Find the right time of day for them. Do not judge them or be critical of their lateness/cancellation of appointments. Try to get them to the location. Consider meeting elsewhere, other than in an interview room at a police station. Meeting room in police building? (Respondent 18, specialist gun and gang crime unit, 14 years of experience)

The wide range of responses falling into this category suggests some confusion among respondents as to what rapport is, and how to build rapport effectively, and suggests that further academic-practitioner collaboration around this area may be beneficial. Perhaps more concerning is the assertion that rapport is not beneficial (or that respondents cooperate when there is a personal benefit rather than as a result of rapport):

> They [the witness] will provide evidence or intelligence when they know that it assists them, not because they feel comfortable. Rarely has rapport worked. However, there are often legitimate methods we can deploy to encourage them. For example, this morning I have started the process of a "text" to a judge for a witness who will give evidence but only if we provide that (authorised) assistance to him in terms of an unrelated case where he is charged. (Respondent 41, homicide and serious crime command, 30 years of experience)

A minority of respondents also suggest that disguising the level of commitment required by a witness in response to witness concerns about having to attend court can function as a means of rapport building: "Evidence can be obtained via ABE without the victim being entirely aware of their requirement of giving evidence before the court. It is common practice to suggest to the victim that - "we will discuss" or "sort out" later" (Respondent 22, specialist gun and gang crime unit, 16 years of experience). It should be noted that this was not a view universally endorsed among respondents, nor is this approach recommended, as if discovered it can negatively impact perceptions of trust in the police.

### 3.2.4.2: Unclassifiable.

A small number of responses were considered unclassifiable. These included the suggestion to research (or use previous knowledge) of the interviewee:

> Research around the interviewee is vital for a number of reasons. It will enable the interviewing officer to have knowledge of subjects they can discuss with the interviewee in order to build rapport without discussing the information the person has. It can begin the building up of trust in the officer. (Respondent 34, serious crime division, 30 years of experience)

Respondents also emphasise the need to view rapport as an ongoing process: "You can't just build a rapport for an interview.  Your demeanour with the person throughout the process is key and not treating the person as another witness, but someone who has been affected by an incident" (Respondent 15, specialist gun and gang crime unit, 11 years of experience). Respondents suggested slowly building up rapport, utilising rapport building techniques from Tier 3 interview training, and maintaining consistency in which officers' deal with any given witness.

### 3.2.4.3: Explain.

Finally, six respondents referred to techniques which fit more with the explain phase of PEACE interviewing, than as rapport building techniques. These respondents highlighted the importance of giving an honest and realistic outline of the criminal justice process, outlining the witness protective measures available, and being honest about what can be delivered. In addition, respondents suggested that it can be beneficial to explain the distinction between intelligence and evidence, and to explain ongoing police actions.

**3.2.5: Variations in rapport building with reluctant and non-reluctant witnesses.**

Overall, respondents suggest little or no difference in the approach towards rapport building with reluctant witnesses. However, three respondents outlined their specific approach in building rapport with reluctant witnesses. These respondents suggest that rapport building might take longer with reluctant witnesses or that information might be gathered indirectly: "It doesn't vary much, if at all with reluctant witnesses.  With a non-reluctant witness, they are more likely to give me the information directly, with reluctant witnesses it has to be teased out" (Respondent 2, specialist gun and gang crime unit, 18 years of experience).

Respondents suggested that it might become more important to highlight the importance of the witness' support, and to confirm that the investigating team are not immediately seeking to deal with offences that may have been committed by the witness independent of the incident under investigation: "In the case of reluctant witnesses, it is often appropriate to highlight that you are not seeking to immediately deal with offences they may have committed, and that without their support it is likely to happen again, possibly worse" (Respondent 3, specialist gun and gang crime unit, 15 years of experience).

**3.3: Common Features of Witnesses Giving Evidence in Court**

Respondents ($N = 31$) were asked what, if any, features were shared by witnesses willing to give evidence in court. It is worth noting that 23% of the 31 respondents ($n = 7$) reported that there are no common factors between these witnesses. However, the remaining responses ($n = 24$) could be grouped into four main categories: interpersonal relationships or network, factors relating to the individual, prosocial behaviour, and other considerations (which did not neatly sit within the preceding categories). Each of these is discussed in turn below alongside indicative quotes.  Key categories can be seen in Table 11 and the full range of categories and subcategories can be seen in Appendix G.

Table 11.

*Common features of witnesses giving evidence in court (key categories)*

| Category | Count | % |
|---|---|---|
| Interpersonal relationships & network | 13 | 42% |
| Personal factors | 10 | 32% |
| Prosocial behaviour | 10 | 32% |
| Other considerations | 7 | 23% |

### 3.3.1: Interpersonal relationships & networks.

Responses made frequent reference to independent witnesses with no connections to any of those involved in the incident as being more willing to give evidence in court: "Where the suspect is a total stranger in a relatively minor crime" (Respondent 16, youth offending team, 11 years of experience). Respondents also suggest witnesses willing to attend more are often those with a supportive (and stable) family unit ("Parental involvement: where parents are supportive they are more willing" – Respondent 12, specialist gun and gang crime unit, ten years of experience) or those with an emotional commitment to justice, for example as a result of a close relative being affected ("they are close relatives so have a direct emotional commitment to get justice" – Respondent 40, homicide and serious crime command, 25 years of experience). Finally, respondents referred to the witness' relationship to crime, suggesting that witnesses tend to be more willing to give evidence where they have no gang involvement or are in a vulnerable position within a gang. The witness' opinion of the criminally involved can also be a factor in witness cooperativeness: "Those who are not criminally involved tend to be the most willing witnesses. Those somehow connected to (but disapproving of) the criminally involved tend to be the reluctant witnesses. The criminally involved tend to be the hostile witnesses" (Respondent 6, specialist gun and gang crime unit, 11 years of experience).

### 3.3.2: Personal factors.

Around a third of respondents (32%) referenced personal factors which may make a witness more likely to agree to give evidence in court. These include those who witnessed the crime away from their home, for example near to their place of work, and those who are able to be relocated through a witness protective program. Respondents

also highlighted the age and personal circumstances of the witness ("This is not an exclusive list but generally people who are employed, typically in a stable family unit, involved in the community and often older rather than school age" – Respondent 46, homicide and serious crime command, 27 years of experience) and their attitude towards the community: "Generally, the older generation. They have a greater sense of community and duty" (Respondent 26, specialist gun and gang crime unit, 12 years of experience).

Other respondents suggest that confident witnesses are more likely to agree to give evidence in court: "They are not scared by the concept of being confronted. They are confident speakers and confident in general" (Respondent 13, specialist gun and gang crime unit, nine years of experience). Other respondents suggest that those who feel they have something to gain from having officer's onside or those who believe they "owe" the investigating officers are also more likely to agree to give evidence in court: "Where they want something from you and perceive that they need to keep going to get it or that they owe you" (Respondent 12, specialist gun and gang crime unit, ten years of experience).

Finally, respondents suggest previous experience of the court process is likely to impact witness cooperativeness, with positive experience ("Also a positive experience with police and/or the judicial system" – Respondent 46, homicide and serious crime command, 27 years of experience) or lack of experience both increasing the witness willingness to attend court ("People who have never been to court before" – Respondent 42, homicide and serious crime command, 13 years of experience).

### 3.3.3: Prosocial behaviour.

Around a third of respondents (32%) referenced the prosocial behaviour (and beliefs) of the witness. In particular, witnesses who are employed and engaged in society ("They tend to be the ones who have a job and are making a contribution to society" – Respondent 10, specialist gun and gang crime unit, 14 years of experience), with a strong sense of community and duty tend to be more willing to give evidence in court: "They are character who have a moral compass, sense of justice and doing the right thing" (Respondent 35, homicide & serious crime command, four years of experience).

However, a sense of duty has less impact where the witness has been directly involved in the events under investigation: "The 'civic duty' reason for giving evidence seems to be less applicable when the witnesses are either involved in the melee that led to the incident" (Respondent 41, homicide and serious crime command, 30 years of experience). In addition, there are circumstances where the criminally involved may be willing to give evidence. For example, those who are seeking to exit a gang culture are more likely to agree to give evidence in court:

> In gang related crimes (shooting, murders, kidnaps etc.) I have found over the years that it is usually the vulnerable members of the gangs that are more likely to become witnesses. It can be seen as a way out of a lifestyle they are uncomfortable with (Respondent 34, serious crime division, 30 years of experience)

### 3.3.4: Other considerations.

A small proportion of respondents referred to additional considerations underpinning witness willingness to give evidence in court. Witnesses may be more likely to give evidence where the crime witnessed was a relatively minor one or where the witness is not gang affiliated. However, this is where the similarities end: "Not being involved in a gang is probably one broad area of similarity, but otherwise I think that a willingness to give evidence can extend across the full range of ages and backgrounds" (Respondent 44, homicide command, 11 years of experience). For the most part there is limited overlap between witnesses in terms of demographic traits (e.g. age or ethnicity): "No, I've not noticed as witnesses are like to communities we serve - a large spectrum of people all from different ethnicities, beliefs, religions etc." (Respondent 39, response team, eight years of experience). Ultimately respondents stressed that the decision to give evidence is a personal one:

> Not really, each person is an individual and comes to decisions in their own time. You can put people in groups of factors that affect them however each individual person reacts to that situation differently to the next. It takes an officers, skill, judgement and experience to be able to judge these and deal with them accordingly. A training package simply will not suffice, this type of witness dealing is earned through years of experience. (Respondent 4, specialist gun and gang crime unit, 12 years of experience)

Despite this, respondents suggest that there is on occasion still a reluctance to become involved in police investigations within some Black or ethnic minority groups: "Some BME communities still have a generic reluctance to be involved" (Respondent 41, homicide and serious crime command, 30 years of experience). Finally, respondents

highlight a need more generally for the public to understand the criminal justice process as more than common sense: "Members of the public have a very limited knowledge of the judicial system and need to understand that the judicial system is not common sense" (Respondent 1, specialist gun and gang crime unit, 25 years of experience).

## 4: Discussion

The present study addressed the problem presented by reluctant witnesses within the UK CJS by surveying 47 police officers from one of two large metropolitan forces. Respondents suggested that the biggest challenge presented by reluctant witnesses is obtaining evidence from witnesses who had given some information "off the record". Respondents also suggested that in some cases gaining cooperation in the first instance can be problematic. Each of these will be discussed below, with emphasis on how the findings of the present study advance understanding of these issues and examples of how psychological literature can inform best practice.

### 4.1: Key Challenge One: Gaining initial cooperation

As highlighted in Chapter 6, the police often face difficulties in encouraging witnesses to become involved in investigations, with respondents suggesting that one of the key challenges presented by reluctant witnesses is gaining information from witnesses known to be present. It is likely that some of these issues are related to perceptions of procedural justice and police legitimacy. Respondents made frequent reference to distrust or dislike of the police among reluctant witnesses (only a minority of responses referenced positive perceptions of procedural justice and police legitimacy as motivating witnesses to give intelligence or evidence). This may manifest as a generic negative perception of the police (potentially exacerbated by the media or other cultural influences) or a lack of confidence in the police or wider CJS to manage information appropriately. Common cultural or social norms also seem to be a factor here. For example, respondents often discuss a lack of interest in in becoming involved in the investigative process or adherence to anti-snitching cultures or codes of non-cooperation. Finally, respondents suggest problems in securing initial cooperation might stem from a poor previous experience with the police or CJS. Taken together, these findings reflect issues which are fairly widely acknowledged both within official police guidance (see for example ACPO, 2006) and within the wider literature. For example, "disengaged" witnesses are often those who have had prior negative experiences of the

CJS (Audit Commission, 2003), while trust in the police has been suggested to be the strongest predictor of willingness to cooperate (Papp et al., 2017). The repeated discussion of such findings within the literature, and in particular the lack of improvement over the last two decades despite a number of recommendations for doing so (see for example Spencer & Stern, 2001) suggests that these issues are worthy of more consideration by policy-makers.

**4.2: Key Challenge Two: Conversion of information to evidence**

Assuming that practitioners are able to secure early cooperation from the witness, a second challenge then arises; that of converting intelligence to evidence. The findings of Chapter 6 demonstrate that this is considered as the principle challenge presented by reluctant witnesses by over half of practitioners surveyed. The potential risk of repercussions and reputational damage was suggested by respondents as being likely to impact witness willingness to provide evidence. In considering effective practice for minimising these risks respondents made frequent reference to use of special measures. This is unsurprising given the evidence that witnesses considered themselves more willing to provide information where assurances of confidentiality or anonymity (or appropriate witness protection) are given (Audit Commission, 2003; Clayman & Skinns, 2011; Maynard, 1994; Spencer & Stern, 2001). The prevalent view among respondents seems to be that once initial witness cooperation has been obtained (something which often requires considerable effort from the investigative team) the criminal justice process itself then creates the issue of maintaining this cooperation throughout the lengthy and often difficult process of securing justice (see also Sparks & Spencer, 2002; Spencer & Stern, 2001).

**4.3: Potential Solutions**

The present research aimed to establish the techniques representing effective techniques for obtaining both intelligence and evidence from reluctant witnesses, as well as in building rapport. The present findings add to the limited body of research available on reluctant witnesses but reveal little consensus on effective practice in these encounters. Addressing challenges presented by reluctant witnesses often require practical or systemic changes. This is particularly the case where the issues are related to perceptions of procedural justice and police legitimacy (see Koster et al., 2016 for a review of the police behaviour, police legitimacy, and cooperation literature) or the CJS process itself (e.g. changes to the laws surrounding anonymity applications, judicial

timeframes or the court process; Audit Commission, 2003; Clayman & Skinns, 2011; Maynard, 1994; Spencer & Stern, 2001). Previous research has also called for changes to be made to the ways that witnesses are able to provide information. For example, provision of more varied reporting channels (one such change was the 101-telephone number for non-emergencies; Spencer & Stern, 2001). In addition, relatively small changes such as not interviewing the witness at their home address are likely to make a difference to the risk of intimidation. Furthermore, allowing interviews to take place at places other than police stations, and making use of technological advances to allow witnesses to be interviewed or even give evidence via a video-link can avoid some of the inconvenience to witnesses that these processes currently involve (Spencer & Stern, 2001). The need for such changes has been highlighted within previous research. These changes are also beyond the scope of the current research. Furthermore, the overlap between the present findings and those of previous research suggest limited improvement in the issues surrounding reluctant witnesses over the last two decades. This being the case, it is perhaps time to consider the challenge of increasing cooperation from a psychological perspective.

### 4.3.1: Psychological solutions.

Respondents identified a number of relationship-based approaches which can be helpful in overcoming resistance, for example providing explanations of what is required of the witness, building trust and building rapport. The reference to these approaches demonstrates a clear understanding of the importance of the "engage and explain" phase of PEACE interviewing (also captured in phases 1 & 2 of the Cognitive Interview; see Chapter 2, Figure 3). This stage of PEACE includes providing introductions to all present at the time of the interview, outlining the reason for the interview and summarising the interview "route map" (e.g. identify the main topic of discussion, but acknowledge that other topics may become relevant throughout the interview process; College of Policing, 2018) and beginning to develop rapport. This phase also provides the opportunity to outline interview practice and expectations. For example, the interviewer might explain that nonverbal responses will be stated by the interviewer, that notes will be taken throughout, and that the interview provides the interviewee an opportunity to give their own account of relevant information in their own time and free from interruptions (Clarke & Milne, 2001; College of Policing, 2018). It is interesting to note that introductions and explanations were considered to be

more competently provided in cases involving serious crime (in comparison to volume crime; Clarke & Milne, 2001) and that given the primary roles of respondents in the present study, these officers may outperform some of their colleagues. The approaches outlined above present a number of opportunities for psychological literature to inform best practice. These are discussed in turn below.

### 4.3.1.1: The engage phase: Rapport.

Rapport has been suggested by law enforcement practitioners as a predominantly positive relationship involving trust and communication (Vallano et al., 2015). This is in line with the view of rapport adopted within investigative interviewing literature which considers rapport to be a positive relationship developed by "creating a positive, friendly, and comfortable atmosphere between interviewer and interviewee" (see for example Vallano et al., 2015, pp. 370). It is generally acknowledged that building rapport within interviews is beneficial in terms of putting the witness at ease and creating an environment which will allow the witness to provide a detailed and accurate account (see Abbe & Brandon, 2014; Vallano & Schreiber Compo, 2015). This view is seemingly shared by respondents within the present study. For example, respondents frequently referred to offering reassurance, listening to the witness, and empathising (coded within the present study as trust-building and approach-based). Respondents also referred to verbal techniques such as establishing common ground, discussing unrelated topics, and using witness-compatible language. Finally, frequent reference was made to breaking down corporate barriers, behaving as an individual rather than a police officer, and so on. Each of these approaches serves to increase liking and empathy and demonstrate interest in the partner.

The discussion of rapport-building approaches among respondents in the present study represents an advance in our understanding of how such techniques can be used with reluctant witnesses, something previously understudied within the literature. The potential of rapport to facilitate cooperation and disclosure in such encounters is perhaps unsurprising. Rapport has been suggested to improve cooperation in both witness and suspect interviews (Abbe & Brandon, 2013; Vallano & Schreiber Compo, 2015; Vallano et al., 2015). In addition, early development and maintenance of rapport is considered by practitioners to be crucial in obtaining cooperation of suspects (US Department of the Army, 2006; Kleinman, 2011). In this sense rapport can be considered as a means (increasing cooperation and increasing the amount of information

the interviewee is willing to reveal) to an end (the production of a more complete accurate account of the events under investigation; Vallano & Schreiber Compo, 2015; Vallano et al., 2015), regardless of the interviewee category (cooperative witness, reluctant witness, or suspect).

However further improvements are needed in developing officers' understanding of rapport. Within the present study when asked to consider effective practice in building rapport, respondents suggested a number of techniques not directly related to recognised rapport-building approaches. For example, respondents referred to techniques best considered as related to the explain phase of PEACE (e.g. explaining the criminal justice process), those not currently recognised as rapport (e.g. limiting jargon, asking open questions, demonstrating flexibility, etc.) or other such techniques. This suggests that there is still some confusion among practitioners as to what rapport actually is and how best to achieve higher levels of rapport (see for example Vallano et al., 2015 for more on practitioner views of rapport).

### 4.3.1.2: The engage phase: Trust.

In discussing the approach taken to engage with witnesses, several respondents referred to trust-building. It has been argued that there are three key components to trust: cognitive, affective, and behavioural (Johnson & Grayson, 2005; Lewis & Weigert, 1985). Affective trust refers to the relationship between those involved in the interaction (Lewis & Weigert, 1985). This might also capture an individual's confidence in an organisation or service provider as a result of the care and concern demonstrated by the organisation; in this context the reputation of the organisation and the individual's personal experience of them both become important (Johnson & Grayson, 2005). The rapport-building techniques outlined above (particularly those relating to liking, interest, & empathy) can be considered as building affective trust (Meissner, Kleinman, & Phillips, 2017). In contrast, cognitive trust refers to judgements of whether an individual or organisation is trustworthy, untrustworthy, or unknown. Making this judgement requires familiarity with or knowledge of the interaction partner, as well as considerations of reliability and often predictability of the partner (Johnson & Grayson, 2005; Lewis & Weigert, 1985). Finally, behavioural trust refers to actions which stem from cognitive and affective trust. In essence, behavioural trust is indicated by undertaking a course of action as though confident that those involved will act competently (Johnson & Grayson, 2005; Lewis & Weigert, 1985).

Although rapport is seen as critical in securing cooperation, recent research has suggested that cognitive trust (perceptions of competency and fairness) rather than affective trust is a particularly powerful predictor of cooperation and disclosure in an investigative context (Meissner et al., 2017). Respondents within the present study highlighted a number of techniques which serve to build cognitive trust. For example, respondents emphasised the need to demonstrate honesty and fairness, through delivering on promises and being honest and realistic in terms of what is expected of the witness. This suggests that (in line with the suggestion of Meissner et al., 2017), building cognitive trust can be beneficial in securing the cooperation of reluctant witnesses. What is perhaps more concerning in light of these findings is that police officers occasionally rely on a lack of transparency to secure cooperation, as such an approach has the potential to reduce overall cognitive trust in the police. For example, previous research suggested that in some cases witnesses are encouraged by police to give a statement on the grounds that they will not have to attend court, only to be issued with a summons later in the process (Sparks & Spencer, 2002). Moreover, a small number of respondents within the present study suggested a "we will sort that out later" style of response when faced with witness questions about possible court attendance. This suggests that in situations where a witness expresses reluctance to give evidence investigators may utilise techniques which work on a short-term basis without considering longer-term consequences.

### 4.3.2: The explain phase.

Respondents within the present study referred to the need to provide key explanations about the role of the witness, the police, and the CJS more generally. At present there is a lack of standard information provided to witnesses about the process they will be asked to undertake. This means that misunderstandings of the witness role are commonplace, and this is likely to contribute to the dissatisfaction commonly reported by witnesses (Sparks & Spencer, 2002; Spencer & Stern, 2001). As a result, there have been numerous calls for the provision of more standard information for witnesses, as well as increased use of witness support services such as Witness Services (who are able to support the witness in court and can go some way towards easing the apprehension that witnesses may feel; Audit Commission, 2003; Sparks & Spencer, 2002; Spencer & Stern, 2001). There have also been suggestions of ensuring regular updates to keep witnesses informed of case progress, acknowledging the importance of

the contribution witnesses make and providing education around this, and making administrative changes which make the process of providing evidence more convenient for witnesses (Sparks & Spencer, 2002; Spencer & Stern, 2001). Many of these suggestions were echoed by respondents within the present study. This suggests that there have been limited advances in terms of increasing witness understanding of their role and that of the CJS more broadly, despite recognition from officers that this is often key in securing witness cooperation.

### 4.3.3: Advancing best practice.

Respondents made some interesting suggestions for advancing best practice with reluctant witnesses. For example, a small number of respondents suggested that legally compelling witnesses to give evidence of what they have seen may offer a potential solution to witness reluctance. This is likely to be particularly effective where reluctance is caused by concerns over reputational damage. For example, anecdotal evidence suggests that this approach may offer a solution to concerns over "snitching" by giving the impression that the witness has no choice but to provide information (S. Clayman, personal communication, 2014). While these solutions begin to address issues around the personal cost of cooperating, from a psychological standpoint this is perhaps not the most important factor to consider. In considering why witnesses might be compelled to engage, respondents made frequent reference to interpersonal factors related to both the event (in terms of the individuals involved and support from friends and family) and the investigation itself (in terms of the approach of the police or wider CJS). When asked to consider additional support which could be offered to witnesses, respondents referred in particular to the latter of these. The emphasis on the characteristics of the interaction between police and witness as a means of promoting engagement and cooperation both within the current study and the extant literature suggests that psychology can play an important role in overcoming witness reluctance.

Recently, experts within the field of investigative interviewing have suggested that the goal of an investigative interview is to (i) secure engagement and cooperation and (ii) as a result obtain complete and accurate disclosure (Meissner et al., 2017). Two cycles have been suggested to facilitate this process (as shown below in Figure 11). Meissner et al.'s (2017) relationship cycle refers specifically to rapport, trust, and persuasion as facilitating cooperation and disclosure. This is functionally similar to the "engage and explain" phase of PEACE. The roles of rapport and trust have been well

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established in the literature (as outlined above; see Abbe & Brandon, 2013; Vallano & Schreiber Compo, 2015 for recent reviews). What is less well established is the potential role that persuasion or other forms of social influence could play in an investigative context.
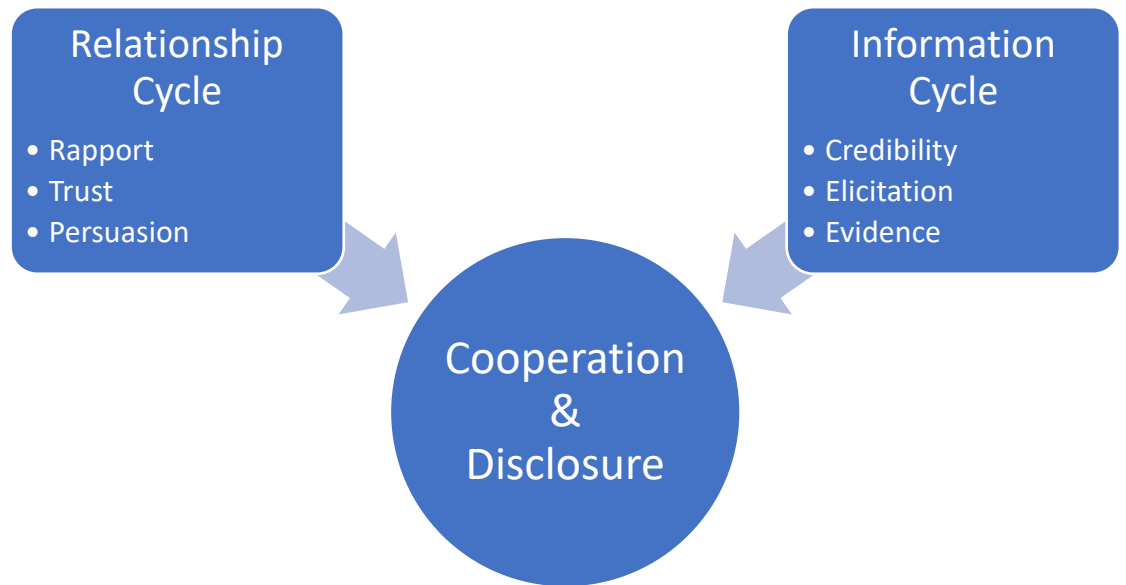


*Figure 11*. Securing cooperation and disclosure in investigations (adapted from Meissner et al., 2017).

Abbe and Brandon (2013) describe the process of an investigative interview as being "fundamentally an attempt at social influence, with an interviewer attempting to gain the participation of, disclosure from, or admission from a source" (pp. 242). If, as Abbe and Brandon (2013) go on to argue, rapport can be considered a means of achieving this social influence, then it is logical to assume that other evidence-based social influence techniques may also facilitate this process. Indeed, recent research has already begun to explore the potential benefit of different means of social influence in information elicitation contexts (Dawson, Hartwig, & Brimbal, 2015; Matsumoto & Hwang, 2018; Weiher, Winters, Taylor, & Luther, 2018). The chapters that follow build upon this line of research, with a view to using social influence techniques to increase the cooperation of reluctant witnesses in an investigative context. This is likely to be of importance in contexts beyond policing. For example, anti-snitching norms have been suggested to occur in a variety of contexts from a refusal to report co-worker

misconduct or "blow the whistle" to the "blue wall of silence" through which police officers seek to protect fellow officers (Palmiotto, 2011; Woldoff & Weiss, 2010).

In conclusion, the present research sought to establish the techniques which respondents perceive as being particularly effective in encounters with reluctant witnesses. A lack of consensus emerged on how best to approach reluctant witnesses. As such it is vital that evidence-based psychological techniques are established which may assist officers in obtaining intelligence or evidence in these cases. The importance of witnesses to investigations within the CJS and wider investigative contexts highlight the need to increase witness cooperation. Given the success with which relationship-based techniques such as rapport and social influence approaches have been utilised in some investigative contexts (e.g. in suspect interviews), it is likely that these approaches could be adapted for use with reluctant witnesses. The research described in the following chapters begins to explore this possibility.

**Chapter 8: Increasing Cooperation with Requests Using Social Influence: A systematic review**

*Police investigations progress considerably quicker when witnesses cooperate with requests for information. However, as discussed in Chapters 6 and 7 encounters with reluctant witnesses are relatively commonplace. Despite this, limited consensus exists around effective practice with reluctant witnesses and in particular on techniques which may increase the cooperation of reluctant witnesses. Chapter 7 outlines the importance of building rapport and trust in increasing cooperation and disclosure. These approaches provide a clear opportunity for psychological research to inform best practice. In addition, recent research has begun to explore the potential additional contribution that persuasion can make to increasing cooperation and disclosure. A considerable body of psychological evidence suggests the role that social influence can play in facilitating compliance with requests. In addition, some of the techniques currently used in practice (outlined in Chapter 7) can be seen as persuasive techniques. For example, officers may rely on an escalating commitment style of approach in trying to encourage witnesses to assist with investigations. The current chapter presents a systematic review of social influence techniques which have been demonstrated to motivate compliance with requests, and which may be of practical value in frontline policing. This systematic review includes 40 articles (55 experiments). Studies are discussed in terms of methodology and in particular, the potential of the influence technique for application within a forensic setting. I argue that social influence techniques have been shown to reliably increase compliance with requests, and that as such social influence presents an opportunity to encourage increased witness cooperation with the CJS. These techniques are then empirically tested in Chapters 9 and 10.*

## 1: Introduction

As discussed in Chapters 6 and 7 reluctant witnesses present a considerable problem for the CJS and very little guidance exists on how these encounters should be approached. A practitioner survey suggests little consensus on effective practice when encountering reluctant witnesses. However, respondents did acknowledge the importance of the "engage and explain" phase of PEACE, and in particular building trust and building rapport. The emphasis practitioners place on relationship-based approaches, combined with the recent discussion within intelligence gathering literature

on the distinct benefits of rapport, trust, and persuasion in facilitating cooperation and disclosure (Meissner et al., 2017) suggests that psychological theory could be used to enhance best practice. In particular, persuasion research can provide an understanding of how investigators may frame their request for information in a way that increases the opportunity to comply with the request, without putting pressure on the target. This is particularly important at a time when the constraints of policing in austerity requires officers to have a range of different skills including effective negotiating and influencing skills (HMIC, 2014).

Social influence can be broadly understood as the process through which an influencer effects the attitudes, beliefs, and behaviour of another individual in a social context. In this way, the change is ultimately caused by an external pressure, which may be real or imagined (Cialdini, 2001a; Guadagno & Cialdini, 2010). Wood (2000) highlights that this influence is often facilitated by complex social situations. When we consider social influence in these terms it is possible to view the investigative interview itself as a social influence attempt through which an interviewer seeks to gain cooperation (and ultimately disclosure) from an interviewee (Abbe & Brandon, 2013). Throughout this process the interviewer is often seeking "a particular kind of response – acquiescence – to a particular kind of communication – a request" (Cialdini & Goldstein, 2004, pp. 592). This process is known within social influence literature as compliance, a key aspect of which is that the target recognises that the influencer wishes them to respond in a given way (Cialdini & Goldstein, 2004).

A number of influence techniques have been proposed as a means of increasing compliance. A primary aim of the present review is to consider the suitability of these techniques for use within an investigative context. At a time when unethical interview practices have come under scrutiny (see Hartwig, Meissner, & Semel, 2014 for some discussion of this) researchers are increasingly focused upon ethical information gathering approaches both within policing and wider HUMINT (or human intelligence) and national security contexts. Crucially for the role of social influence in ethical information elicitation, many influence techniques are built around the concept of "compliance without pressure". This concept first emerged in the literature over 50 years ago as a response to the increasing focus on external pressure as a driving force behind attitude change, conformity, and obedience (Freedman & Fraser, 1966). Freedman and Fraser (1966) noted that situations may arise where ethical, moral, or

practical considerations may mean that maximising compliance while minimising pressure is preferable. It is these approaches which are likely to be of most value in investigative settings. In other words, the social influence techniques of interest focus primarily on increasing compliance through subtle, indirect, non-conscious means (Cialdini & Goldstein, 2004).

The power of social influence is often understood in terms of underlying goals. For example, Kelman (1958; 2006, cited in Abbe & Brandon, 2013) referred to three motivational bases for social influence: interest-based motivations (compliance), relationship-based motivations (affiliation & identification), and identity-based motivations (consistency & internalisation). Conceptually this is similar to Taylor's (2002) Cylinder Model of Negotiation Behaviour, where the negotiator's overall approach to the interaction (avoidance/withdrawal, distributive/antagonistic, or integrative/cooperative) impacts the communication throughout the interaction (instrumental/interest-based, relationship-based, or identity-based).

Other theoretical approaches include that of Knowles and Linn (2004) who posit the existence of approach and avoidance forces present when an individual considers any given request. Where avoidance forces outweigh approach forces then the request is likely to be refused. They suggest a number of strategies which can overcome resistance from the target and so encourage the desired behaviour (see Figure 12). For example, alpha strategies are designed to increase approach forces and promote movement towards the goal through offering incentives or increasing the attractiveness of the message. In contrast, omega strategies decrease avoidance forces which inhibit movement towards the goal. For example, omega strategies might introduce incremental steps towards the goal (thus reducing the perceived size of the request) or raising the comparison point to make the request appear more reasonable.

**Alpha Strategies** — Increase approach forces
- Increase the persuasiveness of the message
- Incentivise cooperation (e.g. through rewards & interpersonal benefits)
- Increase credibility (e.g. use expertise or attractiveness)
- Provide consenus information
- Highlight scarcity
- Create an obligation to reciprocate
- Highlight commitment & consistency (e.g. offer incremental steps towards the goal or reframe prior behaviour as consistent with the target)

**Omega Strategies** — Decrease avoidance forces
- Redefine the interaction as not involving influence or adjust perceptions of the task (e.g. minimise the request or raise the comparison)
- Address resistance directly (e.g. lower costs or address concerns)
- Address resistance indirectly (e.g. build confidence, self-esteem, or self-efficacy)
- Distract attention to interfere with ability to counterargue
- Disrupt complacency to highlight the message
- Consume resistance (e.g. provide prior opportunities for resistance or critique)
- Use resistance (e.g. frame the message so that resistance promotes change)

*Figure 12*. Alpha and Omega persuasion strategies (developed from Knowles & Linn, 2004).

Similarly, and perhaps best known among the theories of social influence, are Cialdini's (2001a) six principles of influence: (i) *reciprocity* or the desire to give something in return for a gift, information, or concession, (ii) *social proof* or the desire to follow the lead of others, particularly when they form a majority or are similar to the target, (iii) *authority* or the desire to follow instructions from legitimate authority figures, (iv) *consistency* or the desire to demonstrate consistency with previous attitudes, behaviours, or our own self-concept, (v) *scarcity* or the desire to take advantage of limited opportunities, and (vi) *liking* or the desire to comply with those we like or think similar to ourselves (see also Cialdini & Trost, 1998; Goodman-Delahunty & Howes, 2016 for an overview of these findings). These principles have inspired the development of a number of influence techniques (see for example Cialdini, 2001a; Cialdini & Goldstein, 2004), have been demonstrated across cultures (Cialdini et al., 1999; Petrova et al., 2007) and across a variety of domains including crisis negotiation (Guthrie, 2004; Giebels & Taylor, 2009), marketing, employment, charitable requests

(Cialdini, 2001a; Cialdini, 2001b) and commitment to environmental change (Lokhorst, et al., 2013).

**1.1: The Present Review**

The preceding two chapters discuss the prevalence of reluctant witnesses within police investigations and highlight the lack of consensus as to best practice in these cases. Given the importance of eyewitness testimony within the CJS (highlighted in Chapter 2), it is critical to establish evidence-based techniques which can increase witness engagement. The current chapter presents a systematic review of social influence techniques, with a view to establishing those most commonly used to increase compliance with requests. The techniques identified will then form the basis for empirical studies presented in Chapters 9 and 10, with an ultimate aim of advancing best practice in cases involving reluctant witnesses. Therefore, the review focuses on techniques with the potential to increase cooperation with requests in an information elicitation context.

The aim of the systematic review was to explore social influence techniques which might benefit police officers in situations involving reluctant witnesses and thus inform the programme of research that follows. The focus was therefore on techniques which aim to increase behavioural compliance with a costly request in an ethical manner. The cost of the request was considered particularly important in light of the commitment required from witnesses who cooperate with police requests (outlined in Chapters 6 & 7). For this reason, the review of social influence literature which follows particularly considers the magnitude of the request and the appropriateness of the technique for police use. Both compliance and persuasion were included as key search terms. There are two reasons behind this decision; (i) persuasion and compliance are often used interchangeably (Gass & Seiter, 2013), and (ii) there is a considerable degree of overlap between attitudes towards the police and reporting behaviours (see for example Murphy, Hinds, & Fleming, 2008), suggesting that within an information elicitation context in particular the two terms may overlap.

<div align="center">

**2: Method**

</div>

**2.1: Search Strategy**

The studies considered for inclusion were primarily obtained through online searches. Searches were limited to the Web of Science database (due to the volume of

literature obtained from initial searches). In line with the strategy of Malpass et al. (2008) only published research was included, as the application to a forensic context necessitates a focus on rigorous, well-executed, peer-reviewed research.

A number of keywords were deemed necessary for inclusion as search terms. All keywords (both primary and secondary) were developed through an initial scan of key literature (e.g. Cialdini, 2001a; Cialdini & Goldstein, 2004) and approved by a small group of researchers with experience of running detailed systematic reviews. The final primary keywords were "social influence" "compliance", and "persuasion". To ensure a focus on techniques the primary search terms were combined with a number of secondary search terms. Secondary search terms were as follows (italics represent a search for the exact phrase): "authority", *"social proof"*, "reciproc*" (for reciprocal, reciprocity, etc.), *"public commitment"*, *"sequential requests"*, *"legitimi*ing paltry contribution"* (for legitimising or legitimizing), "mimicry", *"mere agreement"*, *"driving towards a goal"*, *"MINDSPACE"*, *"low ball"*, "commitment", "liking", "likeability", *"four walls"*, "obligation", "favo*r" (for favour or favor), *"binding communication"*, *"evoking freedom"*, *"foot in the face"*, *"door in the face"*, *"foot in the door"*, *"disrupt then reframe"*, *"fear then relief"*, *"compliance without pressure"*, and "similarity". Additional searches were conducted for authors who appear in search results five or more times. This second strategy was intended to capture additional research published by researchers working in the domain of social influence. A number of searches were undertaken during keyword refinement stages of the systematic review. The final search was conducted on the 2nd August 2016. Literature published after this period was not included in the final systematic review. No other date constraints were imposed.

To ensure that only relevant core literature was included in the review a secondary refinement stage was undertaken. During this stage a number of specifications were included in the search to limit extraneous results. These are as follows: keywords must appear in the topic (title, abstract, or keywords), the research area must be psychology, the document type must be article, and the document must be available in English. Following these refinements, the abstracts of 876 articles were downloaded for screening. After title and abstract screening, a total of 173 articles remained (284 studies). The purpose of the review was to examine the effectiveness of social influence techniques in increasing compliance with requests. For this reason, only

empirical research was included in this review (review articles were excluded, although where relevant these are introduced in the discussion that follows). This criterion reduced the number of articles to 157 (268 studies).

### 2.1.1: Primary inclusion & exclusion criteria.

The remaining studies were then further refined according to pre-defined inclusion criteria (shown below in Figure 13). Titles and abstracts of studies identified through the search strategy outlined above were examined. Those considered to potentially meet the primary inclusion criteria (outlined below) were examined in full. If these articles were unavailable through institutional links via the Web of Science database, then a broader institutional library catalogue search and Google Scholar search was conducted. Attempts were also made to contact authors to request articles. Only one article was unavailable through these means (that of Reeves, 1993), and as such was excluded from the review.
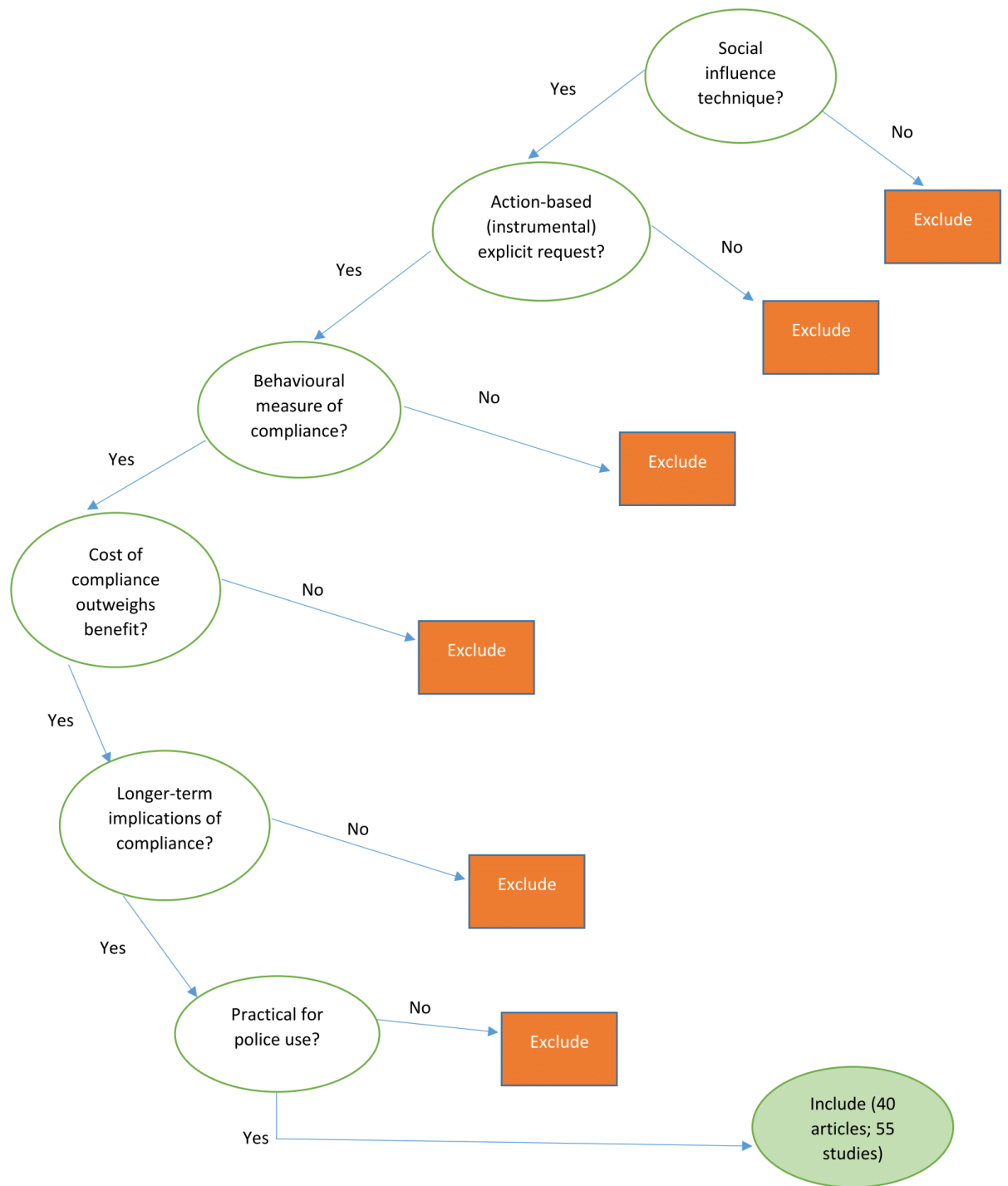
*Figure 13*. Primary inclusion criteria (in order of assessment).

Full articles were then screened to see that they met the primary inclusion criteria. First, studies must contain at least one social influence technique as a manipulation. In order to allow the assessment of the effectiveness of different social influence techniques multiple social influence manipulations should be presented in separate conditions, rather than combined. Secondly, studies must include a behavioural measure of compliance, rather than an intention-based measure. Next the nature of the request within each study was assessed against a number of criteria. These criteria were intended to mimic the conditions of a witness faced with a request for information as much as possible in an experimental setting. The request should be a direct request targeting one specific respondent at a time (although this could be delivered face-to-face, over the phone, or in an online context). For example, requests made via posters promoting or discouraging a particular behaviour were excluded on the basis of this criterion. The request should also be action-based, rather than identity-based. For example, where participants are asked to display an affiliation with a cause (e.g. through wearing a badge or displaying a poster) this should be followed up by an action-based request (e.g. to volunteer time to a particular cause). The request should also represent a significant cost to the participant, and the cost should outweigh any benefit of compliance, as well as requiring a longer-term commitment from the participant. For example, the request should incorporate compliance on a longer-term basis (e.g. a delay between the request and the behavioural measure of compliance or the request taking place over a longer period), rather than involving fleeting or one-shot compliance with no lasting implications (e.g. a one-off donation).

The criteria outlined above were designed to model an investigative scenario (i.e. a request where compliance requires action on the part of the participant, has long-term implications and a significant cost). For this reason, studies were only included in the systematic review if the social influence technique could be considered appropriate in an information gathering or investigative interviewing context. In assessing this criterion particular attention was paid to whether the social influence technique is likely to be considered ethical (that is it avoids deception or undue distress of respondents) and that existing evidence suggests it is likely to have a positive effect on compliance. Consideration of the ethics of using a social influence technique in this context is considered further in the discussion. The number of articles and studies included at excluded at each stage can be seen in Table 12.

Table 12.

*Articles and studies included and excluded at each stage of inclusion criteria assessment*

| Criteria | Included Articles | Included Studies | Excluded Articles | Excluded Studies |
|---|---|---|---|---|
| Search terms & abstract screening for relevance | 173 | 284 | | |
| Empirical work only | 157 | 268 | 16 | 16 |
| *Primary inclusion criteria* | | | | |
| Social influence technique | 141 | 244 | 16 | 24 |
| Behavioural measure of compliance | 112 | 187 | 29 | 57 |
| Cost outweighs benefit of compliance | 91 | 152 | 21 | 35 |
| Action-based (instrumental) request | 90 | 149 | 1 | 3 |
| Longer-term implications of compliance | 43 | 60 | 47 | 89 |
| Practical for police use | 40 | 55 | 3 | 5 |

### 2.1.2: Coding of studies

The review originated as a study space analysis. The purpose of a study space analysis is to thoroughly review existing literature in a way that identifies gaps in understanding as well as concentrations of relevant research (Malpass et al., 2008; Memon et al., 2010). The focus of the present review was on the second of these, with the aim of identifying those techniques that have been used *most often* within the considerable body of research on social influence to increase compliance with requests. Those studies that met these criteria were coded according to the fields shown in Table 13 (overleaf) and were included in a searchable database (see Figure 14). Studies were coded by study (rather than article).

| BASICS | | | | | SAMPLE | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SHORT REFERENCE | APA REFERENCE | EXPERIMENT NO. | PUBLISHED | TYPE OF STUDY | SAMPLE | SPECIAL FEATURES | SAMPLE SIZE | COUNTRY | TARGET REQUEST TYPE | TARGET REQUEST | |
| Baron 1971 | Baron, R. A. (1971). Behavioral | 1 | 1971 | Lab | Students | Females only | n = 60 | USA | Favour | Varies - IV. Small | |
| Beauvois 1993 | Beauvois, J. L., Joule, R. V., & Br | 1 | 1993 | Lab | Students | Smokers (at lea | n = 115 | France | Behaviour change | Take part in a 6-da | |
| Beauvois 1993 | Beauvois, J. L., Joule, R. V., & Br | 2 | 1993 | Field | Public | Must be aware | n = 800 | France | Other charity or 'prot | Take part in an int | |
| Burger 1981 | Burger, J. M., & Petty, R. E. (1981 | 3 | 1981 | Field | Students | Living in on-can | n = 75 | USA | Other charity or 'prot | Go to the lobby of | |
| Burger 1981 | Burger, J. M., & Petty, R. E. (1981 | 2 | 1981 | Field | Students | | n = 60 | USA | Other charity or 'prot | Write 'a line or tw | |
| Burger 2001 | Burger, J. M., Soroka, S., Gonzag | 2 | 2001 | Lab | Students | Females only | n = 120 | USA | Favour | Read an 8-page es | |
| Burger 2001 | Burger, J. M., Soroka, S., Gonzag | 1 | 2001 | Lab | Students | Females only | n = 114 | USA | Favour | Read an 8-page es | |
| Burger 2003a | Burger, J. M., & Cornelius, T. (20 | 2 | 2003 | Field | Students | Living in on-can | n = 216 | USA | Request for time | Take part in a 3-m | |

*Figure 14*. Screenshot of social influence searchable database.

Table 13.

*Study coding fields*

| Overall coding category | Field | Descriptor |
|---|---|---|
| Basics | Article short reference | First author and year only |
| | APA reference | APA style reference |
| | Experiment no. | Study number (within the journal article) |
| | Published | Year of publication |
| Sample Characteristics | Type of study | Laboratory or field study |
| | Sample | Sample population (student; public; university staff) |
| | Special features | Notable characteristics of the sample (e.g. female only, smokers, etc.) |
| | Sample size | Sample size |
| | Country | Country sample are drawn from |
| Study details | Target request type | Request type (behaviour change; favour; request for time; research request; sensitive request; other charity or "protest" request) |
| | Target request specifics | Details of the target request |
| | Target request delivery | Delivery format (face-to-face; written; online; telephone) |

| | | |
|---|---|---|
| | Time needed to complete request | Estimate of time taken to complete request |
| | Delay between manipulation and request | Estimate of delay between manipulation and request |
| | Delay between request and measure of compliance | Estimate of delay between request and measure of compliance |
| | Manipulation delivered by | Who was the manipulation delivered by (confederate; experimenter; written; computer-mediated; participant-based) |
| | Request delivered by | Who was the request delivered by (confederate; experimenter; written) |
| | Manipulation and request delivered by | Did the same person deliver both the manipulation and the request (same; different) |
| | Manipulation delivered | How was the manipulation delivered (individually; group; confederate-participant pair; experimenter-participant pair) |
| | Request delivered | How was the request delivered (individually; group) |
| | Benefit of compliance | List any benefit of compliance (none; minimal; course credit) |
| Manipulation(s)/Independent Variable(s) | Manipulation | Details of the social influence technique |
| | Broad influence technique | Broad type of influence technique (attraction towards requester; efficacy; emotion; interaction with requester; modelled compliance; personalisation of request; priming; reciprocity; request format; response format; similarity) |

|  | Principle of social influence (Cialdini) | Potential underlying mechanism (Cialdini's six principles or similar) |
|---|---|---|
|  | Other manipulations | Additional manipulations of the request context |
|  | Control group | Control group included (yes; no) |
| Outcome(s)/Dependent Variable(s) | Agreement with target request | Format of agreement with request (written; behavioural; verbal) |
|  | Additional DV type | Broad categorisation of additional measured variables |
|  | Additional DV details | Details of additional dependent variables |
|  | Notes | Any notes relating to the study |

*Note*: Short article references (as used within the tables that follow) do not appear in the thesis reference list, however these can be found alongside the full APA style reference (as listed in the thesis reference list) in the searchable database.

### 3: Results and Discussion

The aim of the review was to identify candidate techniques for the empirical phase of the research and in doing so to explore approaches which might benefit police officers faced with reluctant witnesses. Fifty-five studies from 40 journal articles were included in the final review. Each of these included a specific social influence technique or techniques to induce compliance with a target request (full details of each study can be found in the searchable database available on OSF; see Appendix A). The studies included in the systematic review are outlined below in terms of (i) the context of the request, (ii) the measure of compliance and (iii) the social influence techniques used to drive compliance with the request. The discussion closes with some consideration of the psychological mechanisms underpinning the social influence techniques. While a number of reviews on using social influence to drive compliance have been previously published, these generally focus on a small range of influence techniques (see for example Burger, 1999 and Dillard, Hunter, & Burgoon, 1984 for reviews of the foot-in-the-door technique, O'Keefe & Hale, 2001 and Feeley, Anker, & Aloe, 2012 for reviews of the door-in-the-face approach, and Pascual & Guéguen, 2005 for a comparative meta-analysis of these two approaches). In contrast, the current review includes literature based on the circumstances of the request, rather than the technique itself. Therefore, the presentation of findings that follow are those of studies which meet the strict inclusion criteria of this review and as such are those which are most relevant to the application of social influence techniques to a policing context.

### 3.1: The Context of the Request

Over half (56%) of the studies were conducted in a field-based or naturalistic setting, with the remaining studies taking place in a laboratory. Over two thirds (69%) of the studies drew their sample from a student population (please note this figure includes three samples presumed to be drawn from student populations, but not confirmed within the details of the study). The remaining studies included members of the public (25%) and university staff (4%; one study did not specify their population). In this sense, the studies presented here are similar to those included in previous reviews focusing on policing contexts. For example, a study space analysis of research on the Cognitive Interview demonstrated that 64% of included studies used a sample of young adult witnesses (Memon et al., 2010). As highlighted by Memon et al. (2010) this does invite the question from policymakers of whether findings can be applied beyond the

typical (young adult, university educated) participant. Therefore, in the empirical chapters which follow I include an online study recruiting from university-based research participation schemes alongside public-facing schemes (social media and public recruitment websites) in a bid to widen participation. This is something which future research should continue to address. Requests were delivered via a number of mediums, the most common being in person requests (55%). Other requests were delivered via telephone (22%), in a written format (11%), in a specific online context (via email or through an online game; 4%), or a combination of these (in person and written, 4%; written and telephone, 2%; unknown, 4%).

In assessing each study against the inclusion criteria, and with a view to further empirical testing, a key consideration was the magnitude of the request. Specifically, it was essential that the request (i) required an action-based response, (ii) represented a cost to the participant that outweighed any potential benefit, and (iii) was of a considerable size, requiring compliance on a longer-term basis, (rather than a request for fleeting compliance). While all the target requests of all included studies met these stringent criteria, the overall context of the request differed between studies (see Table 14 overleaf). Approximately one third of the studies included a request for the participant's time or research requests. The remaining studies included requesting a favour, other forms of charity or "protest" requests, requests for behaviour change, or requests of a more sensitive nature.

Table 14.

*Context of the target request (included studies only)*

| Target request context | Study count (*n*) | Study percentage | Example of context (and article short reference) |
|---|---|---|---|
| Request for time | 19 | 35% | Promote or take part in charitable activities (e.g. Burger, 2003b; Cialdini, 1975); design programs to benefit the community (e.g. Skandrani-Marzouki, 2012) |
| Research request | 18 | 33% | Volunteer to take part in future studies in person (e.g. Dolinski, 2011; Elman, 1977), complete and return a postal survey (e.g. Garner, 2005, Guadagno, 2001), or volunteer to help administer a survey to others (Freedman, 1967). |
| Favour | 8 | 15% | Complete a specific task online (e.g. Eastwick, 2009) or in person (e.g. Baron, 1971), or provide feedback on written work (e.g. Burger, 2001) |
| Other charity or "protest" request | 5 | 9% | Distribute promotional material (e.g. Patch, 1997), take part in a charity-focused interview (e.g. Beauvois, 1993), or other forms of charity promotional activities (e.g. Burger, 1981) |
| Behaviour change | 3 | 5% | Smoking cessation (e.g. Beauvois, 1993), increase energy savings (e.g. Souchet, 2013), or implement a classroom intervention (e.g. Martens, 1996) |
| Sensitive request | 2 | 4% | Reveal a personal password to an experimenter (e.g. Happ, 2016) or agree to a cornea donation on behalf of a decreased next of kin (e.g. Joule, 2010) |

A number of studies included manipulations of the wider request context (see Table 15). Where relevant these are discussed alongside the social influence manipulations below. These are not the focus of the present review (and are beyond the scope of the line of research which follows); however, it should be noted that a number of these manipulations may be relevant to a policing context (e.g. anonymity, personalisation of the request, and some aspects of requester characteristics). Future research should therefore consider implementing these manipulations within the context of information elicitation.

Table 15.

*Additional manipulations of request context (included studies only)*

| Manipulation of request context | Count (*n*) | Percentage | Example of context (and article short reference) |
|---|---|---|---|
| Requester characteristics | 8 | 30% | Same or different requester (e.g. Burger, 1981; Cialdini, 1975; Chartrand, 1999), interaction with requester (e.g. Burger, 2001), requester beneficiary (Freedman, 1967), ethnicity of requester (Eastwick, 2009), or requester weight (Elman, 1977) |
| Target characteristics | 5 | 19% | Target weight (Elman, 1977), gender (Dolinski, 2005), self-concept clarity (Burger, 2003b), or preference for consistency (Guadagno, 2001) |
| Request magnitude | 4 | 15% | Length of survey (e.g. Garner, 2005), size of favour (e.g. Baron, 1971), nature of task (cognitively demanding or undemanding; Fennis, 2010) or magnitude of compliance (self-determined or fixed; Goldman, 1981) |
| Personalisation of request | 4 | 15% | Use of handwritten, handwritten & personalised or blank post-its in written request delivery (e.g. Garner, 2005) |
| Request delay | 2 | 7% | Delay in a foot-in-the-door paradigm (e.g. Chartrand, 1999; Shanab, 1982) |
| Behavioural justification | 1 | 4% | Providing justification or cognitive rationalisation of a costly act (e.g. Beauvois, 1993) |
| Social representation | 1 | 4% | Request phrasing activates central or peripheral cognitions (Souchet, 2013) |
| Request unpleasantness | 1 | 4% | Low or high unpleasantness (e.g. Freedman, 1967) |
| Anonymity | 1 | 4% | Anonymous return of a survey (e.g. Burger, 2009) |

**3.2: Measure of Compliance**

Over half (65%) of the studies included in the review measured verbal compliance. The remaining studies included measures of behavioural compliance (18%), or a combination of measures (behavioural compliance with verbal compliance; 15% or behavioural compliance with written compliance; 2%). It should be noted that in order to meet the inclusion criteria of the review participants must be unaware that they will not actually be required to complete the task. Therefore, the studies included in the review which included a measure of verbal compliance can be considered as a measure of actual compliance, rather than intention only. A number of studies included secondary measures alongside measures of compliance (see Table 16). These are discussed below where relevant to the scope of the current review.

Table 16.

*Additional relevant dependent variables (included studies only)*

| Other relevant dependent variables | Count (*n*) | Percentage | Example of context (and article short reference) |
|---|---|---|---|
| Magnitude of compliance | 10 | 50% | Self-determined. Magnitude of target behaviour (e.g. Dolinski, 2005; Goldman, 1981) or amount of time offered (e.g. Demarque, 2013; Elman, 1977; Skandrani-Marzouki, 2012) |
| Liking | 3 | 15% | Rating of requester (e.g. Grant, 2010) or target behaviour (e.g. Martens, 1996) |
| Response time or reaction time | 3 | 15% | As response within a set window (e.g. Garner, 2005; Guéguen, 2002) or more traditional reaction time (Grant, 2010) |
| Attraction towards requester | 1 | 5% | Attitudinal similarity (e.g. Baron, 1971) |
| Resource depletion | 1 | 5% | Errors made on a Stroop task (e.g. Fennis, 2010) |
| Mood | 1 | 5% | Positive or negative affect (e.g. Fennis, 2010) |
| Level of information provided | 1 | 5% | Word count across open-ended survey questions (Garner, 2005) |

Fifty-percent of the studies with a second dependent variable (10 of 20 studies) included a measure of the magnitude of compliance. This was determined by the target of the request, rather than fixed by the requester. This approach is of particular interest within an information elicitation context where the magnitude of compliance (e.g. the effort expended on a recall attempt) is determined by the witness. For example, Goldman and Creason (1981) suggest an overall marginally significant increase in compliance when the magnitude of the task is self-determined. In addition, research has shown that individuals comply with target requests at a higher rate and with a higher level of compliance (when self-determined) when a social influence technique is used (Dolinski, Grzyb, Olejnik, Prusakowski, & Urban, 2005, Study 3; Skandrani-Marzouki, Marzouki, & Joule, 2012; Fennis & Aarts, 2012). One study also assessed the level of information provided by participants; Garner (2005) demonstrated that use of a handwritten post-it (to personalise the target request) reduced the return time of postal surveys while increasing the amount of comments provided in response to open-ended questions.

However, this benefit on the magnitude of compliance does not appear to hold true for all social influence techniques (e.g. the fear-then-relief approach does not seem to impact the level of compliance; Dolinski & Nawrat, 1998) or across all conditions. For example, Guadagno, Asher, Demaine, and Cialdini (2001) suggest that foot-in-the-door requests increase the level of compliance only when this influence technique is presented alongside information which promotes the view of the target as helpful. Similarly, Fennis and Janssen (2010) demonstrated that the size of an initial request – and the nature of this task as cognitively demanding or otherwise – affected the amount of time that participants were willing to volunteer in response to a later request. These contrasting findings suggest a need for further research to examine the impact that social influence techniques can have not only on rates of compliance, but on the index of self-determined compliance. This is addressed within the empirical studies which follow.

**3.3: Social Influence Techniques**

The influence techniques used within the 55 studies included in the systematic review can be grouped into 10 broad categories. Each of these is briefly outlined below and the categories and their associated counts can be seen in Table 17 (please note that some studies included more than one influence technique).

Table 17.

*Broad influence techniques used to drive compliance (included studies only)*

| Broad influence technique | Study count (*n*) | Study percentage | Article short reference |
|---|---|---|---|
| Request format | 36 | 58% | [See Table 18] |
| Interaction with requester | 7 | 11% | Burger, 2001; Dolinski, 2005; Freedman, 1966; Grant, 2010; Guéguen, 2011 |
| Priming | 4 | 6% | Guadagno, 2001; Skandrani-Marzouki, 2012 |
| Emotion | 4 | 6% | Dolinski, 1998; Freedman, 1967 |
| Personalisation of request | 4 | 6% | Garner, 2005 |
| Reciprocity | 2 | 3% | Burger, 2009; Happ, 2016 |
| Similarity | 2 | 3% | Baron, 1971; Elman, 1977 |
| Modelled compliance | 1 | 2% | Elman, 1977 |
| Efficacy | 1 | 2% | Fennis, 2012 |
| Response format | 1 | 2% | Cioffi, 1996 |

As shown in Table 17, over half (58%) of the social influence techniques could be broadly categorised as manipulations of request format. The focus of the review is on those techniques which have a large evidence base suggesting a reliable increase in compliance with a large target request. Therefore, the discussion that follows focuses on manipulations of request format (seen in Table 18 overleaf), and in particular on *foot-in-the-door* and *door-in-the-face* manipulations. Additional social influence techniques returned under the present search conditions can be seen in the searchable database (available on the OSF; see Appendix A).

Table 18.

*Manipulations of request format (included studies only)*

| Request format manipulation | Study count (*n*) | Study percentage | Article short reference |
|---|---|---|---|
| Foot-in-the-door (or similar: rejection moderation; double foot-in-the-door; gearing) | 17 | 39% | Beauvois., 1993; Burger, 2003b; Chartrand, 1999; Demarque, 2013; Eastwick, 2009; Fennis, 2010; Freedman, 1966; Goldman, 1986; Guadagno, 2001; Guéguen, 2002; Joule, 2010; Martens, 1996; Rodafinos, 2005; Shanab, 1982; Skandrani-Marzouki, 2012; Souchet, 2013 |
| Door-in-the-face (or similar: metacommunicative door-in-the-face; yield/gain concessions) | 13 | 30% | Cialdini, 1975; Eastwick, 2009; Goldman, 1986; Goldman, 1981; Martens, 1996; Miller, 1976; Patch, 1997; Rodafinos, 2005; Shanab, 1979; Shanab, 1980 |
| Prior information (or similar: lowball compliance) | 5 | 11% | Beauvois., 1993; Burger, 1981; Burger, 2003a; Cialdini, 1978 |
| Contrast of request (to a prior request) | 3 | 7% | Shanab, 1979; Shanab, 1980; Shanab, 1982 |
| Relatedness of request (to conversation or a prior request) | 2 | 5% | Burger, 1981; Dolinski, 2005 |
| Evoking freedom | 2 | 5% | Guéguen, 2013a |
| Legitimising paltry contribution | 1 | 2% | Dolinski, 2005 |
| Request order (equivalent request size) | 1 | 2% | Dolinski, 2011 |

The studies included in the present review contain 17 uses (39%) of a *foot-in-the-door* request format. The foot-in-the-door technique is arguably the most frequently used technique among a series of manipulations known as sequential requests. Sequential requests, as their name implies, combine a sequence of two or more requests in such a way that compliance with the target request (which is usually the final request in the sequence) is increased. Originally proposed by Freedman and Fraser (1966), the primary assumption of the foot-in-the-door approach is that by inducing an individual to comply with a small (low cost) request, we increase the likelihood of their compliance with a second, larger and more costly request (Freedman & Fraser, 1966). In their initial test of the foot-in-the-door procedure Freedman and Fraser (1966) found that this assumption held true; participants were more likely to agree to a target request when they had first been presented with an initial smaller request. Compliance with the target request increased further when the initial request was carried out, but mere agreement (without the action) was enough to increase compliance above the rate of a control (presented with the target request only). This pattern of results remains consistent requests are delivered face-to-face (as in Freedman & Fraser, 1966) on in an online setting (see for example Guéguen, 2002). Each of these request mediums is explored in an investigative interviewing context in the empirical chapters that follow. A number of reviews conducted on this topic have generally concluded that the foot-in-the-door effect is small but fairly robust (see for example Burger, 1999; Dillard et al., 1984), with a suggested overall *r* range of .09 to .17 (Burger, 1999).

There are however some discrepancies in terms of findings related to the context of the request, meaning further research is needed to establish the exact circumstances under which this effect is most likely to occur (see for example Burger, 1999; Dillard et al., 1984). For example, Chartrand, Pinckert, and Burger (1999) suggested that there are circumstances which can cause the foot-in-the-door manipulation to "backfire". In particular, they argue that in order for the foot-in-the-door procedure to effectively increase compliance with a target request, there must be a sufficient period of delay between the two requests if these requests are to be presented by the *same requester*. However, compliance rates are not affected when (i) the *same requester* presents the target request after a delay or (ii) when the target request is immediately presented by a *different requester*. Research has also suggested that individual differences may affect the extent to which an individual is susceptible to foot-in-the-door as an influence

technique. For example, while there has been some agreement in the literature that insufficient delay can reduce the effectiveness of the foot-in-the-door technique (Burger, 1999; Chartrand et al., 1999), others have suggested that individual differences can reduce the impact of delay (this may go some way to explaining the inconsistent findings around foot-in-the-door and delay). Guadagno, Asher, Demaine, and Cialdini (2001) suggest that when the same requester presents non-continuous requests with minimal delay that this creates resistance to the second request. However, this resistance can be reduced by emphasising the prior helpfulness of the individual (in agreeing to the initial request), but that this is only the case when the individual scores highly in terms of their preference for consistency. Where an individual has a low preference for consistency the opposite pattern is seen and compliance with the target request is reduced. Similarly, Burger and Guadagno (2003) demonstrated that the foot-in-the-door requests are more effective when the individual is high in self-concept clarity. Taken together, these inconsistencies suggest a need for further research. In particular, it is important to establish whether the timing of the request and characteristics of the requester (particularly whether both requests come from one individual) impact the effectiveness of foot-in-the-door requests in an investigative context.

Further research has explored the magnitude of the requests and the order in which these requests are presented. Beauvois et al. (1993) investigated the effectiveness of a double foot-in-the-door or gearing procedure (asking two initial small requests prior to the target request) and demonstrated that use of two small initial requests significantly increased compliance above that of a control group. Double foot-in-the-door procedures have also been shown to be effective where the request is a sensitive one. For example, Joule, Bernard, Geissler, Girandola, and Halimi-Falkowicz (2010) developed a double foot-in-the-door procedure (designed to promote the concepts of reciprocity and prior helpfulness) for use in requests for cornea donations. Compliance with requests increased by approximately 30% (from 35% to 65.2%) when the double foot-in-the-door script was used compared to a single foot-in-the-door. In contrast, Souchet and Girnadola (2013) demonstrated that a double foot-in-the-door procedure increases compliance beyond that of a low-cost foot-in-the-door (where the initial request is very minor) or control condition (target request only). However, double foot-in-the-door requests did not increase compliance above the level of that obtained when the initial request is moderate in size.

It is possible that the effectiveness of foot-in-the-door techniques varies with the size of the initial request. Beauvois, Joule, and Brunetti (1993) found no benefit of foot-in-the-door sequential requests when the initial act is relatively costly in and of itself (despite remaining less costly than the target act). This echoes the suggestion of Freedman and Fraser (1966) that the success of foot-in-the-door techniques rests with the asking of a small initial request, rather than alternative explanations such as the familiarity with the requester (as a result of the repeated interaction required for the same requester to issue the target request after a delay). Freedman and Fraser (1966) demonstrated that when the requester made contact on a separate occasion prior to issuing the target request (in order to familiarise the target with the requester), this did not increase compliance relative to a control condition. However, more recently, research has suggested that it is possible for a costly initial act (but one which is less costly than the target request) to *increase* compliance. When individuals were presented with a cognitively demanding initial request before being asked to specify how many hours they were willing to donate to a specific cause they were likely to offer more time than those who were presented with a less cognitively demanding initial task (Fennis & Janssen, 2010). It is also possible that the effectiveness of foot-in-the-door procedures varies with the contrast between the initial request and target request. Shanab and Isonio (1982) suggest that individuals were more likely to refuse a socially unpleasant target request (to attend a single hour long session administering electric shock punishments to human subjects in a paired associate task) when there was a high level of contrast between the target request and the initial request (to spend 15 minutes administering buzzer sounds as punishments to rats in another study) compared to a low level of contrast (to spend 15 minutes deducting points from human participants in another study).

A second prominent form of sequential request as an influence technique is the *door-in-the-face* technique. Thirteen of the studies in the present review (30%) incorporated this manipulation. The door-in-the-face technique was originally proposed by Cialdini et al. (1975) as a rejection-then-moderation (or reciprocal concessions) procedure for inducing compliance. The inverse of the foot-in-the-door technique, the door-in-the-face approach assumes that compliance with a target request can be increased by first presenting an extreme initial request (which most individuals would be expected to reject). A number of reviews have been conducted on the door-in-the-

face request format. These have generally concluded that door-in-the-face requests reliably increase compliance with a target request. For example, O'Keefe & Hale (2001) found a random-effects weighted mean odds ratio of 1.46 (95% CI [1.18, 1.82]) in favour of door-in-the-face requests across 87 studies. However, there is some debate around the circumstances in which this approach is most effective. Findings suggest that the door-in-the-face is particularly effective when the target and initial requests are (i) made by the same individual, (ii) have the same beneficiary, (iii) are prosocial in nature, and (iv) are made face-to-face with no delay between requests (O'Keefe & Hale, 2001). However, more recently Feeley and colleagues (2012) conducted a meta-analysis of the first 35 years of research into the door-in-the-face technique and concluded that this approach is more effective in securing verbal ($k = 78$, $r = .126$) than behavioural ($k = 39$, $r = .052$) compliance, and that this effect remains constant across different samples (nonstudent, student, mixed student/nonstudent) and different request mediums (both face-to-face and mediated e.g. written, online/electronic, telephone). The technique is also more successful where the initial and target request are delivered by (and benefit) the same individual or individuals (a decrease in compliance is seen when either the requester or beneficiary changes). Feeley et al. (2012) also argue that door-in-the-face requests are more effective in securing compliance with prosocial requests, particularly where the desired target behaviour is for volunteering or research, rather than a monetary donation. Their findings suggest that the door-in-the-face strategy is effective regardless of whether the second (target) request is novel or a direct reduction of the initial request, but that both verbal and behavioural compliance is impacted by the difficulty of the target request. Where baseline compliance with this request is low, then the door-in-the-face is likely to be more effective. In contrast, Dillard et al. (1984) suggest that door-in-the-face requests prove more effective (in comparison to foot-in-the-door requests) when there is relatively high control group compliance with a target request. Taken together, the findings outlined above suggest a need for further research to examine the efficacy of door-in-the-face requests, particularly in situations where the target request is of a moderate size and is likely to produce relatively high rates of non-compliance from a control group. This will be explored further in the empirical chapters which follow.

Further research has explored the format of the door-in-the-face request. For example, Patch, Hoang, and Stahelski (1997) compared a standard door-in-the-face

request to a metacommunicative door-in-the-face request, which included a statement highlighting the unusual nature of receiving a request from a relative stranger and the hope that the target did not feel pressured to respond. There was no significant difference in compliance rates between these two formats. However, research has demonstrated the effectiveness of a double door-in-the-face procedure. Goldman and Creason (1981) found significantly greater compliance rates when a double door-in-the-face format (that is an initial extreme request, followed by a concession to a large request which is still likely to be refused, followed by the target request) is used in comparison to a single door-in-the-face request or control condition.

Research on sequential requests has also explored a combination of foot-in-the-door and door-in-the-face techniques (Goldman, 1986). In this case, a target individual is first presented with an extreme request. This request is then modified to a more moderate level. The moderate request – which represents a concession from the extreme initial request as in the door-in-the-face approach – is one which is smaller than the target request which follows – as in the foot-in-the-door approach – but is relatively demanding in comparison to initial requests usually presented in a foot-in-the-door paradigm. Goldman (1986) demonstrated that the combination approach increased compliance with the target request beyond the level achieved with either the foot-in-the-door or door-in-the-face approach alone. It has also been suggested that an increase in compliance is seen when the initial request and target request are equal in size. When both requests are of moderate difficulty then securing compliance with an initial request led to a significant increase in compliance with a second request. This pattern of results remained unchanged regardless of the order in which requests were presented (Dolinski, 2011). On the whole, these findings further demonstrate the effectiveness of sequential requests as an influence technique and suggest that the relationship between request size and compliance is one which merits careful consideration.

A number of studies have also directly compared the effectiveness of foot-in-the-door and door-in-the-face requests. A comparative meta-analysis has shown no overall significant difference in the efficacy of the two request formats in securing compliance with a target request. Instead, both approaches increased compliance relative to a control condition at approximately equal rates; foot-in-the-door showed an overall compliance rate of 45.2% (mean odds ratio = 4.31) and door-in-the-face an overall compliance rate of 41.1% (mean odds ratio = 3.39; Pascual & Guéguen, 2005).

However, this particular analysis showed considerable variation in effect sizes (odds ratios ranged from 0.10 to 51.00 for the foot-in-the-door technique and 0.29 to 27.00 for the door-in-the-face technique) and further analyses of potential moderators were not included. Given the focus of this review on application of sequential requests to a real-world setting, one of the studies included in the meta-analytic study in particular merited further attention. Martens, Kelly, and Diskin (1996) explored the effectiveness of foot-in-the-door and door-in-the-face requests in the contexts of asking teachers to (i) rate and (ii) apply a classroom-based intervention (systematic praise). Martens and colleagues (1996) found that when the request was presented in a door-in-the-face format then the intervention was less likely to be rated positively (compared to a control. There was no significant difference between door-in-the-face and foot-in-the-door or foot-in-the-door and control). The same pattern of results was shown in terms of behavioural compliance via the implementation of the intervention (although note that in this case the comparison between the door-in-the-face and control groups was reported as "approaching significance", $p = .057$). Martens et al. (1996) suggest that the ineffectiveness of the door-in-the-face technique in this case is potentially the result of unfavourable perceptions of the requester caused by the feeling of the large request as unreasonable. This suggests that researchers should take care to ensure that door-in-the-face requests are not seen as extreme or unreasonable (thus creating resentment for the requester) when applying such techniques in practice.

It may also be that the context of the request itself is crucial. For example, in an early meta-analysis Dillard et al. (1984) suggest that both foot-in-the-door and door-in-the-face requests are most effective when the request is a prosocial one. However, they argue that foot-in-the-door is the more robust of the two approaches, with effectiveness relatively unaffected by delay, but that this is dependent upon the provision of an incentive. In contrast, door-in-the-face is effective only where the delay between requests is brief. The discrepancy in the findings of the comparative performance of foot-in-the-door and door-in-the-face requests suggests a need for further research, particularly within applied settings. In Chapters 9 and 10 I present a series of empirical studies which aim to compare these approaches within an information gathering context.

Taken together, the findings outlined above suggest the need to further explore the effectiveness of sequential requests in situations where the target request is a costly

one. The aim of this review was to establish the techniques with a large evidence base which may be of practical value in an information elicitation setting. The techniques identified will form the basis of empirical research presented in the chapters which follow. The review highlights a large body of research demonstrating the effectiveness of foot-in-the-door and door-in-the-face requests in increasing compliance with requests. Taken together, this evidence suggests that foot-in-the-door and door-in-the-face request formats may be beneficial in increasing compliance with requests for information in a policing context. The rationale behind this approach is summarised below.

First, the foot-in-the-door approach of presenting a smaller initial request followed (immediately or after a delay) by a larger one could be of practical value in policing, where witnesses often find themselves in a situation of escalating commitment (e.g. agreeing to speak to police, providing a statement, attending court, and so on). While there has been some suggestion that this process can increase witness reluctance (see the discussion in Chapters 6 & 7), the contrasting findings on the impact of the size of the initial request in comparison to the target request (e.g. Beauvois et al., 1993; Fennis & Janssen, 2010; Souchet & Girnadola, 2013) suggest a need for further research. It is possible that the effectiveness of the foot-in-the-door in an investigative context depends upon what the desired target behaviour is (e.g. the provision of a statement, confirmation of the presence of the witness at the events, information "off the record") and that the magnitude of the initial request could be adapted accordingly. It is heartening that the foot-in-the-door procedure has been shown to successfully increase compliance with a sensitive request (that of cornea donation on behalf of a deceased relative; Joule et al., 2010). The request for a cornea donation is a considerable request, presented in a situation which is likely to be highly emotionally charged (due to the recent death of the next of kin). Similarly, the request for a reluctant witness to provide information is considerable in terms of request magnitude and is likely to occur in emotionally charged contexts (respondents made frequent reference to emotion as impacting the decision of witnesses; see Chapters 6 & 7 for discussion of this). While the emotions experienced within these two contexts are likely to differ, the use of foot-in-the-door requests in a naturally-occurring emotive context provides an interesting (and ethical) frame of reference, which suggests that the foot-in-the-door approach may also prove effective in the context of information elicitation.

As the inverse of the foot-in-the-door approach, the door-in-the-face technique presents a natural comparison point. Research has suggested that the door-in-the-face is particularly powerful when presented alongside a prosocial target request (Feeley et al., 2012; O'Keefe & Hale, 2001). The prosocial nature of providing information as a witness is something which police officers seem to naturally emphasise (see the discussion of "duty", etc. in Chapters 6 & 7). In addition, research has suggested that the door-in-the-face is particularly effective where the baseline level of compliance with a target request is low (Feeley et al., 2012; although see also Dillard et al., 1984 for a contrasting view). Again, this suggests a potential benefit in an information elicitation context, particularly in cases involving reluctant witnesses where the baseline level of compliance is particularly low (see Chapter 6). Overall, the application of sequential requests in an investigative interviewing context merits further investigation. Both the foot-in-the-door and the door-in-the-face techniques have been shown to reliably increase compliance with requests, particularly prosocial requests, but there remains some debate around the comparative effectiveness of the two. No published experimental work directly addressing the use of sequential requests in an investigative setting has been found. Therefore, the chapters that follow adapt a "guilty knowledge" paradigm (see for example Evans et al., 2013) to explore whether foot-in-the-door and door-in-the-face requests can reliably increase (i) willingness to provide information (through a statement or an investigative interview) and (ii) the amount of critical information (details of the "guilty knowledge") disclosed. I explore this possibility in an online and a face-to-face setting (see Chapters 9 & 10 respectively), with both reluctant and cooperative witnesses.

In sum, the present review identifies two approaches to increasing compliance with requests. The stringent inclusion criteria of the review mean that the focus is on those techniques likely to be effective within the constraints experienced by investigative interviewers. The results of this focussed and rigorous systematic review lead logically towards an empirical test of such techniques. Overall, I argue that a considerable evidence base demonstrates the effectiveness of foot-in-the-door and door-in-the-face requests in securing compliance with costly requests. Each of these approaches may be of practical value in an information elicitation context. This possibility will be explored in Chapters 9 (online) and 10 (face-to-face). In addition, a

number of potential avenues of research have been identified and the searchable database resulting from this review is likely to benefit researchers in beginning to explore these lines of research.

## Chapter 9: Using Social Influence Techniques to Elicit Guilty Knowledge Online: An empirical test

*Recent research has started to explore the potential of persuasion to enhance the effectiveness of the "engage and explain" phase of PEACE in increasing engagement and disclosure. Chapter 8 presented a systematic review of social influence techniques which have been demonstrated to motivate compliance with requests. In particular, this review outlined the considerable body of evidence demonstrating the effectiveness of foot-in-the-door and door-in-the-face techniques. Chapters 9 and 10 then empirically test these techniques in an information gathering context. The study outlined below investigated whether recall of an event varied with the type of relationship participants imagine having with those involved in the event and with the type of request made. Participants viewed a short violent mock-crime video and were then asked to imagine that they held a particular attitude towards helping the police (cooperative, reluctant). A social distance mentalizing task was used to manipulate perceptions of social distance between the participant and those involved in the event (close relationship, distant acquaintance). Finally, a request was made for participants to give an online statement about the event. This request was made in one of three ways: target request only (control), small request then target request (foot-in-the-door), or large request then target request (door-in-the-face). Accounts were then coded in terms of the number of critical items revealed. Analyses suggest an approximately 10% increase in compliance with the target request (to give a statement) when foot-in-the-door requests are used in comparison to the target request only. In contrast, a 10% decrease was shown when door-in-the-face requests are used (in comparison to the target request only). No significant difference was seen in the number of critical items recalled dependent upon social influence condition. However, a significant interaction between cooperativeness and social distance was shown, where "reluctant" participants disclosed fewer critical items when the witness was an acquaintance (rather than friend) of those involved. Implications for investigative interviewing are discussed.*

In discussing best practice for engaging with reluctant witnesses, respondents often refer to characteristics of the interaction between police and witness (see Chapter 7). This focus on approaches best viewed as part of the "engage and explain" phase of PEACE (see Chapter 2 for an overview) suggests that psychology can contribute to enhancing best practice. As discussed in Chapter 7, the process of an investigative

interview can be broadly considered to be a social influence attempt, where an interviewer attempts to secure cooperation with a request for information (Abbe & Brandon, 2013). This being the case, it is logical to assume that evidence-based social influence techniques may facilitate this process. Recent research has begun to explore this possibility in suspect interview contexts (Dawson et al., 2015; Matsumoto & Hwang, 2018; Weiher et al., 2018). The overarching aim of the empirical research that follows is to explore whether social influence techniques can increase cooperation and disclosure with a sample of reluctant witnesses.

In support of this aim, Chapter 8 presents a systematic review of studies using social influence techniques to increase compliance with requests. In particular, the review focuses on those techniques which may reliably increase compliance within the confines of investigative interviewing. This review outlines the considerable body of evidence highlighting the effectiveness of foot-in-the-door and door-in-face face requests in increasing compliance. I use these findings to argue that sequential requests are likely to be of practical value in frontline policing. In sum, foot-in-the-door requests might be particularly effective in situations involving a natural escalation of commitment, of which the witness role in the CJS is a prime example. Foot-in-the-door requests have also been shown to be effective where the target request is a sensitive one (e.g. Joule et al., 2010). The door-in-the-face technique is the inverse of foot-in-the-door approaches and as such presents a natural comparison point. In addition, door-in-the-face requests have been suggested to be particularly powerful in prosocial contexts (Feeley et al., 2012; O'Keefe & Hale, 2001) and where the baseline level of compliance is low (Feeley et al., 2012). The aim of the present study therefore is to directly compare the effectiveness of foot-in-the-door and door-in-the-face requests in the context of information gathering. The rationale behind this choice lies in the simplicity and ease of implementation of these techniques, combined with the strong support for the effectiveness of these manipulations (see Chapter 8).

The present study incorporates a novel online reporting paradigm to manipulate reluctance. As outlined in Chapter 8, foot-in-the-door and door-in-the-face requests have been presented across a variety of mediums, including face-to-face and online formats. The simplicity of sequential request techniques (such as foot-in-the-door and door-in-the-face) and the flexibility with which they can be deployed provides the opportunity to utilise these approaches within a number of policing contexts. The focus

in this case is on online statement-taking. The current study presents an information management dilemma where participants have to decide how much information they want to reveal while responding in-line with their "character" (cooperative or reluctant). This approach was inspired by previous research, particularly those adopting the Scharff technique or "secret agent" style paradigms (see for example Deeb et al., 2016; Granhag, Oleszkiewicz, Strömwall, Kleinman, 2015; Oleszkiewicz, Granhag, & Montecinos, 2014. See also Clayman & Skinns, 2012). The "character" adopted by participants will be determined via the assigned cooperativeness condition. Participants will be asked to reveal as much as they can remember in order to assist the police (cooperative condition) or to reveal some information, without revealing everything they remember (reluctant condition). Research on reluctant witnesses is currently somewhat limited by the fact that most research participants are volunteers, and therefore have already made the decision to cooperate. Overcoming the challenge of creating reluctance in a volunteer sample is key to the advancement of such research. If the proposed manipulation of cooperativeness is shown to be effective then this will represent a considerable advance for research on reluctant witnesses, by presenting a relatively simple paradigm with which to test evidence-based techniques.

It is hypothesised that there will be a main effect of cooperativeness, where those participants in the reluctant condition will (i) be less likely to agree to give a statement, and (ii) disclose less critical information than those in the cooperative condition. The present study also explores the effect of social distance (between the witness and those involved in the events in question) on cooperativeness. In line with the work of Dawson et al. (2015), it is anticipated that there will be a main effect of social distance on both cooperation and disclosure. However, given the focus on reluctant witnesses, I hypothesise that participants in the distant acquaintance condition will (i) be more likely to agree with the target request and (ii) will disclose more information than participants in the close relationship condition. This prediction runs counter to the findings of Dawson et al. (2015) who found that priming secure attachment increased disclosure. The reason for this prediction is that within the context of reluctant witnesses a relationship to those involved often limits cooperation as witnesses attempt to avoid "snitching". Furthermore, both existing research and practitioner comments suggest that individuals are less likely to report offences committed by those people known to them (see Chapters 6 & 7. See also Felson et al.,

2002; Fyfe & McKay, 2000; Spencer & Stern, 2001). Finally, the present work explores the effect of sequential requests (foot-in-the-door; door-in-the-face; target request only) on cooperation and disclosure. A main effect of social influence is expected on both cooperation and disclosure, where participants in the social influence conditions (foot-in-the-door; door-in-the-face) will (i) be more likely to agree to the target request (of providing a statement), and (ii) that where that statement is given disclosure rates will be higher.

## 1: Study 3

### 1.1: Method

#### 1.1.1: Design.

The present study incorporated a between-participants 2 (social distance: close friend; acquaintance) X 2 (cooperativeness: cooperative; reluctant) X 3 (social influence request format: target request only; foot-in-the-door; door-in-the-face) design, with participants randomly allocated to one of the 12 experimental conditions. The dependent variable was the level of compliance with the target request (agree to give a statement), and the number of critical items reported in the witness statement (as in Evans et al., 2013).

#### 1.1.2: Participants.

A G*Power analysis (Faul et al., 2007) using the average effect size for social influence (0.26; RabbitSnore, 2018; Richard, Bond Jr., & Stokes-Zoota, 2003) alongside the parameters outlined above suggested that 146 participants were needed to achieve 80% power. Therefore, initial data collection continued until a minimum of 146 participants had been recruited[10].

Participants were 168 undergraduate students and members of the public (five male and 139 female. Twenty-four participants chose not to list their gender), who took part voluntarily (the option of course credit was offered to student participants). Participants were aged between 18 and 63 years of age (Mean = 20.81 years, SD = 5.19 years). The majority of the participants were first year undergraduate psychology students (86%). The remaining participants were members of the public recruited via

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[10] Please note that these figures were deemed acceptable for preliminary analyses, however in light of critical discussion regarding sample size in social psychology studies (e.g. Vazire, 2014) data collection remains ongoing to meet the requirements of a power analysis specifying a desired 95% power.

advertisements on social networks and online study participation websites. A pre-requisite of participation was speaking English fluently at native-speaker or approximately native-speaker levels. The majority of the respondents identified their nationality as being British (68.5%) and spoke English as their first language (72.6%).

**1.1.3: Materials.**

*1.1.3.1: Stimulus event.*

Participants viewed a short clip from the film *Kidulthood* (2006). This was approximately six minutes in length (6 mins 27 s) and was played via a YouTube link (https://www.youtube.com/watch?v=4kkKQHd_yJY) embedded within Qualtrics. The clip depicts a violent altercation between two males, in which one male is seriously injured. A second altercation also takes place in which a gun is fired, but no one is seriously injured. There are a number of characters in the scene, some of whom become involved in the two altercations and some of whom are simply bystanders. The scene was therefore judged to be sufficiently complex to allow varying levels of disclosure of critical items. The nature of the violence was judged to be representative of one scenario where reluctant witnesses are likely to be encountered (i.e. serious violence involving multiple young people. See Chapter 6 for discussion of this). Finally, although the scene involves use of strong language and depicts serious violence it was classified as a 15 upon release and was therefore considered to be unlikely to cause participants undue distress (note all participants were informed in advance that participation involved watching scenes of violence with use of strong language).

*1.1.3.2: Procedural justice scale.*

Perceptions of police were assessed using Murphy and Barkworth's (2014) scale. This included four factors: procedural justice, police effectiveness, outcome favourability, and willingness to report crime. In each case, a mean score was calculated for each scale and higher scores indicated greater perceptions of the factor being assessed. Procedural justice, police effectiveness, and outcome favourability were each measured on five-point Likert scales ranging from 1 (strongly disagree) to 5 (strongly agree). In each case, a mean score was calculated for each factor and higher scores indicated greater perceptions of the factor being assessed. Procedural justice assessed general perceptions (rather than perceptions of a specific encounter) of the fairness of the police and included questions related to neutrality, respect, trustworthiness, and

voice. Procedural justice was measured using seven items (e.g. "police listen to people before making decisions"; Cronbach's alpha = 0.88). Police effectiveness assessed trust in the police to effectively carry out their duties and was assessed using five items (e.g. "when people call police for help, they respond quickly"; Cronbach's alpha = 0.84). Outcome favourability assessed satisfaction with and perceived fairness of the outcome of the respondent's most recent encounter with the police. Two items were included ("you were satisfied with the outcome" and "the outcome you received was fair"; Cronbach's alpha = 0.93). Finally, willingness to report crime was assessed by four items answered on a five-point Likert scale ranging from 1 (very unlikely) to 5 (very likely). Items included "if the situation arose how likely would you be to willingly assist the police if asked" (Cronbach's alpha = 0.88). This scale served as a manipulation check to ensure that differences in participants' attitudes towards the police were unlikely to underpin any significant effects found.

### 1.1.3.3: Social distance mentalizing task.

Social distance was manipulated through a mentalizing task, during which participants are asked to consider a series of questions designed to help them clearly recollect a good friend or an acquaintance. These questions were adapted from Maner and Gaillot (2007) and Fitzsimons and Bargh (2003) and were designed to function similarly to an imagined contact task (e.g. West, Hunsu, & Lipps, 2015). A meta-analysis of the effectiveness of imagined contact in reducing intergroup contact demonstrated that the amount of time spent mentalizing (over 1-2 minutes) did not significantly moderate effectiveness, however the amount of detail provided about the context of the mentalizing task did act as a significant moderator (Miles & Crisp, 2014). Therefore, a number of points were provided to guide participants throughout the task. A mental reinstatement of context task (e.g. Dando, Wilcock & Milne, 2009) was adapted to ensure sufficient detail was included. Participants were asked to imagine a good friend (defined as someone known well and seen socially outside of work, university, etc.) or an acquaintance (someone recognised and perhaps seen regularly, but not known well). Participants were prompted to create a clear picture of the individual in question, and to consider their relationship to the individual, and the individual's personality and values. Full instructions can be seen on the OSF (see Appendix A). Participants were asked to spend six minutes on this task to allow sufficient time to read the instructions carefully and engage with the task.

### 1.1.3.4: Perceived Awareness of Research Hypotheses.

The Perceived Awareness of Research Hypotheses (PARH) was included to provide a measure of the influence of demand characteristics (Rubin, Paolini, & Crisp, 2010). Participants responded to four items using a seven-point Likert scale (see Appendix A). These items assessed their awareness of the aims of the study. A higher mean score (across the four items) indicates that participants believe they are aware of the research hypotheses (Rubin, 2016). As advocated by Rubin (2011) an open-ended item was also included to allow participants to express what they believed the research aim to be. This allowed the exclusion of any participant who guessed the true aims of the study. In this case, several participants referenced eyewitness recall and the impact of relationships to those involved in an event on recall, as well as general willingness (or lack thereof) to help the police. However, no participant referred to social influence as a manipulation, and as such all participants were considered appropriate to be included in analyses.

### 1.1.4: Procedure.

The study was wholly online and delivered through Qualtrics. All conditions were randomly allocated within Qualtrics. The overall procedure is outlined in Figure 15. After reading a brief summary of the study (described as assessing how online reporting affects information provided by witnesses and whether this is impacted by thinking about the event in a given manner before providing information). The study began with the stimulus event. Following this the study auto-advanced to one of two social distance conditions, *friend* or *acquaintance*. A number of prompts were provided (in a similar vein to mental reinstatement of context tasks) in order to guide the participant in mentalizing in sufficient detail. After six minutes had elapsed the study auto-advanced to the cooperativeness instruction stage.

```
┌─────────────────────────────────────────────────────────────┐
│              View violent mock crime event                   │
└─────────────────────────────────────────────────────────────┘
                              ↓
┌─────────────────────────────────────────────────────────────┐
│      Social distance. Spend a few minutes thinking about a:  │
├───────────────────────────────┬─────────────────────────────┤
│         Close friend          │        Acquaintance         │
└───────────────────────────────┴─────────────────────────────┘
                              ↓
┌─────────────────────────────────────────────────────────────┐
│                      Cooperativeness                         │
├───────────────────────────────┬─────────────────────────────┤
│      Give max. information     │   Appear helpful but withhold│
│                                │          information         │
└───────────────────────────────┴─────────────────────────────┘
                              ↓
┌─────────────────────────────────────────────────────────────┐
│                      Request format                          │
├──────────────────────┬─────────────────┬────────────────────┤
│   Foot-in-the-door   │ Door-in-the-face│ Target request only│
└──────────────────────┴─────────────────┴────────────────────┘
```
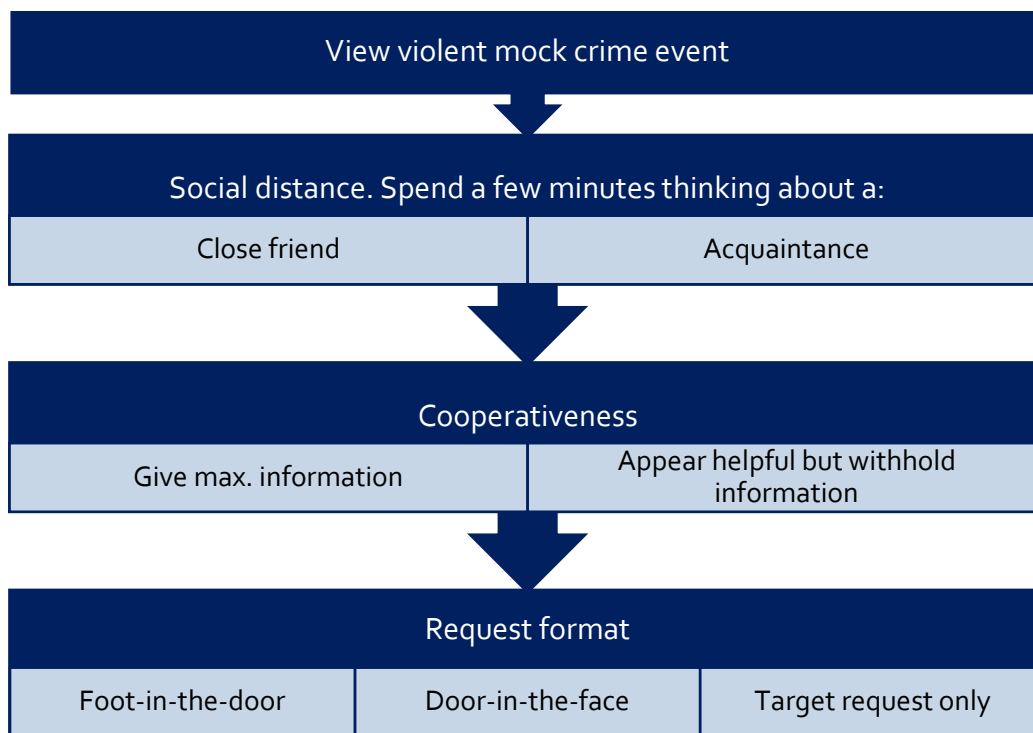
*Figure 15*. Outline of experimental procedure (Study 3).

      The cooperativeness manipulation was presented as an information management dilemma, where participants have to decide how to balance competing demands in terms of revealing and concealing information (e.g. Clayman & Skinns, 2012; Deeb et al., 2016; Granhag et al., 2015; Oleszkiewicz, Granhag, & Montecinos, 2014). The purpose of this task was to help participants to put themselves in the place of a witness who knows people involved in the event. Participants were instructed to adopt a particular attitude towards helping the police with their investigation. The *cooperative* instructions directed participants to give as much truthful information as possible. In contrast, the *reluctant* instructions directed participants to give some information, but not to reveal everything. Full cooperativeness instructions can be seen in Figure 16.

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**Cooperativeness Instruction**

You have just witnessed a fight in which someone was seriously injured. You know that the police have not yet identified the person responsible because they are appealing for information.

You know that you have information that would help the police with their investigation, and you want to assist as much as possible. You decide to cooperate and to give as much truthful information as you can to help the police investigate the person responsible.

**Reluctance Instruction**

You have just witnessed a fight in which someone was seriously injured. You know that the police have not yet identified the person responsible because they are appealing for information.

You know that you have information that would help the police with their investigation, but you are not comfortable with telling the police everything. You decide to give some information to appear as though you are helping, but without telling everything that you know.

---

*Figure 16*. The cooperativeness instructions provided to participants in Study 3.

Participants were then asked to provide a written statement. This request was framed differently depending upon the social influence condition the participant has been assigned to (target request only; foot-in-the-door; door-in-the-face. See Figure 17). Those participants in the target request only (control) condition were told that instructions for completing a witness statement would be presented when they advanced to the next screen, and that if they agreed to give a statement then they should follow this guidance carefully. Participants in the two social influence conditions also saw this target request, but in each case, it was preceded by an initial request (either smaller or larger depending upon condition). Participants were required to select their answer (yes/no) from a checkbox before continuing. Participants in the foot-in-the-door condition saw a smaller initial request prior to the target request. In this case the participant was asked to confirm that they witnessed the event before continuing ("We are interested in establishing how many witnesses hold information about the event. Are you willing to confirm that you witnessed the event under investigation?"). In the door-in-the-face condition a larger target request was presented ("We would like to conduct interviews with key witnesses to the event. This can be conducted face-to-face or as a

video interview [whichever is most convenient to you]. The interview will last approximately two hours and is scheduled to take place at 7 pm [GMT] tomorrow. Will you agree to take part in an interview?"). Regardless of their response to the initial request participants in both social influence conditions (foot-in-the-door and door-in-the-face) were thanked for their response and presented with the target request ("Thank you for your response. We would now like to give you an opportunity to complete an online statement. If you agree to give a statement, then please complete this on the following screen.").
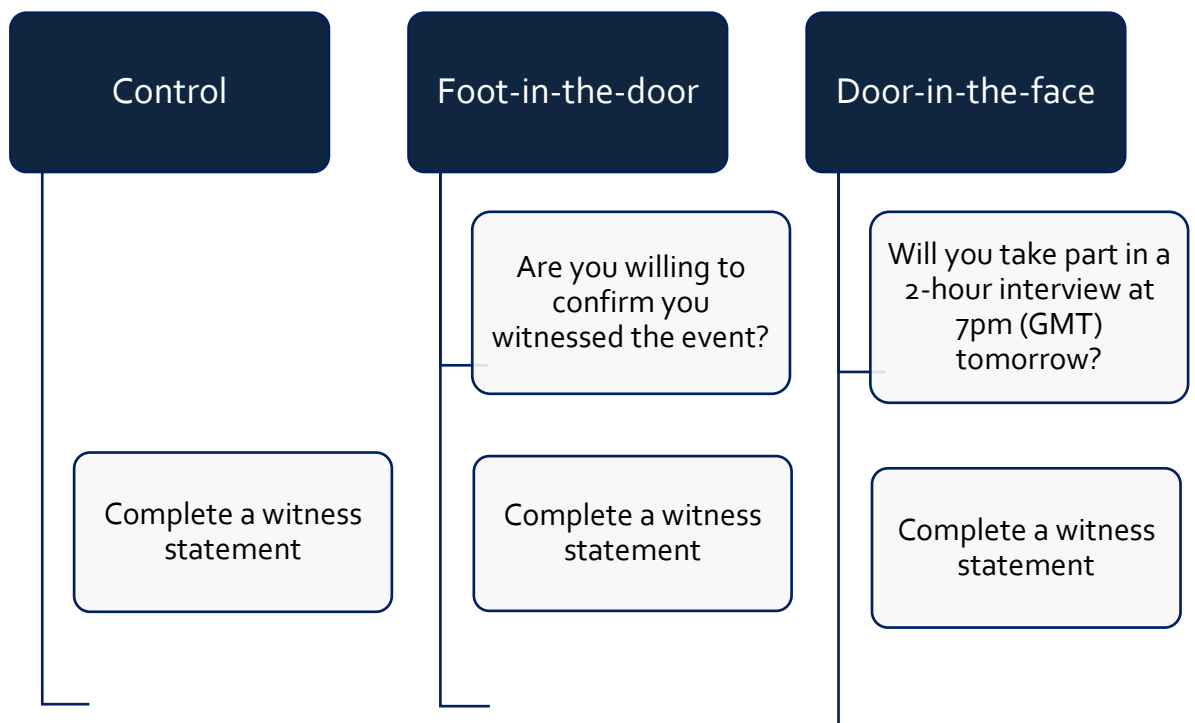


*Figure 17*. The social influence manipulation (Study 3).

The statement itself was presented as authentically as possible and marked as "Witness Statement (MG11)". The statement form was also headed "restricted (when complete)". Brief free recall instructions were presented. Participants were instructed to take a few moments to build a clear picture of the event and to write down everything they could remember. Instructions also highlighted that this could be out of order if needed, that no details should be left out, but not to guess. Participants were requested to work alone on their statement. A minimum character count of 1,500 characters (approximately 250 words) was imposed for those who agreed to provide a statement.

Full instructions can be seen on the OSF (see Appendix A). To maintain authenticity the statement form closed with a brief sentence thanking the participant and highlighting the importance of witness testimony ("Thank you for coming forward. We value your help and we will do everything possible to help you. The criminal justice system cannot work without witnesses. They are the most important element in bringing offenders to justice."). The statement opening and closing were adapted from the MG11 form used to record witness statements in police investigations.

Finally, participants were asked to complete a demographics scale (including rating their English language fluency) and the procedural justice scale (Murphy & Barkworth, 2014) to indicate their perceptions of police and the CJS. Participants then completed the Perceived Awareness of Research Hypotheses and were debriefed. As part of this participants allocated to the door-in-the-face condition were informed that no interview was necessary. Participants were then asked to complete a short memory task. The purpose of this was to compare information disclosed with information available to disclose (i.e. all information remembered) and to confirm that information was deliberately disclosed or withheld, rather than just forgotten. Participants were instructed to complete this as themselves, rather than in the mindset of the "character" they were previously asked to assume (in the social distance and cooperativeness conditions). The memory task took the form of ten statements which were judged as true, false, or unsure. Six of these statements were false. For each of these statements participants were also asked to confirm whether they chose to include the information, chose not to include it, did not remember it, or recognised the information as being false. Participants were also asked if they had seen the film clip previously. Participants were then thanked for a final time and exited the study.

### 1.1.5: Coding.

Participant statements were coded first in terms of presence or absence (i.e. whether or not participants agreed to give a statement in response to the target request). Where a statement was provided this was then coded in terms of length and content. *Statement length* was calculated as the number of characters over the 1,500 character limit. *Statement content* was coded according to the number of critical items reported.

A coding framework was developed to allow statements to be coded according to the number of critical items recalled. This framework was developed by RW in part

from the stimulus event (i.e. key stages of the video were noted in the coding framework in advance of data collection). Additional items were added and existing items adapted throughout the coding process to reflect the varying level of detail included within witness statements. The final coding framework was agreed by RW and FG. Critical items were coded as present (1) or absent (0). An item was coded as present when sufficient detail was provided for the detail in the statement to be identified as a stage on the coding framework. In this way, coding was gist-based rather than verbatim. A series of comments were recorded alongside the coding framework to ensure consistency in coding. The coding framework (and associated notes) can be seen on the OSF (see Appendix A).

## 1.2: Results

### 1.2.1: Violations of assumptions.

Please note, in some of the analyses that follow violations of assumptions of normality were shown. Where this was the case this is noted and Shapiro-Wilks $p$-values are reported. ANOVA is generally considered to be robust to violations of normality (Schmider, Ziegler, Danay, Beyer, & Bühner, 2010), therefore in most cases it was deemed appropriate to continue with the planned analysis. The general approach taken in the event of such violations is outlined below.

*In the case of a one-way ANOVA*: The planned analysis was conducted; however, Kruskal-Wallis $H$ tests were also conducted. Any changes in the pattern of results are noted.

*In the case of a factorial ANOVA*: As no non-parametric alternative to a factorial ANOVA is readily available it was deemed appropriate to continue with the analyses.

### 1.2.2: Preliminary analyses.

A series of one-way ANOVAs were conducted on each of the factors of the procedural justice scale to determine whether any significant differences existed between participants in the cooperative and reluctant conditions. This is important as research suggests that systematic differences in attitudes towards the police can impact willingness to cooperate (see Chapter 5 for some discussion of this). Mean scores can be seen in Table 19. Please note the data showed some violation of the assumption of normality (Shapiro-Wilks $p$s = .001 to .295). There were no significant differences

between the scores of those participants in the cooperative and reluctant conditions for the procedural justice ($F$ (1, 143) = .18, $p$ = .674, $\eta_p^2$ = .001, 90% CI [.00, .03]), police effectiveness (Welch's $F$ (1, 132.86) = .13, $p$ = .722, $\eta_p^2$ = .001, 90% CI [.00, .03])[11], outcome favourability ($F$ (1, 142) = .02, $p$ = .881, $\eta_p^2$ < .001, 90% CI [.00, .01], or willingness to report crime factors ($F$ (1, 142) = 1.40, $p$ = .239, $\eta_p^2$ = .01, 90% CI [.00, .05]). These results suggest that participants in the cooperative and reluctant conditions were comparable in terms of their attitudes to police and to reporting.

A series of one-way ANOVA were also conducted to assess whether the recall of participants in the cooperative and reluctant conditions differed significantly. This will demonstrate that any difference in the number of critical items reported by participants in these conditions is due to strategies employed in the context of an information management dilemma, rather than differences in recall ability. Mean scores can be seen in Table 19. The data showed some violation of the assumption of normality (Shapiro-Wilks $p$s = .001 to .005). Those participants in the reluctant condition chose to exclude significantly more memory check items from their written statements than those participants in the cooperative condition: $F$ (1, 142) = 4.65, $p$ = .033, $\eta_p^2$ = .03, 90% CI [.00, .09]. There were no significant differences between those participants in the cooperative and reluctant conditions in the number of memory check items answered correctly ($F$ (1, 143) = .05, $p$ = .827, $\eta_p^2$ < .001, 90% CI [.00, .01]), the number of items included in the memory test that participants chose to include in their statements ($F$ (1, 142) = 1.14, $p$ = .288, $\eta_p^2$ = .01, 90% CI [.00, .05]), or the number of memory test items forgotten when writing the statement ($F$ (1, 142) = 1.07, $p$ = .302, $\eta_p^2$ = .01, 90% CI [.00, .05]). This demonstrates that participants in the two conditions differed only in the number of memory check items that they chose to exclude, and so suggests that all participants were equally able to recall items from the stimulus event.

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[11] Please note, Levene's test showed a violation of the assumption of homogeneity of variance for the police effectiveness factor, therefore it was deemed most appropriate to conduct a Welch's $F$ test in this case.

Table 19.

*Mean procedural justice and memory check scores for cooperative and reluctant witness conditions*

| | | Cooperative condition | | | Reluctant condition | | |
|---|---|---|---|---|---|---|---|
| | | $n$ | Mean (SD; SE) | 95% confidence intervals | $n$ | Mean (SD; SE) | 95% confidence intervals |
| Procedural justice factor | Procedural justice | 71 | 3.27 (.80; .09) | 3.08–3.46 | 71 | 3.21 (.72; .09) | 3.04–3.38 |
| | Police effectiveness | 71 | 3.47 (.90; .11) | 3.25–3.68 | 71 | 3.50 (.68; .08) | 3.34–3.66 |
| | Outcome favourability | 71 | 3.35 (1.01; .12) | 3.11–3.59 | 71 | 3.30 (1.06; .13) | 3.05–3.55 |
| | Willingness to report crime | 71 | 4.36 (.74; .09) | 4.19–4.54 | 71 | 4.17 (.86; .10) | 3.97–4.38 |
| Memory check scores | Total correct | 73 | 6.40 (1.82; .21) | 5.97–6.82 | 72 | 6.46 (1.53; .18) | 6.10 – 6.82 |
| | Total items chose to include | 72 | 1.99 (1.71; .20) | 1.58–2.39 | 72 | 1.74 (1.02; .12) | 1.50 – 1.98 |
| | Total items chose not to include | 72 | .57 (1.11; .13) | .31-.83 | 72 | 1.00 (1.28; .15) | .70 – 1.30 |
| | Total items forgotten during statement | 72 | 3.08 (2.14; .25) | 2.58–3.59 | 72 | 2.75 (1.69; .20) | 2.35 – 3.15 |

### 1.2.3: Agreement with target request.

Initial analyses addressed the relationship between the three independent variables (social distance; cooperativeness instruction; social influence) and agreement with the target request to give a witness statement. There was a significant association between social influence condition (control; foot-in-the-door; door-in-the-face) and agreement with the target request: $X^2$ (2, $N$ = 168) = 6.62, $p$ = .04, $\Phi$ = .20. This represents a small effect. See Figure 18 for this pattern of results. Bonferroni corrected (with a threshold significance level of 0.02) pairwise Chi-square analyses suggest that this difference lay primarily between the foot-in-the-door and the door-in-the-face condition: $X^2$ (1, $N$ = 112) = 6.62, $p$ = .02, $\Phi$ = .24. All other comparisons were non-significant ($p$s > .24). There was no significant association between agreement with the target request and either the social distance or cooperativeness instruction: $X^2$ (1, $N$ = 168) = .04, $p$ > .999, $\Phi$ = .02 (these figures remained unchanged in both cases).
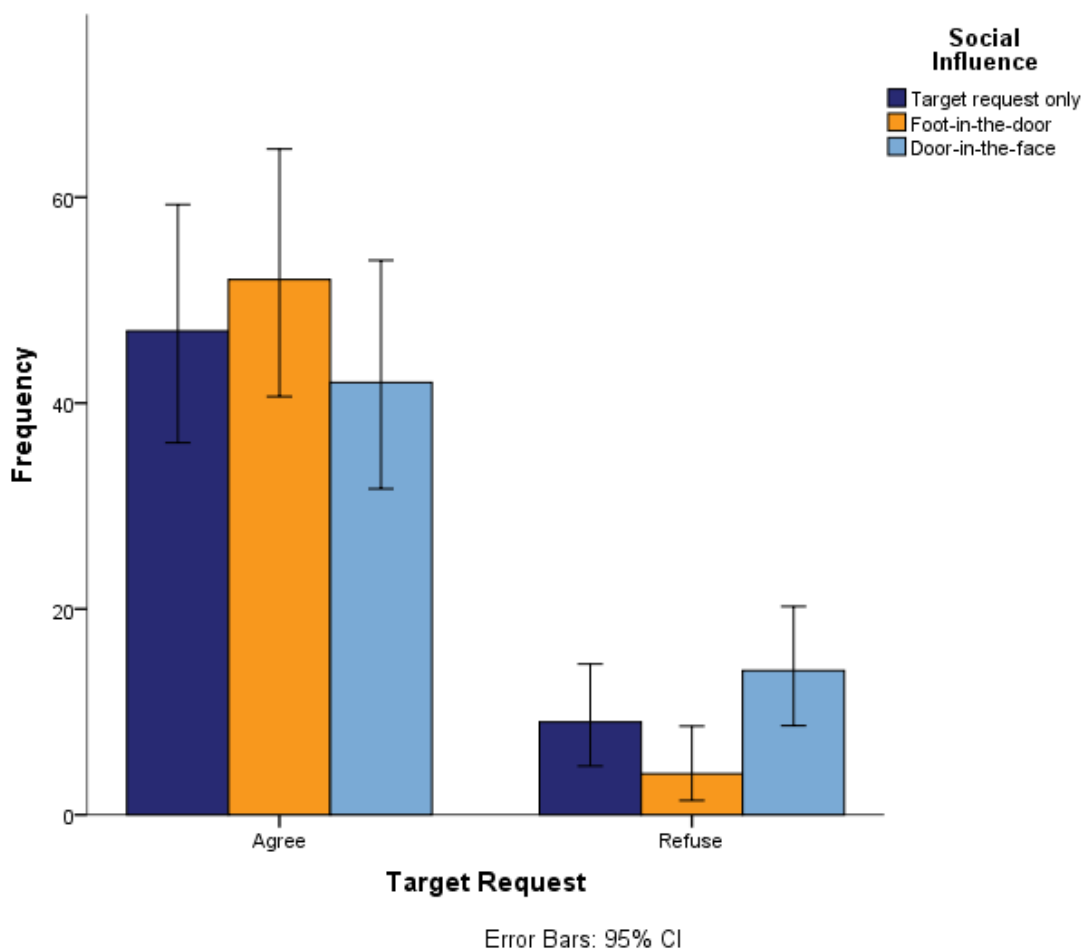


*Figure 18*. Compliance with target request by social influence condition.

A binary logistic regression was conducted to confirm the findings of the chi-square and to explore any multivariate interaction effects. There is some debate over the most appropriate method of entry to use in logistic regression (see for example Field, 2018; King, 2003). In this case, as the goal of the regression was to explore possible predictors of compliance in a relatively under-researched topic area this was treated as a more exploratory analysis and so a stepwise backward (likelihood ratio) method of entry was used (in line with Cliff, 2019. See also Field, 2018. Although please note that results should be interpreted with caution; see Steyerberg, Eijkemans, & Habbema, 1999).

Of the variables not included in the null model (block 0), social influence was identified as the strongest predictor. Model coefficients confirm that the model containing social influence as the sole predictor represented a significant improvement over the null model; $X^2$ ($df = 2$) = 6.95, $p$ = .031, $-2LL$ = 141.177, Cox and Snell $R^2$ = .041. The model was 83.9% accurate in its predictions of agreement with the target request (note this is the same as the block 0 model). Hosmer & Lemeshow test results suggest that this model was a good fit for the data; $X^2$ ($df = 1$) = 0.00, $p$ > .999. Once social influence has been accounted for no other significant predictors were identified (all $p$s ≥ .231).

The individual regression coefficients are presented in Table 20. These coefficients suggest that neither foot-in-the-door nor door-in-the-face significantly predicted the likelihood of agreeing with the target request compared to the control condition. A second stepwise logistic regression was then conducted with the door-in-the-face condition as the reference category in order to confirm that the significance lay between the door-in-the-face and foot-in-the-door request conditions (as suggested by the chi-square analysis). This analysis suggests that participants in the foot-in-the-door condition were approximately four times more likely to agree with the target request than those in the door-in-the-face condition. There was no significant change in likelihood of agreement in the control condition (compared to door-in-the-face). All other values remained consistent with the initial logistic regression analysis.

Table 20.

*Coefficients of the model predicting agreement with the target request of providing a statement.*

| | *B* | S.E. | Wald $z^2$ | df | *p* | exp(B) | 95% confidence intervals |
|---|---|---|---|---|---|---|---|
| *Stepwise regression 1: Control group as comparison* | | | | | | | |
| Social Influence | | | 6.04 | 2 | .049 | | |
| Control & foot-in-the-door | .91 | .63 | 2.07 | 1 | .150 | 2.49 | .72 – 8.62 |
| Control & door-in-the-face | -.55 | .48 | 1.35 | 1 | .245 | .57 | .23 – 1.46 |
| Constant | 1.65 | .36 | 20.64 | 1 | < . 001 | 5.22 | |
| *Stepwise regression 2: Door-in-the-face group as comparison* | | | | | | | |
| Social Influence | | | 6.04 | 2 | .049 | | |
| Door-in-the-face & foot-in-the-door 2 | 1.47 | .60 | 5.90 | 1 | .015 | 4.33 | 1.33 – 14.15 |
| Door-in-the-face & control 1 | .55 | .48 | 1.35 | 1 | .245 | 1.74 | .68 – 4.43 |
| Constant | 1.10 | .31 | 12.67 | 1 | < . 001 | 3.00 | |

*Note*: The coefficients above are taken from two separate stepwise regressions. The only significant model in each case was that containing social influence. The only difference between the two analyses is the reference category selected.

The following analyses focus on the content of the witness statement, therefore only those participants who agreed to give a statement were included in the analyses (*N = 141*).

### 1.2.4: Character count over 1,500 characters (min.).

Mean scores suggest some variability in the length of accounts over the minimum (1,500 characters; see Table 21). Data showed some violations from

normality (Shapiro-Wilks $p$s = .001 to .110). There were no significant differences in the length of statements between the primary conditions: social distance ($F$ (1, 129) = .00, $p$ = .983, $\eta_p^2$ = .00, 90% CI [.00, .00]), cooperativeness ($F$ (1, 129) = 1.920, $p$ = .168, $\eta_p^2$ = .01, 90% CI [.00, .07]), and social influence ($F$ (2, 129) = .58, $p$ = .560, $\eta_p^2$ = .01, 90% CI [.00, .04]). There were no significant interactions (all $p$s > .378).

| Social Distance | Cooperativeness | Social Influence | *n* | Character-count (over 1500) | | Critical items recalled | |
|---|---|---|---|---|---|---|---|
| | | | | Mean (SD; SE) | 95% CI | Mean (SD; SE) | 95% CI |
| Friend | Cooperative | Target request only (control) | 12 | 390.58 (343.78; 99.24) | 172.16 – 609.01 | 34.33 (8.73; 2.52) | 28.79 – 39.88 |
| | | Foot-in-the-door | 14 | 537.86 (612.65; 163.74) | 184.13 – 891.59 | 36.21 (8.17; 2.18) | 31.50 – 40.93 |
| | | Door-in-the-face | 11 | 280.36 (255.14; 76.93) | 108.96 – 451.77 | 34.27 (5.29; 1.60) | 30.72 – 37.83 |
| | Reluctant | Target request only (control) | 11 | 474.09 (526.44; 158.73) | 120.42 – 827.76 | 32.82 (7.15; 2.16) | 28.01 – 37.62 |
| | | Foot-in-the-door | 12 | 227.83 (245.93; 70.99) | 71.58 – 384.09 | 33.17 (6.64; 1.92) | 28.94 – 37.39 |
| | | Door-in-the-face | 11 | 335.73 (400.53; 120.76) | 66.65 – 604.80 | 32.91 (7.89; 2.38) | 27.61 – 38.21 |
| Acquaintance | Cooperative | Target request only (control) | 12 | 595.00 (1080.74; 311.98) | -91.67 – 1281.67 | 35.17 (11.15; 3.22) | 28.08 – 42.25 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Foot-in-the-door | 13 | 412.62 (540.48; 149.90) | 86.01 – 739.22 | 37.54 (7.81; 2.17) | 32.82 – 42.26 |
| | Door-in-the-face | 10 | 390.10 (463.10; 146.45) | 58.82 – 721.38 | 34.40 (12.00; 3.80) | 25.81 – 42.99 |
| Reluctant | Target request only (control) | 12 | 300.25 (446.94; 129.02) | 16.28 – 584.22 | 27..42 (11.34; 3.27) | 20.21 – 34.62 |
| | Foot-in-the-door | 12 | 163.67 (265.71; 76.70) | -5.16 – 332.49 | 26.33 (6.36; 1.84) | 22.29 – 30.37 |
| | Door-in-the-face | 11 | 373.73 (424.21; 127.91) | 88.74 – 658.72 | 25.00 (11.62; 3.50) | 17.19 – 32.81 |

Table 21.

*Mean character count and number of critical items recalled by condition*

**1.2.5: Number of critical items recalled.**

A three-way factorial ANOVA was conducted to explore the effect of social distance (friend; acquaintance), cooperativeness instruction (cooperative; reluctant), and social influence request format (target request only; foot-in-the-door; door-in-the-face) on the number of critical items recalled. The pattern of means can be seen in full in Table 21. Data showed some violations from normality (Shapiro-Wilks $p$s = .013 to .934).

Overall mean scores suggest that those participants in the acquaintance social distance condition ($M$ = 30.99, SD = 10.91) reported fewer critical items than in the friend condition ($M$ = 34.04, SD = 7.28); this main effect was marginally significant: $F$ (1, 129) = 3.89, $p$ = .051, $\eta_p^2$ = .03, 90% CI [.00, .09]. There was also a main effect of cooperativeness condition on the number of critical items reported: $F$ (1, 129) = 12.95, $p$ < .001, $\eta_p^2$ = .09, 90% CI [.03, .18]. Overall mean scores suggest that those in the reluctant condition ($M$ = 29.69, SD = 9.08) reported fewer critical items than those in the cooperative condition ($M$ = 35.32, SD = 8.82). Although mean scores suggest a slight increase in the number of critical items reported dependent upon social influence request format (foot-in-the-door $M$ = 33.58, SD = 8.25; door-in-the-face $M$ = 31.33, SD = 9.99; target request only $M$ = 32.43, SD = 9.97), this difference was not significant: $F$ (2, 129) = .64, $p$ = .531, $\eta_p^2$ = .01, 90% CI [.00, .04].
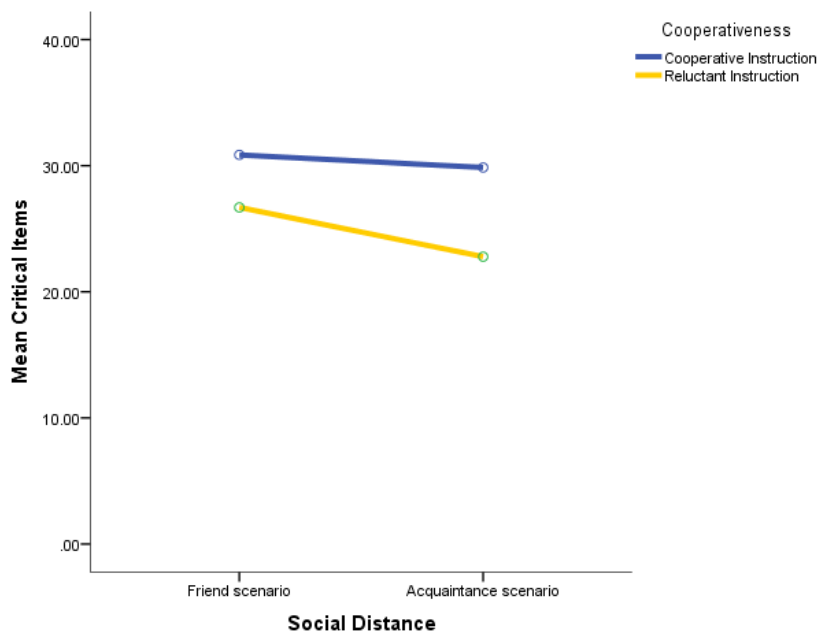


*Figure 19.* Interaction plot social distance * cooperativeness.

There was a significant interaction of social distance and cooperativeness: $F_{(1, 129)} = 5.25$, $p = .024$, $\eta_p^2 = .04$, 90% CI [.00, .11]. Mean scores suggest that reluctance had a greater effect on the number of critical items reported in the acquaintance condition than the friend condition (see Figure 19). Mann-Whitney post-hoc testing (with Bonferroni correction, adjusted significance threshold = .025) supports this view. Within the acquaintance condition there was a significant difference between the number of critical items recalled with the cooperative instruction ($M_{rank} = 49.67$) or the reluctant instruction ($M_{rank} = 35.33$); Mann–Whitney $U = 581.000$, $p = .007$. In contrast, within the friend condition there was no significant difference between the number of critical items recalled with the cooperative instruction ($M_{rank} = 44.89$) or the reluctant instruction ($M_{rank} = 40.11$); Mann–Whitney $U = 781.500$, $p = .367$. All other interactions were non-significant: $ps > .823$.

It should be noted that cell sizes are perhaps smaller than is desirable, however is some evidence that the study was sufficiently powered to detect a small effect. A post-hoc sensitivity analysis was conducted using G*Power (Faul et al., 2007) for the primary analyses. As in Chapter 4, an assumed power value of .35 to .5 (based on Lakens, 2014; Bakker, van Dijk, & Wicherts, 2012) and an alpha error probability of .05 was used. Taken first, the sensitivity analysis for agreement with the target request (chi-square analysis) suggests sensitivity to detect an effect size of .14 to .17 (observed effect size $\Phi = .20$). Secondly, the sensitivity analysis for the number of critical items reported suggests sensitivity to detect an effect size of .21-.25 (Cohen's $f$). This equates to a $\eta_p^2$ value of .04 to.06 (see Lenhard & Lenhard, 2016) for transformation of effect sizes). The observed effect sizes for this analysis ranged from .03 to .09, with confidence intervals of .00 to .18. This suggests that while these findings are somewhat reliable (in particular the main effect of cooperativeness and the interaction of cooperativeness and social distance are more likely to be reliable), further research is needed to confirm the reliability of these results.

## 1.3: Discussion

Study 3 demonstrates the potential for social influence techniques to increase disclosure from reluctant witnesses. A significant association was shown between social influence condition and agreement with the target request. This finding was confirmed with a logistic regression. Analyses suggest that use of a foot-in-the-door request format increased compliance with a target request in comparison to a door-in-the-face request

format. It should be noted however than neither of these conditions significantly differed from the control. In terms of statement content, there was no significant effect of social influence. Interestingly, there was a significant interaction of social distance and cooperativeness, suggesting that reluctance had more of an effect (shown by fewer critical items included in the witness statement) when the participant mentalized about an acquaintance than a friend. In other words, "reluctant" participants who imagined that they were an acquaintance of those involved (rather than a friend) revealed fewer critical items. As such, the hypotheses were partially supported.

A number of additional analyses were conducted to demonstrate that the pattern of results outlined above were the result of the manipulations, rather than other potential confounds. No significant differences in procedural justice scale scores were present between participants in the cooperative and reluctant conditions. This suggests that the two groups were comparable in terms of their attitudes to police and willingness to report. Moreover, this suggests that the differences shown between these groups in terms of the number of critical items disclosed can be attributed to the cooperativeness manipulation. The question then arises of whether participants in the cooperative and reluctant conditions were equally able to recall critical items; in other words, did participants in the reluctant condition choose to withhold key details (as instructed) or were these details simply not available to them at the time of writing their statement. The scores of those in the reluctant and cooperative conditions were compared in terms of the number of memory check items they (i) answered correctly, (ii) chose to include in their statement, (iii) chose to exclude from their statement, and (iv) forgot at the time of writing their statement. The groups differed only in terms of the number of memory check items they chose to exclude from their statements, with participants in the reluctant condition choosing to withhold significantly more items. This suggests that all participants were able to recall critical items from the stimulus event, and that the difference lay in reporting, rather than recall. Future research would benefit from including a more exhaustive memory check post-study completion. While results do not suggest a significant difference in the memory ability of those participants in either the cooperative or reluctant conditions, the memory check included just ten items. In addition, just over half of these items were false statements. It would be beneficial to include a more complete memory check to allow a more complete understanding of the types of items that participants choose to exclude when asked to perform as a reluctant

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witness. However, it should be noted that manipulation checks were not included. Future research should incorporate manipulation checks and attention checks to ensure that (i) participants interpret the social influence initial requests as intended (i.e. that the foot-in-the-door initial request is viewed as considerably smaller than the target request. This is particularly important as these two requests differ considerably on a number of dimensions) and (ii) that participants were sufficiently engaged with the task for experimental manipulations to take effect.

The finding that foot-in-the-door requests significantly increased compliance with a request in comparison with door-in-the-face requests was counter to expectations. The door-in-the-face technique has previously been suggested to consistently increase compliance with a target request, even at higher rates than foot-in-the-door requests (Rodafinos et al., 2005). More recently however, a meta-analysis suggested that while door-in-the-face approaches consistently secure verbal compliance, this technique does not significantly increase behavioural compliance above presenting the target request alone (Feeley et al., 2012). This may explain the reduction in compliance shown when door-in-the-face sequential requests are used comparative to foot-in-the-door requests. The nature of the request is also important to consider here. For example, Feeley et al. (2012) suggest that door-in-the-face requests are more effective in prosocial request contexts and that the difficulty of the target request moderates the effectiveness of the door-in-the-face technique, with door-in-the-face requests being more effective where baseline levels of compliance (with the target request) are low. Taken together these findings suggest that door-in-the-face request formats might be particularly effective within the current context (of helping the police with their investigations after a serious assault). That this pattern of results has not been demonstrated here might be a product of the boomerang effect. Previous research has suggested that where the initial large request is one that participants are unwilling to make, then this door-in-the-face sequencing might create unfavourable perceptions of the requester and increase feelings of manipulation or pressure, and in doing so decrease compliance creating a boomerang effect (Feeley et al., 2012; Martens et al., 1996). If this is the case then, given the initial reluctance that individuals might feel at being asked to provide information in a police investigation, it is possible that the door-in-the-face technique serves to at best exacerbate this reluctance, and at worst create feelings of distrust for the police as a result of perceived pressure to complete a task when the individual is already reluctant

to do so. The potential for loss of trust in the police is problematic, particularly given the impact this has on police-community relationships and policing by consent (see Chapters 6 & 7 for discussion of this). It is crucial that when developing social influence techniques to be used in an investigative setting proper consideration is given to the ethics and longer-term implications of this approach. This will be discussed in more detail in Chapter 12 (general discussion).

That the foot-in-the-door technique did not increase compliance in comparison to a control condition was also unexpected. A large body of evidence highlights the effectiveness of foot-in-the-door techniques (see Chapter 8) and suggests that this approach merits further investigation. In addition, use of a foot-in-the-door approach seemingly fits with existing practice. For example, officers may rely on an escalating commitment style of approach in trying to encourage witnesses to assist with investigations. As seen in Chapter 6, this may be presented in one of two ways. Firstly, officers may disguise later commitments with a "we will sort that out later" style of response. This approach is not recommended as it has the potential to negatively impact trust in the police (see Chapters 6 & 7 for discussion of this issue). However, it is possible to incorporate this escalating commitment approach in an ethically sound manner. For example, officers have reported that it is rare for witnesses to withdraw from the investigative process once they have committed to giving a statement (again, see Chapter 6 for more information). This suggests that those witnesses who may be willing to provide information, but not evidence may be "nudged" to engage more fully with the investigation through use of social influence. Providing officers with training around the effective use of such escalating commitment techniques is crucial in ensuring that such techniques are adopted in an ethically sound manner. Future research should further investigate the escalating commitment nature of foot-in-the-door requests in an investigative context.

Within the present study, there was no significant effect of social influence condition on the number of critical items reported. Although previous research has shown that foot-in-the-door requests can increase not just compliance with requests, but also the *amount* of time or money an individual is willing to donate (see for example Fennis & Janssen, 2010), the finite nature of memory may mean that this benefit is not seen in this case. An individual exposed to foot-in-the-door as a means of social

influence may desire to help further, they are only able to do so within the constraints of their memory ability. As such, although participants in the foot-in-the-door condition did not report more critical items (nor did they write longer accounts), it is possible that the benefit of social influence continues into future requests. In light of Fennis and Janssen's (2010) findings, future research should establish whether individuals presented with a foot-in-the-door sequential request are willing to invest more (in comparison to control conditions) by spending more time and effort engaging in the retrieval attempt, being willing to engage in repeated retrieval attempts, being willing to take part in follow-up interviews and other forensically relevant requests.

Consideration should be given to the manipulation of social distance included in the present study. Participants were asked to think about either a close friend or an acquaintance prior to being presented with the social influence request. Previous research has demonstrated that thinking about close others increases prosocial behaviour (Maner & Gailliot, 2007; Fitzsimons & Bargh, 2003), therefore it might be expected that those in the "close friend" social distance condition would be more likely to agree to the target request regardless of their social influence condition. However, there was no significant association between agreement with the target request and social distance condition, suggesting that this additive benefit does not exist in this context. Future research should seek to disentangle social distance (manipulated through priming a close other) and social influence to confirm this assumption.

The specific instructions given also merit further consideration. While the social distance and cooperativeness instructions were shown to be effective in this case, further refinement is needed. For example, the social distance instructions directed participants to imagine they were a friend or acquaintance of "all the people involved". However, it is worth noting that the small number of participants (approximately 35 of 141 accounts) who provided a first-person account (one which included reference to participant being there or a sign that the account is being treated as "real" e.g. "I will contact you if I remember anything more") suggest that the focus was on the victim or girlfriend of victim rather than suspect. Providing specific instructions as to the relationship between the participant (in their role as witness) and those involved in the incident would allow examination of how the details reported might differ with a change in the "status" of the witness relative to the group (see Chapters 6 & 7 for

discussion of the impact this has on reporting). Finally, it is noteworthy that no difference was seen in rates of compliance with the target request between the cooperative and reluctant conditions. This is likely a function of the instructions given; participants in the reluctant condition were instructed to appear cooperative but to withhold some information. This being the case it is perhaps unsurprising that this difference was not shown. Future research should explore how variations in the framing of the reluctant instructions may impact overall agreement with the target request.

Overall, Study 3 presents a successful demonstration of a novel paradigm designed to simulate witness reluctance. This represents a considerable advance for research on reluctant witnesses. Pre-existing paradigms very often focus on the cooperative witness (e.g. a standard eyewitness paradigm where the participant witnesses an event and then is asked to recall details of that event. See for example Studies 1a and 1b) or the uncooperative suspect (e.g. paradigms designed to elicit a true or false confession such as the social cheating paradigms developed by Russano, Meissner, Narchet, & Kassin, 2005 and Evans et al., 2013). While each of these paradigms have been used effectively, neither directly captures the predicament experienced by the reluctant *witness*. Although social cheating paradigms might involve giving information about the behaviour of another individual, they generally do so in a situation where the participant themselves is also under suspicion. For example, although Evans et al.'s (2013) information-gathering script did not directly accuse the participant, the experimental design necessitated the participant working collaboratively with a confederate on a general knowledge task, and so in effect put the participant in the position of an accomplice or informer. As discussed in Chapters 5 and 6, this is not always the case for the reluctant witness. The benefit of the paradigm presented here, is that it allows the effectiveness of social influence techniques to be tested in a situation where the witness is reluctant to become involved, but not because of any fear relating to their own wrongdoing (this issue is highlighted in Chapter 6, and anecdotally often appears to be a concern for young people when considering becoming involved in an investigation). In establishing a relatively simple paradigm to simulate reluctance, the opportunity then arises to develop evidence-based techniques with a view to informing best practice. Future research should continue to explore potential means of combating reluctance. It would also be of interest to establish whether the effectiveness of social influence techniques in this context varies depending upon the reason for reluctance.

This is something which researchers are beginning to explore (see for example Meissner et al., 2017) and could be manipulated within the current paradigm. For example, within Study 3 participants in the reluctant condition were told to imagine that they were "not comfortable with telling the police everything". Given the variety of potential causes of reluctance (outlined in Chapters 6 & 7), it would be interesting to explore whether the effectiveness of social influence techniques and the patterns of behaviour they elicit varies when participants are instructed to imagine that their reluctance stems from fear of the perpetrators, mistrust of the police, and so on.

There are two key findings of Study 3; (i) that foot-in-the-door requests significantly increase compliance with a target request in comparison to door-in-the-face requests, but not control conditions and (ii) that there is a significant interaction between cooperativeness and social distance, where "reluctant" participants who imagined that they were an acquaintance of those involved (rather than a friend) revealed fewer critical items in their statements. Given that social influence techniques are most often delivered in a face-to-face context (see Chapter 8), it will be interesting to establish whether this pattern of results remain in a face-to-face setting. There is reason to believe that this might be the case. For example, social influence techniques have been suggested to be effective in both face-to-face and mediated contexts such as by telephone or online, however effects are more variable in mediated settings (Feeley et al., 2012). The physical and psychological differences between online and face-to-face interactions (summarised in Guadagno, 2013) mean that a number of additional factors are at play in offline interactions. For example, authority suggested by Cialdini (2001a) as one of the key principles of influence becomes less salient in an online setting (Dubrovsky, Kiesler, & Sethna, 1991). For this reason, it might be expected that requests for information in a face-to-face investigative context (e.g. from a police officer or other investigator) might carry more weight than the same request in an online setting. Therefore, Study 4 builds upon Study 3 by presenting an empirical test of sequential requests (foot-in-the-door, door-in-the-face, target request only) in a face-to-face guilty knowledge context.

## Chapter 10: Using Social Influence Techniques to Elicit Guilty Knowledge in Person: An empirical test

*Chapter 9 empirically tests the effectiveness of sequential requests (foot-in-the-door and door-in-the-face) in increasing compliance with an online request for a witness statement. Findings suggest that foot-in-the-door requests significantly increase compliance rates by approximately 20% compared to a door-in-the-face request. Chapter 10 extends the line of research presented in Chapter 9 and explores the effect of social influence on compliance in a face-to-face setting. In study 4 participant-confederate pairs took part in an adapted "guilty knowledge" paradigm ostensibly to investigate eyewitness performance. After creating affiliation between the participant and confederate, the confederate cheated on the task by taking a photo of the suspects in a mock-crime video. This creates a situation whereby the participant has "guilty knowledge" they may not wish to disclose. Participants were then separated from the confederate and interviewed about the nature of the cheating using an adapted Structured Interview Protocol. The Structured Interview Protocol was combined with a social influence technique to create three conditions: no social influence (target request only), foot-in-the-door (small request then target request), and door-in-the-face (large request then target request). Surprisingly, a large proportion of participants gave an appearance of cooperating, whilst entirely concealing the confederate's cheating. Due to this unexpected result, minimal analyses are presented. Instead, this pattern of behaviour is discussed in the context of existing literature. Chapter 11 then presents two further experiments which explore potential reasons for this pattern of results.*

The relative success of the foot-in-the-door technique in securing statements from witnesses in an online context merits further investigation. The suggestion that the power of social influence techniques lays with the "social" element of such approaches (i.e. social influence techniques are most effective when they are perceived to be part of a genuine social interaction; Gass & Seiter, 2013) also merits further investigation. Within Chapter 9, participants had no reason to believe that they were part of a social interaction. Study 4 therefore attempts to replicate the pattern of results demonstrated in Study 3 in a face-to-face investigative context.

The present methodology is adapted from Evans et al. (2013)'s "guilty knowledge" paradigm. A key feature of this paradigm is the inclusion of an elaborate transgression (in comparison to simpler manipulations of guilt or innocence e.g. Kassin

& Kiechel, 1996 or Russano et al., 2005). This allows for varying degrees of information disclosure to be included as an outcome (Evans et al., 2013). Within the present study, participants take part in a lineup task alongside a confederate. Throughout this task the confederate "cheats" by taking photos of the suspects and using these to aid their performance on the lineup task. Upon noting the unusually high score on the task, the experimenter asks permission to interview both participants separately about how they conducted the task. In this case, the variable of interest was how much information would be revealed by the true participant about the cheating behaviour of the confederate. It is hypothesised that those participants who are presented with a foot-in-the-door or door-in-the-face request manipulation (that is the presentation of a smaller or larger request prior to the target request) will be (i) more likely to agree to the target request of an interview (and completing a form to state data are valid and information given accurate), and (ii) more likely to reveal key critical information about the confederate's cheating behaviour. Participants were also issued with a number of short questionnaires, such as the shortened Social Axioms Survey II. This inclusion allowed the investigation of systematic personality differences in terms of attitude to authority (see Bond et al., 2004 and Leung et al., 2002)

## 1: Study 4

### 1.1: Method

#### 1.1.1: Design.

The design was between participants, with participants randomly assigned to one of three social influence conditions; foot-in-the-door (smaller request then target request), door-in-the-face (larger request, then target request), and control (target request only). The dependent variable was the level of compliance with the three target requests (agree to an interview, check a box to say that data is useable, and write a signed statement and to say information given during the interview was accurate), and the number of critical admissions made by the participant (as in Evans et al., 2013).

#### 1.1.2: Participants.

Participants were sixteen undergraduate students (seven male and nine female), who took part voluntarily in exchange for course credit or a £5 Amazon voucher. Participants were aged between 18 and 27 years of age (Mean = 21.31 years, SD = 2.52 years). The majority of the participants were first year undergraduate (75%) psychology

students (81%). The remaining participants were drawn from undergraduate cohorts of anthropology, sociology, and management students. Over half of the participants identified their nationality as British (56%), and the majority spoke English as their first language (75%). Participants were randomly allocated to social influence condition (control, three participants; door-in-the-face, five participants; foot-in-the-door, eight participants). Three participants were excluded from analyses as they did not reach the interview stage of the study (primarily due to time restrictions). Of these participants one was originally allocated to the foot-in-the-door condition, and two to the door-in-the-face condition. It should be noted that this study is considerably underpowered and therefore statistical analysis has not been attempted. The small sample size results from the early termination of the study (a decision made because of consistently extreme low levels of disclosure). This lack of variability in participant responses meant that any analysis would be unlikely to be informative and suggests a need for refinement of the experimental procedure.

### 1.1.3: Training.

Six volunteer research assistants were recruited to assist with data collection alongside the principle researcher (RW). The research assistants were all female students from undergraduate and postgraduate psychology courses. Three research assistants were assigned to act as confederates, and three were assigned to act as experimenters alongside RW. The confederates and experimenters were paired up on the basis of availability. All research assistants underwent a series of training sessions conducted by the research team (RW, FG, GW). Research assistants completed all training sessions (experimenter and confederate) regardless of the role they had been allocated. In addition, all research assistants attended at least two general practice sessions.

#### *1.1.3.1: Experimenters.*

Experimenters were trained to deliver the experimental script consistently between sessions. This involved training and practice sessions in delivering the guilty knowledge manipulation consistently (e.g. through highlighting the extreme scores) and explaining the need to contact a senior member of the research team (FG) for advice on how to proceed with the session.

The experimenters were also all trained to administer the Structured Interview Protocol (SIP). The SIP was developed by Gabbert et al. (2016) and is designed to complement national guidelines on the collection of evidence. The SIP (a protocol with associated color-coded aide memoirs) is based around the PEACE model of interviewing, with the addition of new engage and explain techniques (including rapid rapport skills), new techniques to facilitate retrieval (including using questions appropriately, interviewee-led interviewing, and use of witness-generated retrieval cues). SIP training lasted a minimum of two hours and was delivered by FG and RW. The training consisted of an hour-long lecture on the SIP and the underpinning research, and an hour of interview practice with feedback. All research assistants attended at least one SIP training session, regardless of the role they were allocated in the study. Experimenters (allocated the interviewing role) were instructed to keep rapport building to a minimum standard using some of the techniques outlined during SIP training. These included acknowledging the participant's preferred first name, showing empathy, and maintaining open body language. An aide memoir was made available to the experimenters during the interview, alongside a set list of questions to be asked (beginning with "in your own words, and in as much detail as possible, tell me what happened when you were doing the lineup task with your partner", and ending with "is there anything else you want to tell me?").

### 1.1.3.2: Confederates.

During the study, the confederates were required to take part in an adapted Fast Friends Procedure. The Fast Friends Procedure (adapted from Webster, Bernier, Meade, Van Bergen, & Harris, n.d.) is designed to encourage disclosure of information usually gathered over a longer-term period, and in doing so to enhance feelings of affiliation. Confederates prepared basic responses to each of the adapted Fast Friends questions and were trained to adjust the level of details in these responses to align themselves to the level of detail given by the participant. In addition, confederates were trained to deliver the guilty knowledge to the participant by "cheating" on a lineup task. All confederates were involved in loose script development and attended at least two training sessions to ensure that the "cheating" was delivered in a consistent and plausible manner. Confederates were also trained to handle any objections the participant raised to the cheating consistently (e.g. through stating that the pictures taken were for their own use to assist them on the memory task).

**1.1.4: Materials.**

The experimental script and all experimental materials were developed by the principle researcher (RW) and approved by the research team (RW, FG, GW, and the six research assistants). The experimental script was initially adapted (by RW) from the guilty knowledge paradigm developed by Evans et al. (2013). The adapted script was rehearsed with the research team (RW, FG, GW, and the six research assistants) during the training sessions and any amendments made to ensure that this was delivered consistently and naturally by the research team. The experimental script is outlined in the procedure. Additional experimental materials are outlined below, with reference to how these have been developed or adapted where appropriate.

*1.1.4.1: Stimulus event.*

A short video clip (145s) of a mock crime depicting minor violence was created for use in the current study. The clip shows a young female leaving an office building. She then encounters three males blocking her path. As she passes the group, they stop her and ask for money. A knife is drawn and pointed at the female. The males then grab her bag, push her to the ground, and run off. The complete video clip can be viewed on the OSF (see Appendix A). Participants viewed the video clip in pairs (with a confederate) on a laptop with inbuilt speakers.

*1.1.4.2: Lineup materials.*

Three photo lineups were created for use in conjunction with the stimulus event. All lineups were target absent. The North Carolina Correctional Institute Inmate Search (http://webapps6.doc.state.nc.us/opi/offendersearch.do?method=view) was used to search for targets of the same approximate age and ethnicity as the actors in the stimulus video clip. Images were then chosen which matched the approximate identity of the suspects. A screenshot of the three suspects can be seen below in Figure 20.

*Figure 20*. Video stills of the three mock crime suspects (from L-R suspect A, suspect B, & suspect C. Study 4).

The resulting lineups were discussed among the research team (RW, FG, GW, and the six research assistants). The final series of lineups (Appendices H to J) were judged to be an appropriate level of difficulty by the research team. The purpose of the lineup task was to allow the confederate the opportunity to implicate the participant in cheating on the task, and as a result for the participant and confederate to be in a situation where they believe they have an extremely high score. For this reason, the lineups needed to be difficult enough that participants believe they would not have achieved their high score without the confederate cheating.

### 1.1.4.3: Adapted Fast Friends task.

The Fast Friends Procedure was developed by Aron, Melinat, Aron, Vallone, and Bator (1997) as a means of quickly establishing feelings of closeness in an experimental context. The focus of the procedure is to facilitate the reciprocal sharing of information usually gathered over a longer period of friendship. During this procedure participants work through a series of questions which gradually increase in intensity (in terms of disclosure required). Participants take it in turns to choose a question from their list for both partners to answer. This closeness generating procedure has been shown to create higher levels of post-interaction closeness than comparable small-talk tasks (Aron et al., 1997).

The present study incorporated a shortened Fast Friends Procedure based on an adaptation by Webster et al., (n.d.). Webster and colleagues (n.d.) shortened the length of the procedure from 45-minutes to 20-minutes by including 22 items (rather than the

original 36 items). This was further adapted for the time constraints of the present study. Participants were asked to spend 10 minutes working through two lists of three items. Only the final three items from Webster et al.'s (n.d.) adaptation were included on each list. These were the items judged (by Webster et al., n.d.) to require the most disclosure. The adapted list of Fast Friends questions can be seen on OSF (Appendix A).

### *1.1.4.4: Surveys.*

*1.1.4.4.1: Social Axioms scale.* Social axioms refer to general beliefs which are likely to remain stable across a number of different contexts. The Social Axioms Survey (SAS) was originally developed by Leung and colleagues (2002). The original SAS consists of 60 items dived across five factors: social cynicism, social complexity, reward for application, religiosity, and fate control. *Social cynicism* represents a negative view of human nature, biases against some social groups, mistrust of social institutions, and disregard for ethical means of achieving an end. *Social complexity* represents the view that there are no fixed rules, instead there are multiple routes to achieving a given outcome. This factor also acknowledges that human behaviour is frequently inconsistent. *Reward for application* represents the general belief that positive results can be achieved through effort, knowledge, and careful planning. *Religiosity* (or *spirituality*) refers to the belief in supernatural forces and the presence of religious belief. Finally, *fate control* refers to the belief that life events are predetermined, and that people have limited means to influence these outcomes (see Leung et al., 2002 for more detailed discussion).

Within the current study the shortened version of the SAS II is employed (see Appendix A). This takes the eight items with the highest factor loading on each axiom scale to create a 40-item version of the SAS II (Leung et al., 2012). All items are phrased in simple language and are answered on a five-point scale ranging from *strongly believe (5)*, *believe (4)*, and *no opinion (3)* to *disbelieve (2)*, and *strongly disbelieve (1)*. High scores represent that participant beliefs were more in line with a given axiom dimension.

### *1.1.4.5: Perceived Awareness of Research Hypotheses*

As in Study 3, The Perceived Awareness of Research Hypotheses (PARH) scale is designed to provide a measure of the influence of demand characteristics (Rubin et al., 2010). Participants responded to four items assessing their awareness of the aims of

the study using a seven-point Likert scale. Higher mean scores suggest that participants believe they are more aware of the research hypotheses (Rubin, 2016). As in Rubin (2011) an open-ended item was included at the end of the PARH to allow participants to indicate their perceptions of the research aim. This allows the exclusion of any participant who guessed the true aims of the study. In this case, while two participants mentioned a confederate, no participant referred to social influence as a manipulation. Therefore, all participants were included in analyses.

The PARH in the current study was further adapted to allow a measure of compliance with the experimenter's requests. This was achieved through the inclusion of a check-box and signature line (through which participants were asked to confirm that tasks have been completed as honestly and accurately as possible, and as such that data are valid and useable) and an "additional comments" section (within which participants were asked to write a statement confirming that information given during the interview was accurate).

### 1.1.5: Procedure.

The experimental procedure consists of seven key stages: introduction and questionnaire data collection, affiliation building, Guilty Knowledge procedure, initial requests for information (one & two), informal interview request, the interview stage (which varied with condition), and the PARH and debrief. Each of these is outlined in turn below. An overview of the experimental procedure can be seen in Figure 21.

```
┌─────────────────┐      ┌─────────────────┐      ┌─────────────────┐
│  Introduction & │ ───▶ │   Affiliation   │ ───▶ │      Guilty     │
│  Questionnaires │      │     Building    │      │    Knowledge    │
│                 │      │                 │      │    Procedure    │
└─────────────────┘      └─────────────────┘      └─────────────────┘
         │
         ▼
┌─────────────────┐      ┌─────────────────┐      ┌─────────────────┐
│  First Request  │ ───▶ │     Second      │ ───▶ │    Informal     │
│ for Information  │      │   Request for   │      │    Interview    │
│                 │      │   Information   │      │     Request     │
└─────────────────┘      └─────────────────┘      └─────────────────┘
         │
         ▼
┌─────────────────┐      ┌─────────────────┐
│ Interview Stage │ ───▶ │     PARH &      │
│  (varies with   │      │     Debrief     │
│   condition)    │      │                 │
└─────────────────┘      └─────────────────┘
```
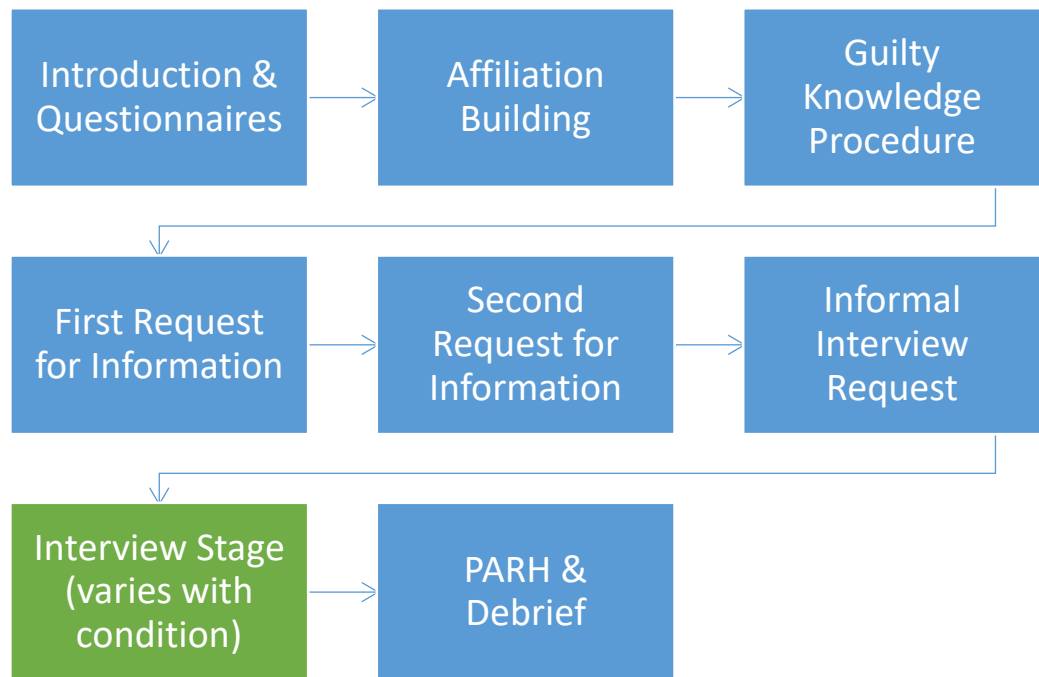
*Figure 21*. Overview of the overall experimental procedure (Study 4).

Prior to the arrival of the participant the experimenter discreetly placed a Dictaphone in the room for the covert audio recording of the experimental session. Upon the arrival of both the confederate and participant, the experimenter introduced themselves as a research assistant working for the Forensic Psychology Unit and explained that the purpose of the study was to compare the performance of individuals and pairs of strangers on a number of eyewitness-related tasks. As part of the pairs condition the experimenter explained that the participant and confederate would complete some tasks together. Both then signed an information and consent form. This included logos for Goldsmiths University, the Metropolitan Police and Greater Manchester Police at the top of the form and explained that the study involved watching a mock crime video and then taking part in a series of eyewitness tasks. The second paragraph included standard information about withdrawing from the study and data storage. Crucially, this paragraph ended with a statement that by signing their consent form participants agreed that the study may be video, or audio recorded. A final paragraph highlighted that results of the study would be presented to police practitioners as part of an ongoing collaboration. While this collaboration is a real one, the purpose of

this paragraph was to emphasise to participants the importance of the data collected. Participants were then given the opportunity to ask any questions before the study began.

The pair then completed a short demographic questionnaire. This also included three visual analogue scales, which asked each member of the dyad to rate their partner in terms of (i) knowledge (of the partner), (ii) similarity to self, and (iii) likeability. The confederate bisected the scales at a similar point to the participant. Where this was not possible (either because the confederate reached the scales first, or because they could not see their partner's responses) confederates marked the line at a neutral point. Participants also completed a series of personality measures; these form part of another research project and will not be discussed further within this chapter.

The experimenter then began the **affiliation building phase**. This was introduced as a "getting to know you" task. Both members of the dyad were handed the adapted Fast Friends Procedure questions. The pair should spend ten minutes (the experimenter left the room during this time) taking it in turns to choose a question from one of the lists. Both partners should then answer this question beginning with the chooser. All confederates had roughly prepared answers to each of the questions, however the confederate was asked to match the style of the participant as much as possible (in terms of conciseness, awkwardness, engagement with the task, and so on). For this reason, the confederate was asked to go second wherever possible (meaning they would be the second person to answer the initial question). If this was not possible then the confederate was asked to reveal a moderate amount of information, and to adapt their style to the participants after this point. This was designed to ensure that the confederate appeared similar to the participant, and so increase the likelihood that she would be rated favourably. Following this, both partners again completed Visual Analogue Scales measuring knowledge of their partner, similarity, and likeability. Again, the confederate marked the line in a similar place to the participant if possible or made a slightly more positive mark than they had previously.

Upon re-entering the room, the experimenter explained that the next stage of the experiment involved viewing a mock crime video. The participant-confederate dyad was informed that following the video they would be asked to complete a lineup task and take part in an investigative interview, and so they should pay careful attention to

the video. The experimenter also stated that the video should be watched once, and no notes should be taken during this period. At this stage the experimenter explained that she needed to go downstairs to collect the printed lineup sheets, but that the pair should watch the video in her absence. She then told the pair to press play whenever they were ready and left the room.

The video itself was just over two minutes long (2 minutes 25 seconds), but the experimenter remained away from the testing room for at least five minutes. This precaution was in place to ensure that the confederate had time to complete the **Guilty Knowledge Procedure**. After the experimenter left the room the confederate clarified with the participant that they had to complete a lineup task. This was intended to imply that they were nervous about this task. Upon realising there are three perpetrators (approximately 80s into the clip) the confederate paused the video, commented that their memory for faces is poor, and took a photo of the perpetrators. If the participant objected to this, then the confederate responded that the photos were for their own use. After five-minutes the experimenter returned with the three photo lineup sheets. She asked whether everything went okay with the video (and so provided an early opportunity for the participant to reveal the confederate's cheating). She then asked the pair to work together to select one suspect from each lineup. The experimenter then left the room, ostensibly to prevent her presence from biasing the discussion. At this point the confederate took out their phone and began comparing the photos to the lineup images. The confederate tried to implicate the participant in the cheating by asking their opinion on a comparison between the images. The confederate suggested that the perpetrators were not present in the lineups (if the participant disagreed then the confederate tried to use the photos to persuade them) and suggested that they ask the experimenter to return to the room (signalling completion of the task).

Upon her return, the experimenter looked at the response sheets and asked why the participant-confederate pair had not made a choice from each of the lineups (first information request). If the participant did not volunteer a response, then the confederate responded that the pair did not believe the suspects were present. The experimenter then explained that the answers were correct, and that this was the first time within the study that this had occurred. She explained that the task was designed to encourage a choice (i.e. no "target absent" option was given). She also asked again if

there was anything she needed to know about the way the lineup task was completed (second information request). If the participant did not respond then the confederate replied that the pair had followed the instructions given, and that they did not know who to pick as they believed the suspect was not present. At this point the experimenter stated that she was not sure what to do in this situation, and so would need to leave the room to telephone the lead investigator (named as Professor Fiona Gabbert). After a brief delay the experimenter returned and asked to speak to each partner separately under the guise of clarifying the experiment instructions (informal interview request). The experimenter always requested to speak to the participant first and the confederate left the lab. Following agreement with this request the experiment moved into the **Interview Stage**. This seemingly marked the end of the official experiment for the participant, however the experimenter ensured that this phase would be completed within the 1-hour window allocated to the study. Therefore, the inconvenience to participants was minimal and all participants were guaranteed to be available during this period.

The Interview Stage began with a brief **"Engage" phase** which was consistent between testing sessions regardless of condition. The experimenter apologised for any inconvenience and reiterated the interview aims ("the professor in charge of this project wants to understand exactly what happened, and why you acted differently to all the other participants"). The experimenter briefly built rapport by establishing the participants preferred first name, displaying empathy ("I realise this might be a bit awkward"), and maintaining open body language throughout. At this point the interview varied with condition. This process is outlined in Figure 22. Regardless of condition, all experimenters took brief notes to aid them in asking follow-up questions where necessary.
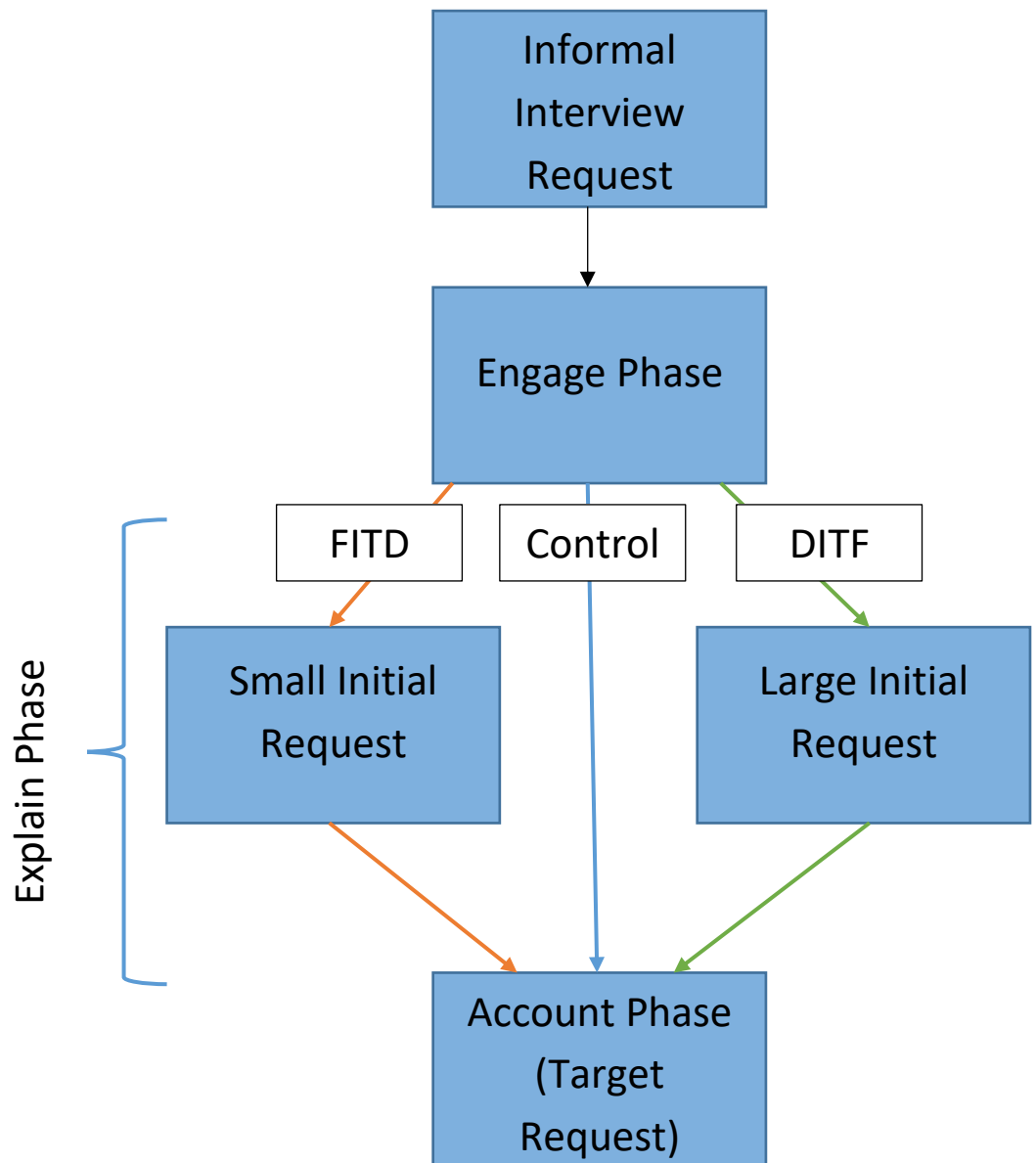
*Figure 22*. Overview of the experimental interview procedure (Study 4).

The remaining interview was split into two sub-stages: the explain phase and the account phase. The social influence manipulation was introduced in the explain phase. The experimenter explained that she would like to ask a few questions in order to understand what happened within the study. This included the line "you don't have to agree to this, but it would be helpful to me" (functionally similar to the "evoking freedom" influence technique suggested to increase compliance with requests; Gueguen & Pascual, 2000; Samson-Secrieru & Carpenter, 2017). This emphasised the "compliance without pressure" nature of the request by highlighting the option to accept or decline request. The experimenter explained that this process would take no more than 30 minutes (interviews generally lasted around 10 minutes) and that no additional

benefits could be issued above that which had been previously offered. Finally, the experimenter explained that information given might be discussed with the lead researcher (named as Professor Fiona Gabbert) and as such confidentiality could not be guaranteed. The explain phase in the **control condition** closed with the target request ("are you willing to answer some questions about what happened?").

The two experimental conditions included an initial request prior to the target request. The **foot-in-the-door (FITD) condition** included a small initial request prior to the target request. In this case the experimenter explained that she would like to ask the participant a few questions and that information discussed would be kept confidential ("we'll do this 'off the record' so anything you say is just between us. I'd like to take some notes, but I won't discuss these with anyone else without your permission"). Again, participants were told that they were not obliged to agree but that this would be helpful. If the participant agreed, then the experimenter was to ask an initial open question, and let the participant speak briefly while taking notes. After the participant had spoken for a few seconds (approx. 30-45 seconds) the interviewer interrupted to say that information provided was helpful and that she would like to formally interview the participant. This signalled a move to the standard explain phase and target request (as in the control condition).

The **door-in-the-face (DITF) condition** included a large initial request prior to the target request. Here, the experimenter explained that as the project was a collaboration with two metropolitan police forces the lead researcher (named as Professor Fiona Gabbert) was keen to ensure data were appropriate for inclusion. The experimenter introduced the large initial request by asking the participant to return at an inconvenient time to attend an interview with the lead researcher ("Fiona would like to speak to you about what happened. Unfortunately, she's in back-to-back meetings all day. She could meet you at 7pm or at 8.30am tomorrow morning. Are you able to meet her at either of those times please? She's asked if you can keep an hour free, so she can speak to both you and your partner. You don't have to agree to this, but it would be helpful. Is that okay?"). It was anticipated that most participants would refuse this request. Where this was the case the experimenter was instructed to state that she understood that this was inconvenient and propose the target request (as in the explain phase of the control condition).

If the participant agreed to the target request, then the experimenter began the account phase of the interview and asked a series of open questions (followed up using the SIP). The set questions (the same across conditions) are as follows: (i) "in your own words and in as much detail as possible, tell me what happened when you were doing the lineup task together with your partner", (ii) "explain how you made your decisions for each of the three lineups", (iii) "Did you always agree? If not then describe how you reached an agreement with your partner", (iv) "Is there anything else you want to tell me?" The experimenter finished by saying "thank you for cooperating. I was worried that your results were caused by something more serious. It's obviously not the case so there will be no further action. If it's okay by you then I'll finish by completing a debrief about the study". If at any stage the participant did not agree to an interview request (or did agree to the initial large request in the door-in-the-face condition) then they were thanked, asked to complete the PARH and debriefed. The PARH was presented as a "standard form" confirming data given were valid and useable. Participants were also asked to add a sentence confirming that information provided throughout the interview was accurate. There were therefore three opportunities for compliance: (i) the target request (providing information through an interview), (ii) the checkbox on the PARH, and (iii) the statement on the accuracy of information provided. The debrief was done in two stages. To prevent potential participants from discovering the purpose of the study by word-of-mouth a partial debrief was given at the end of the study. All participants then received a full debrief sheet via email from the lead experimenter (RW) following completion of data collection.

## 1.2: Results & Discussion

### 1.2.1: Compliance data.

Four key measures of compliance were taken: (i) agreement with the experimenter's request for an interview, (ii) checking the box on the PARH to confirm that data provided are valid and useable, (iii) writing a statement on the PARH to confirm that information given throughout the interview was accurate, and (iv) signing the PARH. Of the 13 participants included in analyses, all complied with the request for an interview and confirmed that the information given during the interview was accurate (one participant in the door-in-the-face condition was not asked for an interview as they agreed with the large initial request, therefore all 12 participants presented with the interview request complied. One participant was not asked to add the statement that

information given was accurate; all 11 participants presented with this request complied). All 13 participants completed the PARH checkbox and signed the form confirming their data were valid and useable.

### 1.2.2: Interview admissions.

Audio recordings were coded by RW in agreement with the research team (FG & GW). Data were first coded for interview admissions. This focused particularly on whether the participant revealed that (i) the confederate paused (or re-watched) the video, (ii) the confederate took photos of the suspects in the video, and (iii) that the confederate used these photos during the lineup task. Just one participant revealed any of this information (this particular participant revealed all three cheating behaviours). This level of admissions was considerably below that which was anticipated based upon previous research (e.g. Evans et al., 2013), therefore a secondary coding procedure took place to establish more subtle variations between participant behaviour.

The secondary coding considered the participant's response to the confederate's cheating behaviour at various stages of the study. Behaviours were coded as present (1) or absent (0). During the guilty knowledge phase (i.e. away from the experimenter and outside of the interview) the participant's response to the confederate's cheating was coded in terms of whether the participant (i) commented on the confederate taking a photo during the video, (ii) revealed the photo-taking in front of their partner when asked by the experimenter if everything went okay during the video, and (iii) told the confederate (away from the experimenter) that they objected to the confederate's use of the photos during the lineup task. The participant's responses to requests for information were also coded in terms of whether the participant revealed the cheating when asked to explain their high scores (i) *in front of the confederate*, and (ii) *away from the confederate*. Finally, audio recordings were coded for whether the participant appeared complicit in the cheating both during the video (photo taking), and during the lineup (using photo).

Of the 13 participants included in analyses, approximately half (54%) commented on the confederate taking a photo during the video, but only a single participant (8%) clearly objected to the use of these photos during the lineup task[12]. In

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[12] It is worth noting that one participant excluded from analyses actively tried to prevent the confederate from taking these photos, and that a second participant excluded from analyses attempted to distance herself from the cheating by refusing to participate in using the photos during the lineup.

contrast, over a third of the participants were judged to be complicit in the cheating behaviour during either the photo-taking during the video or the use of the photos during the lineup task (38% in each case). No participants revealed the cheating at the first opportunity when asked by the experimenter if everything went okay during the video, and just one participant (8%) explained the extreme scores on the lineup task to the experimenter (this participant did so both in front of and away from the confederate).

### 1.2.3: Additional data.

A social axiom score was also calculated for each dimension of the scale (social cynicism, reward for application, social complexity, fate control, religiosity) following the coding procedures set out by Leung et al. (2012). Partner ratings changes were calculated in millimetres by subtracting the second partner rating score (after affiliation building) from the initial partner rating score (pre-affiliation building). This gave a change score for each of the three ratings scales: knowledge of, similarity to, and liking of. On average partner ratings change scores were positive, demonstrating an increase in affiliation throughout the "fast friends" procedure. In addition, the number of questions (out six) answered during the affiliation building stage and the amount of time spent on the task was noted. Finally, the number of lineups where the participant and confederate reached a shared decision (out of three) and the amount of time spent discussing this task was noted. Data for these variables (min, max, mean & SD) are shown below in Table 22.

Table 22.

*Additional data collected (Study 4)*

| Variable | | Mean (S.D.) | Min Value | Max Value |
|---|---|---|---|---|
| Partner Ratings Change Scores | Knowledge of | 57.15 (21.50) | 22.00 | 99.00 |
| | Similarity to | 28.46 (29.34) | -13.00 | 86.00 |
| | Liking of | 22.77 (23.94) | -15.00 | 72.00 |
| Social Axioms | Social Cynicism | 25.31 (3.79) | 20.00 | 33.00 |
| | Reward for Application | 31.54 (3.43) | 26.00 | 39.00 |
| | Social Complexity | 31.85 (3.02) | 27.00 | 38.00 |
| | Fate Control | 19.54 (5.74) | 10.00 | 28.00 |
| | Religiosity | 20.69 (7.54) | 10.00 | 33.00 |
| Affiliation Building | No. of Questions Answered | 4.15 (1.28) | 2.00 | 6.00 |
| | Length of Discussion (s) | 419.15 (171.36) | 144.00 | 653.00 |
| Lineup Task | No. of Lineups where Agreement Reached | 2.46 (0.88) | 0.00 | 3.00 |
| | Length of Discussion (s) | 329.23 (215.64) | 90.00 | 901.00 |

The series of studies presented across Chapters 9 and 10 aimed to investigate the effectiveness of simple social influence manipulations in facilitating the elicitation of guilty knowledge. Based upon the systematic review of literature presented in Chapter 8 and the promising empirical findings presented in Chapter 9, it was anticipated that social influence request manipulations would increase the rate of compliance. Specifically, within Study 4 it was hypothesised that framing the request in a foot-in-the-door format would increase compliance with the target request for an interview (compared to door-in-the-face requests or target request only), result in greater disclosure of guilty knowledge, and increase compliance with a request for a statement confirming data are valid and information provided accurate. Contrary to these expectations, results suggest an extremely high level of apparent compliance alongside minimal disclosure of guilty knowledge. Just one participant revealed any part of their "guilty knowledge" to the experimenter. The extremely low level of any form of

admission ran contrary to expectation (based upon previous literature e.g. Evans et al., 2013) and provided very limited opportunity to assess the effectiveness of the social influence techniques proposed. Despite this, the results provide some insight into the use of a guilty knowledge procedure to create reluctance in the laboratory.

Firstly, the mean changes in participant ratings of (i) knowledge of, (ii) similarity to, and (iii) liking of the confederate were positive. This suggests that ratings generally increased after the affiliation building stage and so suggests that the affiliation building stage was effective. This supports previous research on the Fast Friends procedure. For example, this procedure has previously been shown to generate greater feelings of closeness than comparable small-talk tasks (Aron et al., 1997). In addition, the Fast Friends Procedure (or adaptations of this) have been suggested to facilitate cross-group friendships (Mendoza-Denton & Page-Gould, 2008), reduce physiological threat as a result of implicit prejudice (Page-Gould, Mendoza-Denton, & Tropp, 2008), and lead to more positive attitudes, greater feelings of interpersonal closeness, and longer and friendlier responses following disclosure of sexuality in conversations between heterosexual participants and gay or lesbian interaction partners (Lytle & Levy, 2015). Finally, the Fast Friends Procedure has been suggested to be of potential benefit within policing contexts. For example, as a means of developing rapport and understanding and so facilitating teamwork between officers quickly when there is a requirement to work in a partnership to deescalate a situation or achieve another similar goal (Andersen & Papazoglou, 2014). Taken together, these findings highlight the power of the Fast Friends Procedure. Furthermore, the findings of the present study suggest that the Fast Friends Procedure can be used within laboratory studies to create reluctance which mirrors that often found in real-world reluctant witness scenarios. For example, loyalty to friends or family is a commonly cited reason for not cooperating with police investigations (see Chapter 6). Interestingly, the Fast Friends Procedure appeared to create greater feelings of affiliation with the confederate than basic rapport-building did with the experimenter (although note that these procedures were not sufficiently controlled to allow firm conclusions to be drawn). However, it is important to note that the rapport-building engaged in by the experimenter is not representative of best practice; in other words, this was very brief (in duration) and very limited in the techniques applied in comparison to official guidance within the Cognitive Interview or the SIP. It is possible that more thorough rapport-building could be enough to override

some of the benefit of the Fast Friends procedure. This should be explored in future research.

Secondly, the high rates of compliance are interesting. Rates of compliance were compared across three key stages: (i) at the initial request for an interview, (ii) when asked to write a brief (one sentence) statement confirming information given was accurate, and (iii) when asked to sign an adapted Perceived Awareness of Research Hypotheses form to confirm that data were valid and useable. All participants (n = 11-13) complied with each of these requests. The high level of agreement with the target requests regardless of social influence condition was unexpected. However, despite the apparently high proportion of cooperative participants, the majority lied by omission. The interview stage focused on the type of information disclosed, in particular the disclosure of critical information about the nature of the cheating (e.g. use of the phone to take a photo, use of the photo on the lineup task, and so on). Within this stage just one participant (8%) mentioned the confederate's cheating when explaining their high scores. The extreme rates of compliance coupled with low disclosure rates are surprising in the context of previous research. For example, a recent meta-analysis suggested that generally such studies result in a false confession rate of around 47% (Stewart, Woody, & Pulos, 2018). This rate has also been demonstrated to be considerably higher when a secondary confession (that is a confession about the behaviour of a second participant) is provided rather than a primary confession (concerning the individual's own behaviour; see for example, Swanner, Beike, & Cole, 2010).

Interestingly in addition to the lies of omission, participants often lied by commission. For example, in completing the second and third requests (writing a short statement confirming information given was accurate and signing the Perceived Awareness of Research Hypotheses form to confirm that data were valid and useable, the participant was essentially required to provide false information. Some participants went beyond this, elaborating on details in an attempt to cover up the confederate's cheating. That the combination of Fast Friends Procedure and Guilty Knowledge Procedure resulted in uninstructed lies (of both omission and commission) merits further investigation in a detecting deception domain.

The social axioms were originally included with the intention of exploring systematic differences between individuals with higher and lower levels of disclosure. Unfortunately, the small sample size within the current study meant that there would be limited value in any comparison. However, this is something which should be explored in future research. Social axioms have previously been shown to have a predictive relationship with some behaviour. For example, Singelis, Hubbard, Her and An (2003) demonstrated that a number of social axioms are related to a series of self-reported behaviours. For example, Reward for Application was positively (albeit weakly) correlated with trying harder on as second attempt after being unsuccessful and working hard to maintain good relationships with others. In addition, Kurman (2011) suggests that social axioms make a unique contribution in predicting behaviours directed by how others are expected to behave (e.g. expectations of others mediate the relationship between Reward for Application and social loafing). The findings that social axioms are related to behaviour suggest that it is worth considering whether these types of social belief can explain the behaviour of reluctant and cooperative witnesses.

Overall, Study 4 explored the effectiveness of social influence techniques (and in particular sequential requests) in facilitating cooperation and disclosure in an investigative interview setting. This high rate of apparent compliance (all participants complied with requests to be interviewed and all participants signed the PARH to confirm that their data were valid and useable) alongside the low rate of admissions of guilty knowledge was entirely unanticipated. Some potential explanations for this pattern of results are therefore explored in Chapter 11. First, Study 4a investigates the difference between hypothetical and actual behaviour in a "guilty knowledge" setting, with a view to establishing how accurate individuals are in predicting behaviour in such situations. The aim of this study is to establish whether the pattern of behaviour shown by participants in Study 4 could have been anticipated. In other words, this study aims to explore whether the differences between the behaviour of participants in Study 4a and those in previous suspect interviewing studies (e.g. Evans et al., 2013) are a result of the particular "guilty knowledge" scenario participants were exposed to (meaning estimates of hypothetical behaviour would also be low). Study 4b then explores how accurate individuals are in identifying reluctant witnesses who demonstrate a degree of surface-level cooperation, without providing useful information. In this sense Study 4b

aims to investigate features of accounts which may increase the accuracy of investigators identifying reluctant witnesses.

## Chapter 11: Exploring the Complexities of Using Social Influence to Increase Compliance in Person

*Chapter 10 tests the effectiveness of social influence techniques (foot-in-the-door and door-in-the-face) in a face-to-face adapted "guilty knowledge" paradigm. Surprisingly, a large proportion of participants appeared to cooperate, whilst entirely concealing their "guilty knowledge". Chapter 11 presents two further studies which explore potential reasons for this behaviour. First, Study 4a presents a hypothetical guilty knowledge scenario (similar to that of Study 4) and asked participants to estimate (at a number of key stages) how likely they would be to reveal their guilty knowledge. Estimates were considerably higher than actual behaviour in Study 4, suggesting that individuals are unable to reliably predict behaviour in such situations. Study 4b explores how accurate individuals are in identifying these reluctant witnesses. Respondents read three transcripts (of real participant interviews from Study 4) and rated the cooperativeness of the interviewee in each case. Responses suggest an over-estimation of cooperation and engagement, with qualitative analyses suggesting respondents believed that interviewees answered the questions put to them, focused on relevant information, and introduced new information throughout. Taken together, these findings suggest that reluctant witnesses may appear cooperative, without revealing critical information, and that naïve observers may have difficulty in recognising those witnesses who provide this kind of surface-level cooperation. The discussion that follows draws together the findings of the three studies discussed in Chapters 10 and 11 and presents some "lessons learned" from the use of a complex guilty knowledge paradigm in the context of reluctant witnesses.*

### 1: Study 4a

Within Study 4a participants were presented with a guilty knowledge scenario which approximately mirrored Study 4. Participants were asked at a number of stages to estimate how likely they would be to reveal information about a hypothetical partner's cheating on a memory task (the guilty knowledge). Please note that for clarity in the discussion that follows the term "respondent" is used to describe the participant completing the survey, while the term "participant" refers to the hypothetical participant described in the scenario.

**1.1: Method**

**1.1.1: Design.**

An online survey was developed to assess perceptions of how individuals might expect to behave if they held "guilty knowledge". Respondents were presented with a "guilty knowledge" scenario and were asked to estimate how likely they would be to respond in a given manner. Responses were made on a sliding scale of 0% (extremely unlikely) to 100% (extremely likely).

**1.1.2: Participants.**

Respondents were 43 undergraduate students and members of the public (five male and 38 female), who took part voluntarily (students were offered course credit in exchange for participation). Respondents were aged between 18 and 62 years of age (Mean = 22.51 years, SD = 7.96 years). The majority were first year undergraduate psychology students (81%). The remaining respondents were members of the public recruited via advertisements on social networks and online study participation websites. A pre-requisite of participation was speaking English fluently at native-speaker or approximately native-speaker levels. The majority of the respondents identified their nationality as being British (72%) and spoke English as their first language (74%). This sample of respondents was therefore judged to be roughly equivalent to the sample of participants who took part in Study 4a.

**1.1.3: Materials & procedure.**

A short survey was designed to assess how individuals anticipate behaving when they hold "guilty knowledge". Guilty knowledge was defined as "information that an individual holds about their own or others behaviour, which could embarrass or cause difficulties for the person holding the information". Respondents were presented with a brief scenario outlining a study in which participant pairs worked together to complete a memory task. The scenario described the participant obtaining guilty knowledge about their partner, who cheats on the experimental task. This was devised to mirror Study 4 as closely as possible. At various stages of the scenario the respondent was asked to give a percentage estimate of how likely they would be to behave in a given manner. The key stages of the scenario and the associated questions are described in brief below and depicted in Figure 23. After completing these questions respondents received an electronic debrief form and exited the survey.

Within the scenario, participants are asked to imagine that they take part in a hypothetical experiment. They spend 10 minutes on a "getting to know you" task with a previously unknown partner and feel that they have learned something about one another. This is followed by a memory task. The experimenter asks the pair to watch a video carefully, but not to take any notes. During this the participant notices their partner taking photos of key scenes. The experimenter then introduces a memory task; the participant pair should work together to answer a series of questions about the video and must reach an agreement on their answers (only one answer can be submitted per pair). As they begin to consider the questions, the participant notices their partner using the photos they took to help them answer the questions. The experimenter returns to the room and calculates the pairs test score. They tell the pair that their score is unusually high. The experimenter asks if there is anything they need to know about the way the pair carried out the test.

Respondents were asked to estimate their behaviour at a number of key stages. They were asked to estimate (as a percentage) how likely they would be to (i) comment on their partner's behaviour (to their partner), (ii) reveal to the experimenter *in front of their partner* that the partner took photos (when asked if the video went okay), (iii) object to their partner using the photos to cheat on the task, (iv) tell the experimenter that their partner cheated on the task (by using the photos they took) *in front of their partner* or (v) if the participant was *talking to the experimenter alone*. Finally, the respondent was asked to estimate how their answers might change if (vi) they hadn't spent time getting to know their partner before the task and (vii) if the participant and their partner were working individually in the same room rather than as a pair.
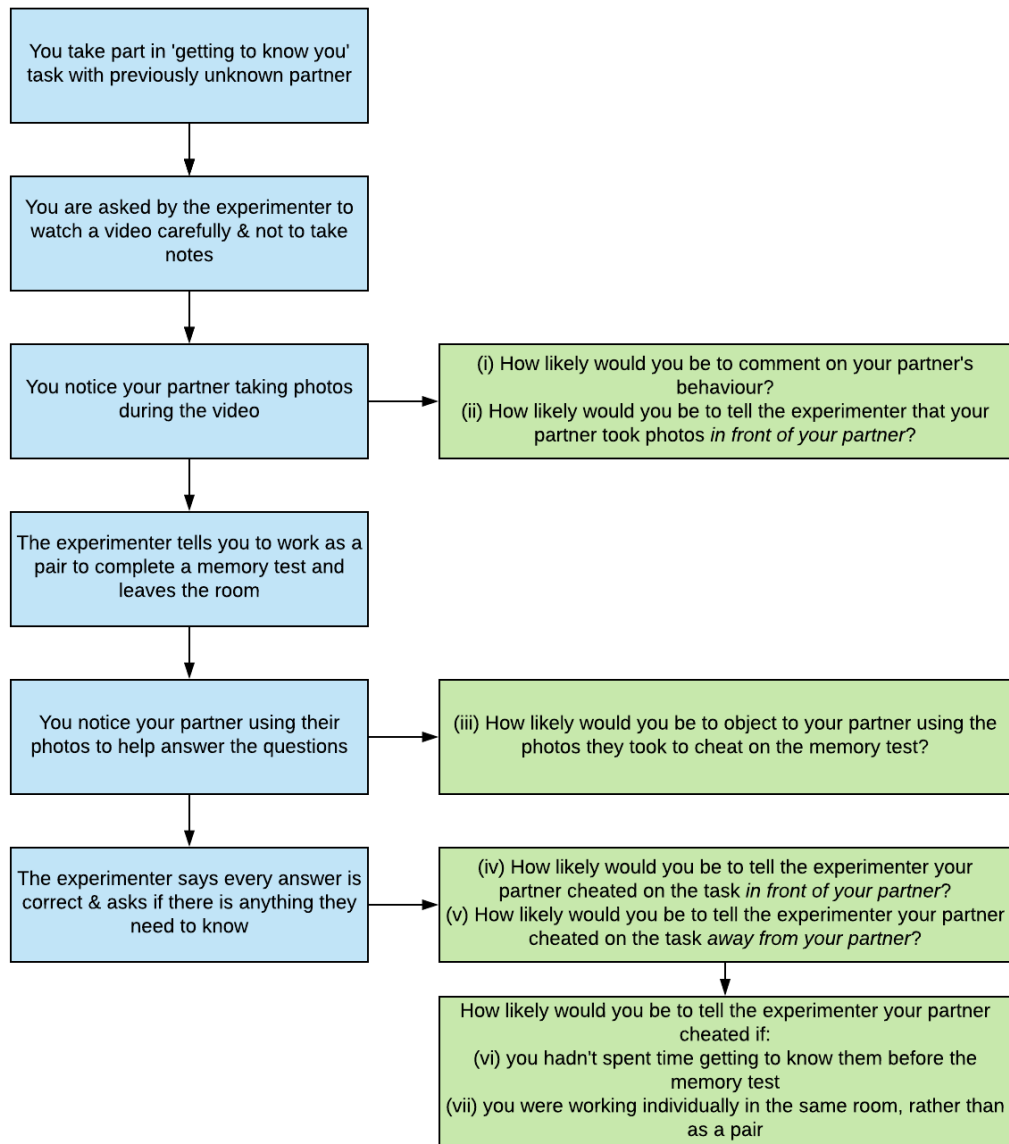
*Figure 23*. Revealing guilty knowledge procedure (Study 4a).[13]

## 1.2: Results & Discussion

Responses were given as percentages for each of the seven questions. The number of participants who responded to each question is given as an *n*. Median values are reported below, with average responses (mean, SD, & median) reported in Table 23. Table 23 also shows a comparison between hypothetical behaviour (Study 4a) and actual behaviour (Study 4) in a "guilty knowledge" scenario.

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[13] Please note that in Figure 23 blue textboxes represent the hypothetical experiment scenario and green textboxes represent the points at which the respondent was asked to give an estimate of how they might respond.

On average respondents ($n = 40$) estimated a 70% likelihood of commenting if their partner took photos during the video. This is somewhat higher than the 54% of Study 4 participants who commented on their partner's behaviour at this stage ($n = 13$; note that only 4 of the participants who commented voiced clear objections to this "rule breaking", however one participant was excluded from Study 4 for actively preventing this cheating). When asked to imagine being asked by the experimenter if everything had gone okay during the video, respondents ($n = 38$) estimated a 30% likelihood of telling the experimenter that their partner had taken photos *in front of their partner*. Responses ranged from 0-80%; interestingly this was the only aspect of the scenario where upper estimates dropped below 100%. This suggests that even the most confident of participants imagine being hesitant at revealing information about another individual when that individual is guaranteed to know the source of the information. This echoes concerns of real-life witnesses, who are more likely to become reluctant to cooperate where there is a risk that they will be identified as the source or as a "snitch" (see Chapters 5 to 7). Again, these responses were considerably higher than actual behaviour might suggest; in Study 4a no participants reported their partner's behaviour at this early stage. In addition, respondents ($n = 41$) estimated an 80% likelihood of objecting to their partner using the photos to cheat on a collaborative memory task. In contrast, just one participant did so when faced with this scenario in Study 4. It is worth noting however that a further participant excluded from Study 4 did not directly object to the cheating but did attempt to distance herself (by refusing to look at the images taken) during the memory task.

Table 23.

*Revealing guilty knowledge: Actual and hypothetical behaviour (Studies 4 & 4a)*

| | **Hypothetical behaviour (Study 4a)** | | | | | **Actual behaviour (Study 4)** | |
|---|---|---|---|---|---|---|---|
| | *n* *(N = 43)* | *Median* | *Mean (SD)* | *Min.* | *Max.* | *n* *(N = 13)* | *%* |
| (i) Comment on partner taking photos during video | 40 | 70 | 63.75 (30.02) | 0 | 100 | 7 | 54% |
| (ii) Tell experimenter in *front of partner* that partner took photos during the video | 38 | 30 | 26.05 (20.07) | 0 | 80 | 0 | 0% |
| (iii) Object to partner using photos to cheat on memory task | 41 | 80 | 71.71 (29.06) | 0 | 100 | 1 | 8% |
| Tell experimenter that partner cheated on memory task: | | | | | | | |
| (iv) *In front of partner* | 39 | 50 | 48.72 (25.77) | 0 | 100 | 1 | 8% |
| (v) *Away from partner* | 41 | 80 | 74.15 (29.58) | 0 | 100 | 1 | 8% |
| Tell experimenter your partner cheated: | | | | | | | |
| (vi) *If you hadn't spent time getting to know them first* | 40 | 70 | 65.25 (30.47) | 0 | 100 | - | - |
| (vii) *If you were working as individuals in the same room, not as a pair* | 41 | 60 | 60.00 (33.47) | 0 | 100 | - | - |

*Note:* n represents the number of respondents for any given question (of a possible 43)

Respondents also estimated the likelihood of telling the experimenter that their partner cheated on the memory task (i) in front of their partner and (ii) away from their partner. In both cases the estimates for hypothetical behaviour were substantially higher than actual behaviour. First, respondents ($n = 39$) estimated a 50% likelihood of revealing their partner's cheating behaviour in front of their partner. When asked how likely they would be to reveal this information in private (away from their partner) estimates rose to 80% ($n = 41$). In both cases, when participants were faced with this situation in person (in Study 4) just one participant (8%) revealed this information (i) in front of their partner and (ii) away from their partner. Interestingly this was the same participant, suggesting that in this case once the decision had been made to reveal the cheating behaviour it was of little consequence whether this was in front of or away from the partner. While this does not directly mirror real-world reluctance, where concerns over "snitching" are commonplace, officers do suggest that once a witness has committed to cooperating with an investigation (e.g. through giving a statement) then it is unlikely for them to withdraw at a later stage. It is securing cooperation in the first instance which is particularly challenging (see Chapter 6 for discussion of this).

Finally, respondents were asked to consider how their answers might change if their interaction with the partner had been different. First, respondents estimated how likely they would be to tell the experimenter that their partner had cheated if they had not spent time getting to know them at the beginning of the study. Estimates suggest a 70% likelihood of revealing the partner's cheating behaviour in this case ($n = 40$). Next, respondents were asked to consider how likely they would be to reveal this information if they were working individually in the same room, rather than as a pair. Estimates ($n = 41$) suggest a 60% chance of revealing this information. Taken together these findings (along with those of Study 4) suggest that while the Fast Friends Procedure is effective in building an affiliation between two relative strangers, this may not be the only factor important in making the decision to cooperate. For example, estimates of the likelihood of revealing guilty knowledge were relatively similar when respondents imagined revealing information about a partner they had got to know away from the experimenter (80%), without getting to know the partner (70%), and if working as individuals, rather than as a pair (60%; note for the last two scenarios it was not specified whether this information was given in front of the partner or privately). That there is actually a small decrease in this estimated likelihood in the latter two scenarios perhaps suggests that

respondents are concerned about being implicated in the cheating when the task is a shared one but would be less concerned with this rule violation where there is no likelihood of their being implicated in this. This supports the assumption that the low disclosure rate seen in Study 4 may (at least in part) be a result of the participant being complicit in the cheating (e.g. through lies of commission; see Chapter 10). The slight increase in the likelihood of disclosure when respondents imagined having spent time getting to know their hypothetical partner (versus when they have not) may represent an emotion response to the rule-breaking. For example, it is possible that when a relationship has been built with another individual then any transgressions on their part can be perceived as morally wrong. This in turn increases the likelihood of disclosure (see Chapter 6). These speculations may be worthy of further investigation. Overall, both Study 4 and Study 4a focused on revealing guilty knowledge based on the cheating behaviour of a previously unknown partner. Within Study 4, which explored actual behaviour, very few participants revealed this information. This pattern of behaviour was contrary to expectations and as such the purpose of Study 4a was to explore respondents' expectations of their own behaviour in this context. Estimates suggest a 50-80% likelihood of revealing guilty knowledge, depending on whether this was given in front of or away from the guilty party. These estimates are considerably higher than the 8% of participants who actually revealed this information in Study 4. This suggests that individuals considerably overestimate the behaviour of themselves and others to provide information in a guilty knowledge context.

Interestingly, within Study 4a although only a minority of the participants revealed the guilty knowledge, every participant asked to take part in an interview agreed to this request. This suggests that the participants in Study 4 all gave an appearance of being cooperative without actually revealing any critical information. This then raises the question of how easy it is to recognise a reluctant or hostile witness when they cooperate with requests but withhold key information. For this reason, a third study was conducted to assess perceptions of cooperativeness when it is known that participants are not revealing valuable information.

**2: Study 4b**

Within Study 4b respondents were asked to read a short outline of a memory study and imagine themselves as a lead researcher who has discovered some unusually high participant scores. As a result, the respondent is asked to imagine they have conducted a series of interviews with the hypothetical study participants. Each respondent then read three transcripts (of real participant interviews from Study 4) and rated the cooperativeness of the interviewee in each case. As in Study 4a the discussion that follows refers to the participant completing the survey as the "respondent". The term "participant" is used to describe the hypothetical participant.

**2.1: Method**

### 2.1.1: Design.

An online survey was developed to assess the perceived cooperativeness of interviewees. Respondents were asked to assess three short interview transcripts (of 13 transcripts) ostensibly collected from fictitious participants explaining their high scores during a memory test and rate the cooperativeness of the interviewee. The dependent variables were (i) the perceived cooperativeness of the interviewee and (ii) whether the interviewee should be invited to attend a second interview (i.e. the interviewee may have more information to give).

### 2.1.2: Participants.

Respondents were 46 undergraduate students and members of the public (five male and 41 female), who took part voluntarily (students received course credit in exchange for their participation). Respondents were aged between 18 and 62 years of age (Mean = 22.22 years, SD = 8.52 years). The majority were first year undergraduate psychology students (87%), with remaining respondents recruited via advertisements on social networks and online study participation websites. A pre-requisite of participation was speaking English fluently at native-speaker or approximately native-speaker levels. The majority of the respondents identified their nationality as being British (76%) and spoke English as their first language (85%). This sample of respondents was therefore judged to be roughly equivalent to the sample of participants who took part in Study 4.

### 2.1.3: Materials & procedure.

An online survey was designed to assess perceptions of the cooperativeness of interviewees. Respondents were asked to imagine themselves as an interview advisor

assessing the quality of interviews conducted by a small team of interviewers. Respondents were presented with a short scenario (shown below in Figure 24 with participant instructions) which described the lead researcher for a study becoming aware of some excessively high participant task scores. As a result, the hypothetical study participants are interviewed to determine whether task instructions have been followed. The task of the respondent was therefore to rate the cooperativeness of the interviewee.

Respondents were then presented with three transcripts of a possible 13 (each transcript can be seen in Appendix K). The presentation of transcripts was randomised. Each transcript was a written record of the questions participants were asked during an interview and the responses they gave. The transcripts were presented as fictional, but in actual fact interviews from Study 4 were transcribed for use in the present study (all experimental sessions of Study 4 were covertly audio recorded). Only the Study 4 interview questions and answers were transcribed (explain and engage, and closure phases were not included in the transcript). Clarifications and injections made by interviewers were included in the transcripts and each included broadly the same questions. Comments made by the interviewer were marked "I" and participant responses were marked "P".

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**Scenario:**

You are responsible for a study on memory. People take part in a memory test with a partner. Some of the test results were surprisingly high and so you want to check that everyone followed the test instructions to use only their own and their partner's memories to answer the questions, and not to use notes to cheat. You hire a team of interviewees to speak to the test participants and find out if everyone followed the instructions. Your team carries out the interviews with people involved to try and find out if anyone cheated on the task. They ask you to help them decide what to do next.

**Task Instructions:**

Your task now is to read a transcript of a short interview carried out by a member of your team and decide whether you think the person being interviewed has told you everything they know. You should consider how cooperative they are being and score their cooperativeness on the scale provided. You should also think about whether you'd like your team to interview the person again. You should only ask your team to carry out a follow-up interview if you believe that an interviewee has more information about the high test scores than they have already revealed. You should remember that any number of the interviewees might have more information – this could be all of them, none of them, or any number in between. If you ask someone to be interviewed again, but they have already told the interviewer everything they know, then they are likely to lose faith in your team and might refuse to cooperate. This means it is important that you carefully consider whether you think an interviewee has told you everything they know.

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*Figure 24.* Scenario and task instructions presented to respondents (Study 4b).

When considering the transcripts respondents were asked to rate the cooperativeness of the interviewee. These judgements were based on Observing Rapport-Based Interpersonal Techniques (ORBIT; Alison, Alison, Elntib & Noone, 2012), and included a cooperativeness judgment for each question and for the interview as a whole. To facilitate this process the transcripts were divided into approximately four key questions (all transcripts contained at least three questions): (i) "in your own words and in as much detail as possible, tell me what happened when you were doing the lineup task together with your partner", (ii) "explain how you made your decisions for each of the three lineups", (iii) "Did you always agree? If not then describe how you reached an agreement with your partner", (iv) "Is there anything else you want to tell me?" After reading each question and answer respondents judged how much

information the interviewee revealed to the interviewer within that particular question response. Responses were given on a four-point Likert scale (adapted from ORBIT; Alison et al., 2012) to indicate whether the interviewee gave (i) no relevant information, (ii) minimal relevant information, with as little as possible revealed, (iii) moderate relevant information, with only information requested provided, or (iv) a high level of relevant information given, with as much provided as possible.

Following this, respondents rated the interview as a whole, taking into account the answers to each interview question. These responses were given on seven-point Likert scale (adapted from ORBIT; Alison et al., 2012). Response options allowed respondents to indicate where the interviewee gave no relevant information (by saying nothing, giving no comment responses, or minimally engaging to reveal only irrelevant information; response options 1-3), whether minimal relevant information was provided (by responding in a scripted manner or introducing minimal new information in response to questions; response options 4-5), or where the interviewee elaborated and provided sufficient relevant information (by answering questions and offering new information or by answering questions fully and thoroughly; response options 6-7).

Finally, respondents were asked to consider whether they believed the participant had more information to give, and as such whether they would advise the interviewing team to arrange a second interview with the participant. A free-response textbox was provided to allow the respondents the opportunity to justify this answer. After completing these questions respondents were debriefed and exited the survey.

## 2.2: Results & Discussion

Responses for individual question responses were given on a four-point Likert scale, while overall interviewee cooperativeness was scored on a seven-point Likert scale. Median values are reported below, with average responses (mean, SD, & median) for overall cooperativeness reported in Table 24. Several open-text response boxes were included to allow participants to justify their answers. As a result, the analyses that follow are more qualitative in nature.

Of the transcripts rated by respondents (obtained from Study 4), just one participant revealed their guilty knowledge of their partner's cheating behaviour (Transcript 6). This participant gave brief information about both the photo-taking and the cheating on the memory task, as well as expressing some suspicion of the nature of

the study (specifically questioning whether the confederate was "a plant"). A second participant also expressed suspicion that their partner was a confederate but failed to provide any information about the cheating behaviour (Transcript 4). For this reason, we would expect that if respondents within the present study were able to identify reluctant witnesses as withholding information then cooperativeness judgments for Transcripts 4 and 6 should be considerably higher than for the eleven remaining transcripts. As is seen in Table 24, this is not the case. Instead, overall ratings of interviewee cooperativeness are around point 5 or 6 on the seven-point Likert scale. This indicates that respondents generally felt interviewees (i) answered the interviewer's questions, (ii) introduced new information, and (iii) focused on relevant information.

Table 24.

*Ratings of overall interviewee cooperativeness (Study 4b)*

|  | *N* | Overall Interviewee Cooperativeness | | | | Invite for Second Interview | |
|---|---|---|---|---|---|---|---|
|  |  | Mean (SD) | Median | Min | Max | Yes | No |
| Transcript 1 | 10 | 4.90 (1.37) | 5 | 3 | 7 | 5 | 5 |
| Transcript 2 | 10 | 5.20 (0.92) | 5 | 3 | 6 | 4 | 6 |
| Transcript 3 | 10 | 5.10 (1.29) | 5 | 3 | 7 | 7 | 3 |
| *Transcript 4* | *11* | *5.18 (1.08)* | *5* | *3* | *7* | *2* | *9* |
| Transcript 5 | 11 | 5.45 (1.51) | 6 | 2 | 7 | 5 | 6 |
| *Transcript 6* | *11* | *5.18 (1.66)* | *6* | *3* | *7* | *7* | *4* |
| Transcript 7 | 10 | 5.20 (1.23) | 5.50 | 3 | 7 | 5 | 5 |
| Transcript 8 | 10 | 4.60 (1.17) | 5 | 3 | 6 | 3 | 7 |
| Transcript 9 | 10 | 5.20 (1.69) | 5 | 2 | 7 | 3 | 7 |
| Transcript 10 | 10 | 4.90 (0.99) | 5 | 3 | 6 | 6 | 4 |
| Transcript 11 | 10 | 5.90 (1.60) | 6.50 | 2 | 7 | 3 | 7 |
| Transcript 12 | 11 | 5.73 (1.01) | 6 | 4 | 7 | 2 | 9 |
| Transcript 13 | 10 | 5.00 (0.94) | 5 | 4 | 7 | 5 | 5 |

*Note*: Transcript 4 and 6 both expressed some suspicion of the participant as a "plant". These transcripts are shown in italics.

Respondents were also asked to consider whether the interviewee should be invited to take part in a second interview. As is shown in Table 24 limited consensus emerged among responses. Respondents were also given the opportunity to justify their decision in a free-response format. These quotes have been collated and some common themes of "yes" and "no" responses will be discussed below alongside indicative quotes. Overall categories and their associated counts can be seen in Table 25 (overleaf).

Overall 43% of respondents would invite the interviewees for a second interview ($n = 57$; 48 of whom gave a reason for their decision). The predominant reason to invite respondents for a second interview (in 36% of responses) was that responses given were vague or unclear, and required further elaboration. Respondents referred specifically to their belief that additional information is available (*"Ignoring the repetitiveness, the overall information provided wasn't very elaborated/explained in detail, and so I think some information hasn't been disclosed"* – Respondent 25 discussing Transcript 13). Respondents also referred specifically to information that they would have liked to have been revealed such as information about "*the participants feelings during the task*" (Respondent 20 discussing Transcript Five) or the impact of the confederate on the participant (*"I would like to know more about this disagreement. Did it affect his decision or attention, perhaps by making him frustrated, rushing, etc.?"* – Respondent 18 discussing Transcript Four).

Table 25.

*Reasons to re-interview witnesses (Study 4b)*

| Yes Responses | | No Responses | |
|---|---|---|---|
| Category | Count | Category | Count |
| Unclear/vague/elaboration needed | 19 | Complete account already given. Participant is honest and gives as much information as they can | 49 |
| Relevant information given/participant cooperates & is confident in her answers | 10 | Participant does not have useful information/is confused/inaccurate | 13 |
| Answers influenced by the interviewer. More focused questions needed to obtain relevant information | 9 | Participant is unreliable/suspicious/has own agenda | 6 |
| Participants seemed to have a strategy to withhold some information | 7 | Participant may have more information but is unlikely to reveal it | 2 |
| Nervous/repetition/hesitation/lack of focus | 5 | Answers influenced by confederate | 2 |
| Answers influenced by confederate | 3 | - | - |

In addition, respondents referred to the impact that nervousness on the part of the interviewee had on responses, with 9% of respondents citing this as a reason for a second interview. In particular respondents highlighted a lack of focus or repetition from interviewees as a rationale for second interview. This is illustrated in the following quote:

> The interviewee hardly answered the questions, they were more like rambles and it was difficult to pinpoint when they actually answered the question. It would be good to hear back from them to see if anything has changed or their rambles were just a result of nerves. (Respondent 21 discussing Transcript Ten)

Respondents also considered the cooperativeness of the interviewee in deciding whether they should be invited for a second interview. Thirteen percent of respondents suggested that the interviewee had a strategy to withhold some information throughout the interview. For example, respondents suggested that participants varied their answers in response to the interviewer (*"They changed what they were saying a lot to make sure they were saying the right thing"* – Respondent 51 discussing Transcript Seven) or appeared to have scripted their responses (*"While the interviewee engages in conversation, she seems to be delivering a script or made up cover story"* – Respondent Nine discussing Transcript Ten). Respondents suggested that in these cases a second interview would be useful in highlighting inconsistencies in the interviewee's accounts:

> I think in certain areas they tried to give less information then there was in full. With the use of a second information the comparison between the answers in each case will reveal if anything was hidden due to inconsistencies (Respondent 40 discussing Transcript Five)

In contrast, 19% of respondents suggested that those participants who were both cooperative and confident in their answers should be re-interviewed in an attempt to glean additional information. For example, in discussing Transcript Seven one respondent highlighted that *"They [the participant] managed to give responses in good detail and seemed as though there were engaged in the interview. A second interview may provide more detailed responses"* (Respondent 20).

Responses also referred to the influence of both the interviewer and the confederate on participant responses (17% and 6% of responses respectively). In considering the influence of the interviewer, respondents emphasised the need for more focused questioning (*"I would ask them to come back as their answers were very vague and could be elaborated on, I would ask them back and try and ask simpler questions to*

*get basic clear answers from them"* – Respondent 37 discussing Transcript One).
Respondents also highlighted the need for more adherence to standard interview
guidelines (e.g. no interruptions). This suggests that the quality of interviewing was not
consistent between all interviewers and highlights the need for further training in future
research.

> The interviewee did answer the interviewer's questions however because the
> interviewer kept interrupting the interviewee, not enough rich and valuable
> information could be obtained. The interviewee appeared cooperative, offering a
> lot of information initially, however, upon being asked more questions/being
> interrupted, the interviewee began to provide less detail; thus by arranging a
> second interview whereby the interviewer allows the interviewee to answer the
> questions fully (rather than interrupting), the interviewer can ensure that the
> interviewee's answering the questions fully (Respondent One discussing
> Transcript Ten)

In considering the influence of the confederate, respondents referred to the
authority that the older student may have had over younger student participants
(*"interviewee was influenced by the more authoritative "2nd "year, and maybe was
primed to not recognise the person as a result"* – Respondent 22 discussing Transcript
Two). Respondents also suggested that where the participant had suspicions about the
role of the confederate that this may have influenced the information disclosed: *"S/he
had prior suspicions about Sally and it seems like this may have influenced the amount
if information that they were willing to disclose"* (Respondent 47 discussing Transcript
Six).

The remaining 57% of respondents chose not to invite interviewees for a second
interview (*n* = 77; 72 of whom gave reasons for their decision). Over two-thirds of
respondents (68%) suggested that there was no need for a second interview because the
participant had already provided as much information as possible. In explaining this
decision respondents referred in particular to the openness of participants (*"There
probably isn't much additional information to get - this interviewee was very open and
offered information unprompted"* – Respondent 38 discussing Transcript 12).
Respondents also suggested that providing additional insights was a cue that the
interviewee had provided all the information they could: *"I believe that this person
provided a good amount of information and personal insight. They were also quite
thorough in answering the questions and proceeded to provide additional information*

*and a good level of insight from their own background"* (Respondent 41 discussing Transcript 11).

Respondents also felt that participants should not be invited for a second interview where they believed the interviewee did not have further information to contribute. For example, 18% of respondents suggested that interviewees may not hold additional information (*"The interviewee didn't give a lot of information away, but it also seemed like that the interviewee didn't know what else to say"* – Respondent Three discussing Transcript Seven) or may be unclear on the events in question (*"I don't think that this person has the capacity to provide any further information. It sounds as though they themselves are fairly uncertain"* – Respondent 41 discussing Transcript Eight). In cases where the interviewee is confused, respondents highlighted that a second interview may in fact lead to inaccuracies. This is illustrated below:

> It seemed to me that all of the relevant and/or important information was divulged by the participant, and so doesn't need to be interviewed further. Furthermore, it seemed that some details weren't completely accurate, but further questioning may leave to further inaccuracies due to nerves (as shown by the repetitive "'erms'") (Respondent 25 discussing Transcript One)

A small percentage of respondents (3%) suggested that the participant may have been influenced by the confederate and as such that the confederate would be a more appropriate potential interviewee (*"I don't think this interviewee necessarily was acting by himself. I think he was led by the other interviewer: the second-year girl. So I think she should be interviewed"* – Respondent 16 discussing Transcript Two).

Respondents also suggested that participants may have less innocent motives for withholding information. Eight percent of respondents suggested that participants were disinterested (*"Because either participant is unlikely to give more information in the second interview due to his disinterest during the first set of questions"* – Respondent Seven discussing Transcript Four) or otherwise had their own agenda (*"Seems more open to talking about the experiment however it seemed more scripted than before as they were almost interviewing the interviewer as to the inside information on the experiment"* – Respondent 40 discussing Transcript Four). A small percentage (3%) of respondents also suggested that participants may be deliberately withholding information. This may be as a result of not wanting to engage with the interview process (*"Interviewee doesn't appear to want to answer the questions with any detail and therefore a reliable account doesn't seem easy to gain. A second interview may still be*

*worthwhile"* – Respondent 40 discussing Transcript Nine) or as a result of the lack of realism inherent in a laboratory study:

> The interviewee thought it was a psychology experiment, so they probably didn't take much interest. If we were to interview this interviewee again, I don't think we'd get any useful information, though the way they bluntly said 'no' when asked if there was anything else, it did make it suspicious that they may be withholding information. But this interviewee will probably find the repetition of another interview, troublesome. (Respondent Three discussing Transcript Four)

Overall, the responses above demonstrate that respondents believed interviewees to be more cooperative and engaged with the interview process than objective ratings of information disclosed would suggest. Although just two of the participants in Study 4 revealed any suspicions about the behaviour of their partner (the confederate), respondents in Study 4b generally rated the interviewees as cooperative. In particular, respondents suggested that interviewees answered the questions put to them, focused on relevant information, and introduced new information throughout their discussions. These findings suggest that reluctant witnesses may on occasion appear cooperative, without revealing critical information. Furthermore, naïve observers may have difficulty in recognising those witnesses who provide this kind of surface-level cooperation.

It is important to note at this stage that the definition of reluctance implied within the preceding chapters is not entirely compatible with the official definition initially provided in Chapter 5. The official Achieving Best Evidence guidance defines a reluctant witness as one who is "…reluctant to become involved in the investigative process" (Ministry of Justice, 2011, pp. 45). This is a narrow definition which implies a dichotomy between those witnesses who will cooperate and those who will not. While this represents an important first step in recognising differences between witnesses, a more nuanced, flexible definition is required if official definitions are to reflect police practice. For example, the findings discussed in Chapter 6 suggest that reluctance is likely to be experienced as a continuum rather than a dichotomy. In particular, officer responses suggest that witnesses may be reluctant to become involved in different aspects of the CJS. For example, the biggest challenge officers face in encounters with reluctant witnesses was rated as gaining evidence from those witnesses who have provided intelligence (or information "off the record". See Chapter 6 for further discussion of this). The studies outlined in the preceding chapters adopt this more

nuanced, flexible definition of reluctance in a bid to explore practical solutions addressing reluctance as experienced by police practitioners.

Overall, Study 4a provides evidence that the low rates of disclosure demonstrated within Study 4 are somewhat contrary to expectations. Within Study 4a participants were asked to speculate at a number of points how they would behave in a guilty knowledge scenario (the outline of this scenario approximately mirrored that of Study 4). When asked to consider how likely they would be to disclose that their partner cheated on the memory task on average respondents suggested there would be a 50% chance of their revealing this information, with this figure rising to 80% should the disclosure be made away from their partner (the confederate). This demonstrates that (i) the low levels of disclosure ran contrary to the expectations of a similar sample, and (ii) individuals tend to underestimate the likelihood of their behaving in a manner which could cause personal inconvenience. Following this, Study 4b explores how accurate individuals are in identifying reluctant witnesses during the interview process. The responses above demonstrate that respondents believed interviewees to be more cooperative and engaged with the interview process than objective ratings of information disclosed would suggest. Although just two of the participants in Study 4 revealed any suspicions about the behaviour of their partner (the confederate), respondents in Study 4b generally rated the interviewees as cooperative. In particular, respondents suggested that interviewees answered the questions put to them, focused on relevant information, and introduced new information throughout their discussions. These findings suggest that reluctant witnesses may on occasion appear cooperative, without revealing critical information. Furthermore, naïve observers may have difficulty in recognising those witnesses who provide this kind of surface-level cooperation. The general discussion (Chapter 12) that follows draws together the findings of the three studies presented in Chapters 10 and 11 and presents some "lessons learned" from the use of a complex guilty knowledge paradigm in the context of reluctant witnesses.

**Chapter 12: Discussion & PhD Outcomes**

The preceding body of research addressed two key challenges faced by investigative interviewers: (i) the elicitation of full, detailed, reliable accounts from witnesses, and (ii) increasing the cooperation of reluctant witnesses. Together, these represent two current and pressing issues routinely faced by frontline police officers. The primary aim throughout this body of research has been to address these challenges by proposing solutions which are (i) derived from psychological theory and empirical research, and (ii) that can be integrated into current best-practice models. The discussion that follows assesses the contribution of this programme of research to meeting these aims, outlines key findings and advances in knowledge as a result of this work, and suggests directions for future research.

### 1: Eliciting Complete Accounts from Witnesses Using Self-Generated Cues

The first challenge identified was that of obtaining a complete and accurate account of events from cooperative witnesses. The aim of the first strand of research presented was therefore to develop and empirically test a theoretically derived, user-friendly, practical and effective mnemonic which can facilitate the recall of such accounts. As a first step towards this goal, **Chapter 3** presents an overview of key memory theory underpinning effective retrieval cues, and self-generated cues in particular. Memory theory suggests that effective retrieval cues can be reliably reproduced at recall, show a high-level of cue-target match, have strong, bidirectional associations (where the cue recalls the target and vice versa), and are distinctive (Bellezza & Hoyt, 1992; Tullis & Benjamin, 2015a; Watkins & Watkins, 1975). Throughout Chapter 3 I argue that these properties are particularly prominent in self (as opposed to other) generated cues. On the basis of this assumption (and the underpinning memory theory) I define a self-generated cue as one which contains details salient to the individual (including private, idiosyncratic details) and is actively generated by the individual themselves, which serves to facilitate more complete retrieval of a target memory, and as such represents the critical properties of the target memory. This definition marks the first contribution of the narrative review presented in Chapter 3. Providing a clear definition of self-generated cues as a distinct concept is beneficial in allowing researchers to further explore their effectiveness. For example, the definition I propose has since been cited in a recent opinion piece in Trends in Cognitive Sciences (2017 impact factor: 15.557) to distinguish between self-relevant (or self-referent) cues

and self-generated cues (Gutchess & Kensinger, 2018). Disentangling these two related but distinct concepts will facilitate the progress of research into the benefit of such cues.

Throughout Chapter 3 I also outline the theory underlying self-generated cues and speculate on how key principles of memory can contribute to our understanding of self-generated cues. First, spreading activation theory underpins the importance of strong, bidirectional associations between the cue and the target memory. Spreading activation theories view memory as a network of associated concepts and explains how the recall of one item can prompt the recall of further related items (Anderson, 1983a; Collins & Loftus, 1975). If this is the case, then allowing individuals to generate their own cues presents an opportunity to (i) focus recall attempts on clusters related to the target material and (ii) trigger activation from the point most relevant to the target material and so minimise the distance in the network between cue and target. Second, the encoding-specificity principle of memory argues that good quality retrieval cues have a high level of overlap between encoding and retrieval (Tulving & Thomson, 1973). This allows cues generated at encoding to be reproduced at retrieval reliably and consistently. In terms of self-generated cues, this means that it is possible for the individual to frame the recall attempt in a way that is compatible with their own encoding and so increase the chance of successful recall. Finally, the principle of cue distinctiveness suggests that effective retrieval cues are those with diagnostic value; good quality retrieval cues recall the target memory at the exclusion of other memories (Nairne, 2002). Here, the benefit of self-generated cues is to allow the individual to maximise cue distinctiveness by including specific idiosyncratic episodic details, rather than relying on general semantic or gist-based details often incorporated into cues for others (Hunt & Smith, 1996; Mäntylä, 1986).

Taken together, the principles of memory outlined above suggest that self-generated cues are likely to function as highly effective retrieval cues. Much of the research outlined in Chapter 3 supports this view. Self-generated cues have been shown to improve recall of wordlists (as in Mäntylä, 1986), number-consonant pairs (e.g. Derwinger et al., 2003), and paragraphs of text (Van Dam et al.,1987). The principle conclusion of Chapter 3 was therefore that self-generated cues represent an effective and viable mnemonic technique which can aid recall in a variety of settings. What was not clear on the basis of this review was (i) whether self-generated cue mnemonics

could be applied successfully in an eyewitness domain, and (ii) whether the effectiveness of self-generated cues differed with the technique used to elicit cues. For this reason, Chapter 4 empirically tested the effectiveness of three distinct means of cue generation in an investigative context.

The purpose of the research presented in **Chapter 4** was to compare three distinct self-generated cue mnemonic techniques identified from extant literature: a keyword grid, event-line, and concept map. Across two studies (Studies 1a and 1b) participants witnessed a live staged event involving a brief confrontation over a "lost" bag during the opening of an undergraduate lecture. After a short delay (4hrs or 24hrs) participants were asked to recall the details of the event in one of five recall conditions (three self-generated cue conditions [stated above] and two control conditions; other-generated cues and free recall alone). Overall, findings suggest that use of self-generated cue mnemonic techniques produce an increase in recall of correct information in comparison to control conditions. No increase in recall of incorrect details was shown. Post-hoc testing suggested that the difference in recall lay between an other-generated cue control condition and (i) the self-generated cue event-line and (ii) the self-generated cue concept map. It should however be noted (as outlined in Chapter 4) that the confidence intervals around the means for each condition showed a degree of overlap. This makes it difficult to meaningfully interpret differences in performance between the conditions. Future research will therefore continue to compare methods of cue generation in order to ascertain (i) the properties of an effective method of cue generation and (ii) how these properties can best be capture in a self-generated cue mnemonic technique. Nonetheless, the findings of the present research are broadly in-line with those of existing research and taken together these findings suggest the potential of self-generated cues to improve recall.

## 1.1: Key Considerations in the Application of Self-Generated Cues

The line of research presented in Chapter 4 is among the first to apply self-generated cue mnemonics to an eyewitness domain. In addition, little (if any) research has directly compared the efficacy of different cue generation techniques. In identifying cue generation techniques, it was particularly important to keep the end-user in mind. In other words, to be of practical value the self-generated cue mnemonics should easy to incorporate into an investigative setting. The techniques proposed are intuitive (in terms

of clear, accessible instructions) and effective (in terms of usability and retrieval benefits). In addition, self-generated cue mnemonics could be situated as an "add-on" component to complement existing Cognitive Interview techniques. Like the techniques included in the Cognitive Interview, self-generated cue mnemonics are in-line with established best practice, for example adopting a witness-led approach (Ministry of Justice, 2011).

However, self-generated cues offer a number of potential benefits beyond more complex techniques included in the Cognitive Interview. Although the Cognitive Interview represents the current gold standard for eliciting information from a cooperative witness (Memon et al., 2010), this approach is not appropriate for all witness encounters or all interviewing contexts (Fisher et al., 2011). In particular, the Cognitive Interview is not always practical for application on the frontline of policing due to the demands of the approach (in terms of training and implementation) and lack of flexibility (Brown et al., 2008; Kebbell et al., 1999). These concerns have become more pressing under conditions imposed by austerity. Here self-generated cue mnemonics may be particularly advantageous. Firstly, the proposed mnemonic techniques are relatively quick to implement (within Studies 1a & 1b participants were asked to spend no more than ten minutes generating their retrieval cues before moving on to give their full account). In addition, self-generated cue mnemonics offer a tailored, individual approach (i.e. one guided by the individual themselves) and so do not require complex training or regular practice to be used effectively (see for example Derwinger et al., 2005; Derwinger et al., 2003). This is particularly promising in terms of the potential of self-generated cues to be incorporated into police practice. At a time when cuts to police budgets and resources mean that training time is particularly scarce, there is a clear advantage to techniques which balance effectiveness with cost in terms of necessary training and resources.

## 1.2: Future Directions

In the discussion above I speculate about the contribution that self-generated cue techniques can make in practice, and in particular how self-generated cue mnemonics might (in some circumstances) offer an advantage over established best practice (e.g. aspects of the Cognitive Interview). This merits further investigation. For example, Mental Reinstatement of Context is often considered to be the most effective

component of the Cognitive Interview (Brown et al., 2008; Kebbell et al., 1999; Memon et al., 2010). Mental Reinstatement of Context describes the process of guiding the individual to reconstruct an internal representation of the physical context of an event by considering details of the target event (e.g. the layout of the scene, the weather, the people and objects that were nearby, etc.). It also considers the personal context of the event (e.g. thoughts, feelings, and reactions to the event (Geiselman et al., 1986). Despite the effectiveness of this technique (as demonstrated in numerous laboratory studies see for example Memon et al., 2010), officers find Mental Reinstatement of Context difficult to implement in the field (Brown et al., 2008; Kebbell et al., 1999). It is possible that the flexibility and simplicity of self-generated cues (in terms of clear, accessible instructions and overall usability) might offer a less demanding alternative which is more easily applied in practice. There is good reason to believe that self-generated cues may be at least as effective as Mental Reinstatement of Context. For example, it has been suggested that contextual cues are less effective than more distinct cues and as such that the benefit of contextual cues becomes apparent only when more effective cues are unavailable (Pansky et al., 2005; see Wheeler & Gabbert, 2017 for further discussion of this). Self-generated cues then may offer an advantage above context-based mnemonic techniques as a result of their increased cue distinctiveness. In light of this argument, it would be of interest to directly compare self-generated cue techniques to established context-based mnemonics such as Mental Reinstatement of Context in terms of the quality of the account obtained. This is the focus of an ongoing line of research.

The effectiveness of self-generated cues demonstrated (both within this thesis and in pre-existing research) has a potential applied benefit. Despite this, the underlying mechanisms remain unclear. While this does not diminish the applied value of the mnemonic techniques, a clear understanding of the mechanisms behind the effectiveness of self-generated cues would represent a theoretical advance. As such, future research will seek to rule out competing explanations for the success of self-generated cue mnemonics and in doing so will allow the refinement and improvement of the mnemonic techniques. For example, in Chapter 4, I argue that the increase in recall performance demonstrated with use of self-generated cue techniques could be the result of one of two factors: (i) the act of self-generating retrieval cues (the primary hypothesis) or (ii) the beneficial effect of repeated recall attempts (hypermnesia or

reminiscence; see for example Odinot et al., 2013). In disentangling these concepts future research will advance knowledge of the theory underpinning self-generated cues and provide direction for maximising the success of these techniques.

## 2: Increasing Cooperation of Reluctant Witnesses

Although self-generated cue mnemonics are a promising means of eliciting complete and reliable accounts from cooperative witnesses, many witnesses are categorised as uncooperative, or reluctant. For this reason, the second challenge addressed within this body of work is that of increasing cooperation of reluctant witnesses. This particular challenge was identified through a collaboration with two large UK-based metropolitan police forces. The aim of this strand of research was to (i) identify the concerns of investigating officers within such forces and (ii) to identify areas of current effective practice which could be improved with reference to psychological principles.

The first step towards this goal was to establish (i) what is known about witness reporting behaviour and (ii) identify factors believed to impact an individual's decision to cooperate with the police. **Chapter 5** therefore reviews existing literature on witness reporting behaviour and reluctant witnesses in particular. A reluctant witness is an individual believed to hold information about an offence (in part or in full) or events connected to an offence, but who is reluctant to engage with the investigative process (Ministry of Justice, 2011). Although limited research has focused specifically on reluctant witnesses, it has been established that not all witnesses or victims report crime (Audit Commission, 2003; Spencer & Stern, 2001). In particular, research has suggested that reporting rates are lower for more serious crimes (Spencer & Stern, 2001). This means that it is crucial to develop an understanding of factors underpinning reluctance to report crimes, and to explore psychological techniques which may help to alleviate this reluctance.

The research outlined in Chapter 5 highlights a number of factors thought to underpin witness reluctance. These include distrust in the police, whether based on experience or popular perceptions (ACPO, 2006), feelings that the incident is not worth reporting, too trivial, or not worth police time (Audit Commission, 2003; Spencer & Stern, 2001) and anxiety about the CJS (Spencer & Stern, 2001). Perhaps more common

are concerns related to the cost of involvement. It has been suggested that witnesses engage in a cost-benefit analysis when deciding whether or not to become involved in investigations (Asbury, 2011). This being the case it is unsurprising that factors related to perceptions of personal cost – for example fear of reprisals or concern over reputational damage (e.g. as a result of snitching) – can decrease cooperation (Clayman & Skinns, 2011; Papp et al., 2017). Despite giving an overall picture of the factors which can contribute to witness reluctance, the conclusion of Chapter 5 was that a clearer understanding of these factors was still required before specific evidence-based interventions can be developed. For example, very little is known about current practitioner experiences of reluctant witnesses; much of the existing research dates from the early 2000s (e.g. Spencer & Stern, 2001; Sparks & Spencer, 2002) and therefore does not account for changes in policing processes. Furthermore, the existing body of literature predominantly focuses on general cooperation with the police, rather than cooperation with specific requests. Given the prevalence of concerns around "snitching" and fear of reprisals (outlined in Chapter 5), it is possible that different factors may underpin witness willingness to provide information or evidence, particularly where it is possible to provide information anonymously or "off the record". These gaps in knowledge were the focus of Study 2 (presented in Chapters 6 & 7).

**Chapters 6 and 7** presented the findings of a detailed, research-led survey administered to experienced investigating officers in two large UK-based police forces. This survey was designed in consultation with senior investigating officers in specialist gun and gang crime units at each of these forces with a view to ensuring that research meets the demands of practice. The aims of this work were twofold; (i) to gain an understanding of the current nature and extent of the problem posed by reluctant witnesses and so to understand the operational challenges faced by frontline officers, and (ii) to explore current effective practice in these encounters. In doing so, the ultimate aim of the research was to identify opportunities for innovative experimental psychological research to contribute to this ongoing operational challenge.

The survey itself contained four key sections; (i) demographic details; (ii) reluctant witnesses (perceived frequency of these encounters and the challenges presented); (iii) effective practice (perceived effective techniques for gaining intelligence, evidence, and building rapport with reluctant witnesses); and (iv)

intelligence versus evidence (the percentage of reluctant witnesses that can be persuaded to give information or evidence, and perceptions of factors that may affect these decisions). Respondents were 47 practitioners (those likely to encounter reluctant witnesses in their daily roles were particularly encouraged to respond). Over half (55%) were secondary investigators (in contrast 33% were first contact officers) and approximately 72% had completed training beyond basic interview training. In other words, respondents were predominantly skilled investigators competent in conducting core or specialist investigative duties (e.g. in cases of serious and complex investigations or conducting specialist interviews with victims, witnesses, or suspects).

The findings of this survey presented in Chapter 6 make an important practical contribution by increasing current knowledge of witness reporting behaviours and the challenges presented by reluctant witnesses in particular. Firstly, this line of research established that the perceived prevalence of encounters with reluctant witnesses remains high (estimated to be around 50% on average). Secondly, while there does not seem to be a single underlying cause of reluctance, the findings of Study 2 suggest a number of risk factors. Reluctance is likely to increase where (i) the crime witnessed was violent or gang-related, (ii) there are concerns of "snitching" or fear of repercussions, (iii) there is peer or familial pressure to withhold information, and (iv) there is a lack of trust or confidence in the investigative team or wider CJS. Thirdly, the findings of the survey identify the key problems presented by reluctant witnesses. For example, obtaining formal evidence from witnesses who were prepared to provide information "off the record" was a particular concern where reluctant witnesses are involved. Taken together, these findings provide an insight into the nature and scale of the problem presented by reluctant witnesses.

Chapter 7 then addresses effective practice in encounters with reluctant witnesses. Currently there is no well-established means of increasing the cooperation of reluctant witnesses. However, many respondents referenced the Engage and Explain stage of PEACE interviewing. For example, respondents referred to building rapport and building trust ("engage") and offering honest explanations of the importance of witnesses to the CJS, what is required of the witness at each investigative stage, and the anticipated outcomes ("explain"). In other words, many of the techniques highlighted by respondents focus on establishing a positive interpersonal interaction as a means of

facilitating cooperation and disclosure. This focus is in-line with the view of experts within the field of investigative interviewing who have recently begun to discuss the role of rapport, trust, and persuasion in securing cooperation and increasing disclosure (see for example Meissner et al., 2017).

Overall, the findings of Study 2 suggest that investigating officers are able to obtain a degree of information from reluctant witnesses but that increasing the *level of cooperation* is a more pressing concern than *securing initial compliance* with a request. In other words, it is the conversion of information (whether given confidentially or anonymously) into evidence (in terms of a written statement or participation in an investigative interview) that is of most interest to practitioners. The priority therefore is to increase the level of cooperation by increasing disclosure from reluctant witnesses. The awareness of the priorities for investigative interviewers in the field (provided by Study 2) allows research to be developed which directly addresses these concerns. This was the primary aim of the next stage of this research.

The principle of "compliance without pressure" was proposed by Freedman and Fraser (1966) for use in situations where ethical, moral, or practical considerations mean that maximising compliance while minimising pressure is preferable. Over the next 50 years a considerable body of work developed, resulting in a number of influence techniques (see for example Cialdini, 2001a; Cialdini & Goldstein, 2004) applied across a number of different cultures (Cialdini et al., 1999; Petrova et al., 2007) and contexts including crisis negotiation (Guthrie, 2004; Giebels & Taylor, 2009), marketing, employment, charitable requests (Cialdini, 2001a; Cialdini, 2001b) and commitment to environmental change (Lokhorst et al., 2013). What this research had not yet addressed, was whether any of the techniques proposed to increase "compliance without pressure" might be incorporated into police practice, and in particular whether social influence can play a role in overcoming witness reluctance. This was the focus of Chapter 8.

**Chapter 8** presented a systematic review of the social influence literature. In this review I aimed to identify candidate techniques for inclusion in a series of empirical studies, which might be of practical value in eliciting information from reluctant witnesses. The intended application of these techniques (i.e. in an investigative context) necessitates a focus on identifying influence techniques which are (i) based on sound psychological principles of "compliance without pressure", (ii) are appropriate for

testing in a controlled laboratory environment, and (iii) are appropriate for application in the context of policing. The focus of the review was therefore on those techniques which increased behavioural compliance in situations involving a costly request which (i) is action-based in nature, (ii) requires a longer-term commitment, and (iii) represents a cost of compliance outweighed by any potential benefit. This stringent inclusion criteria left a total of 40 articles (55 studies) included in the review. In applying these criteria this review makes a positive contribution to the research literature. While a small number of studies have begun to include social influence manipulations in information elicitation contexts (e.g. Dawson, Hartwig, Brimbal, & Denisenkov, 2017; Dawson et al., 2015; Evans et al., 2013; Matsumoto & Hwang, 2018; Meissner et al., 2017; Weiher et al., 2018), this review is (to the best of my knowledge) the first to systematically consider the appropriateness of a number of existing social influence techniques for use in an information elicitation context. The results of the systematic review suggest that sequential requests, and in particular foot-in-the-door and door-in-the-face requests, have a considerable body of evidence behind them which demonstrate a small but stable positive effect on compliance and as such might be of practical value in a policing context. The next logical step was therefore to test these techniques in an empirical study.

Two empirical studies were then conducted to test the premise that sequential requests can increase the cooperation and disclosure of reluctant witnesses. These studies assessed the effect of foot-in-the-door and door-in-the-face requests on (i) reluctant witness compliance with a request for information and (ii) the level of disclosure obtained from as a result. The first of these (Study 3, **Chapter 9**) explored this in an online information elicitation context. Participants viewed a short violence mock-crime video and were then asked to imagine that they held a particular attitude towards helping the police (cooperative, reluctant). Participants also took part in a social distance mentalizing task to manipulate perceptions of social distance between the participant and those involved in the event (close relationship, distant acquaintance), before being asked to give an online statement about the event. This request was made in one of three ways: a foot-in-the-door request (asked to confirm witnessed the event, then asked for a statement), a door-in-the-face request (asked to take part in a two-hour interview, then asked for a statement), or the target request only (asked for a statement).

Results suggest an approximately 10% increase in compliance with the target request (to give a statement) when foot-in-the-door requests are used and a 10% decrease in compliance when door-in-the-face requests are used (in comparison to the target request only. Note, only the difference between foot-in-the-door and door-in-the-face was significant). Study 3 also demonstrated a significant interaction between cooperativeness and social distance; less critical items were reported by "reluctant" participants where the participant imagined themselves as an acquaintance of those involved (rather than a friend). Despite the differences in the number of critical items disclosed, the overall length of the free recall account did not differ between the conditions.

Taken together, these findings suggest the potential of foot-in-the-door requests in increasing compliance with request for information. This is promising given that use of a foot-in-the-door approach seemingly fits with existing practice. For example, officers may rely on an escalating commitment style of approach in trying to encourage witnesses to assist with investigations. Furthermore, the development of a novel paradigm for creating reluctance in otherwise cooperative research participants is of particular note. Pre-existing paradigms very often focus on the cooperative witness (e.g. a standard eyewitness paradigm) or the uncooperative suspect (e.g. paradigms designed to elicit a true or false confession). Neither of these directly captures the predicament experienced by the *reluctant witness*. The simplicity of the reluctant/cooperative instructions developed within Study 3 represents a significant advance in our ability to study the effect of reluctance on information disclosure in controlled laboratory settings.

Study 4 (**Chapter 10**) sought to extend the pattern of results shown in Study 3 in a face-to-face setting. Within this study a guilty knowledge paradigm (Evans et al., 2013) was adapted in an attempt to create a more naturalistic feeling of reluctance among participants. Participant-confederate pairs took part in a short affiliation building task. Following this, the confederate cheated during a memory task by taking a photo of the suspects in a mock-crime video. This created a situation where the participant held "guilty knowledge". Participants were separated from the confederate and interviewed about the nature of the cheating using an adapted Structured Interview Protocol combined with a social influence technique. This led to three request conditions: foot-in-the-door (a request for information "off the record" then a request for an immediate

formal interview), door-in-the-face (a request for an interview with a senior member of staff at an inconvenient time, then a request for an immediate formal interview) no social influence (a request for an immediate formal interview only).

Four key measures of compliance were taken: (i) agreement with the request for an interview, (ii) confirming that data provided are valid and useable, (iii) writing a short (one sentence) statement to confirm that information given throughout the interview was accurate, and (iv) signing the statement. Compliance rates with these requests were at approximately 100% (the actual figures varied with some slight procedural differences). Despite this just one participant (8%) mentioned the confederate's cheating to the experimenter. This extremely low level of disclosure is considerably lower than that suggested by previous research (e.g. Evans et al., 2013) and provided very little opportunity to assess the effectiveness of the social influence techniques proposed. For this reason, **Chapter 11** presented two further studies exploring potential reasons for this pattern of results. Study 4a presented participants with a hypothetical guilty knowledge scenario (similar to that of Study 4). Participants estimated (at a number of key stages) the likelihood of their revealing guilty knowledge. Median estimates ranged from 30% to 80% depending upon the specifics of the situation (estimates were lower when participants were asked to consider revealing their guilty knowledge in front of their partner). In each case estimates were considerably higher than actual behaviour in Study 4, suggesting that individuals are unable to reliably predict behaviour in such situations. Study 4b then explored how accurate individuals are in identifying reluctant witnesses. Respondents read three transcripts (of participant interviews from Study 4) and rated the cooperativeness of the interviewee in each case using the scales from Observing Rapport-Based Interpersonal Techniques (ORBIT; Alison et al., 2012). Overall ratings of interviewee cooperativeness were around point 5 or 6 on this seven-point Likert scale, indicating that respondents generally felt interviewees (i) answered the interviewer's questions, (ii) introduced new information, and (iii) focused on relevant information. This suggests an over-estimation of cooperation and engagement, supported by the results of qualitative analyses Taken together, these findings suggest that reluctant witnesses may appear cooperative, without revealing critical information, particularly in cases where they are complicit in the wrongdoing, and that naïve observers may have difficulty in recognising those witnesses who provide this kind of surface-level cooperation.

## 2.1: Understanding Low Disclosure Rates

It is important to consider why the levels of disclosure shown in Study 4 are so different to those demonstrated by previous research. The low level of disclosure about the confederate's "cheating" is surprising, even when accounting for the possibility that the participant considered themselves complicit in this behaviour. For example, a recent meta-analysis suggested that false confession rates are generally around 47% (Stewart et al., 2018). This often increases when the confession is secondary (concerning the behaviour of another participant) rather than primary (concerning the individual's own behaviour). For example, using a "forbidden key" task Swanner and colleagues (2010) demonstrated that 65% of participants were willing to sign a statement providing a secondary confession, even in the absence of supporting evidence or incentives to do so. In forbidden key tasks doubt over whether the accused participant had behaved in the manner described is likely to increase confession rates, particularly where the confession is a secondary one (Swanner et al., 2010). This doubt was unlikely to exist in Study 4, as participant-confederate pairs were explicitly instructed take no notes and so the cheating represented a clear violation of the rules. However, when it is considered that over a quarter of the participants in Swanner et al.'s (2010) study were prepared to give a primary confession and so take responsibility for an action that they had not (or at least were not certain they had) committed, the low rate of disclosure in the present study (8%) is particularly striking.

One possible explanation for this difference is the relatively high proportion of participants in Study 4 who could be considered complicit in the cheating. Thirty-eight percent of the participants engaged in either the photo-taking or the use of the confederate's photos on the lineup task[14]. This means that for just over a third of participants the guilty knowledge concerned their own behaviour alongside that of the confederate. In effect, these participants were in a position to provide information about their own guilt. This naturally emerging guilt-innocence dichotomy is a strength of social cheating paradigms (such as the "guilty knowledge" paradigm), which allow participants the opportunity to choose whether or not to commit a transgression, while all being treated equally at the accusation or interview stage (Stewart et al., 2018). Of

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[14] Often the participants who engaged with one aspect of the cheating (e.g. the photo-taking) also engaged with the second aspect (e.g. using the photos taken on the lineup task). This suggests that complying with one aspect of cheating increases the likelihood of engaging with further acts.

the 38% of participants who were directly involved in the cheating, none revealed any information about this during the interview stage. Again, this is somewhat unexpected based on previous research. For example, in their social cheating paradigm (in which a confederate leads a participant into cheating on a task by requesting help on a section of a study required to be completed alone), Russano and colleagues (2005) found that 46% of participants gave a true confession in response to a direct accusation of cheating. This being the case, it is possible that a direct accusation is needed to drive admissions, rather than the more indirect approach seen in Study 4.

While the extremely low rate of full admissions in Study 4 is surprising in itself, the absence of varying degrees of disclosure is perhaps even more so. Evans and colleagues (2013) used a guilty knowledge paradigm (adapted for use within Study 4) involving an elaborate act of cheating. Doing so allowed information gain to be considered as an outcome variable. Participant-confederate pairs were asked to leave belongings in a main area before entering a small room to take part in a general knowledge quiz as a pair. Pairs were told that they should not use any other resources in answering the questions. During this study the confederate (i) revealed a "cheat sheet" ostensibly provided by a friend who had already completed the study, (ii) used a mobile phone to call the friend and obtain two further answers, and (iii) copied down additional questions on the cheat sheet for another friend due to complete the study the following week. Disclosure rates varied for each of these items (e.g. 78% of participants admitted to the presence of the cheat sheet, but just 8% admitted that the confederate copied down questions for someone else). In addition, Evans et al. (2013) compared the number of critical items revealed. On average "guilty" participants (who were complicit in cheating carried out by a partner, as in Study 4) revealed 4.94 relevant details of a possible 15. This nuanced approach merits further consideration in future research.

Within Study 4 92% of participants revealed nothing of investigatory value to the interviewer. In contrast just 16% of participants made no admissions within Evans et al.'s (2013) study. This disparity is particularly surprising when the penalty for cheating introduced in each of the studies is considered. While both hinted at potential consequences from an authority figure (a professor in charge of the study), a more direct expression of suspicion (related to academic dishonesty) was made in the work of Evans et al. (2013). In contrast, the requests in Study 4 were framed in the context of understanding how the study were misinterpreted and a concern over data integrity.

While this potentially necessitated a meeting with the professor leading the study (presented as the PhD supervisor FG), there was no overt mention of any suspicion of cheating. It may be that more severe consequences are needed to encourage disclosure. While this may seem counterintuitive, research both in terms of witness reporting (as discussed in Chapters 5 & 6) and whistleblowing domains (e.g. Cassematis & Wortley, 2013) has highlighted that the decision to disclose information is often the result of a cost-benefit analysis. The perceived seriousness of the offence is a key component of this assessment, often in conjunction with perceptions of personal risk (see Cassematis & Wortley, 2013 for some discussion of this). In the case of the present study, the low level of personal risk which might encourage reporting was potentially outweighed by the low level of perceived seriousness of the cheating. Despite this, within Study 4 no participants revealed information about the cheating at the first opportunity (when asked if everything had gone okay with the video). This suggests that the experimental script was sufficient to cause some reluctance to disclose guilty knowledge, even among those who would later overcome this reluctance.

The balance between ethical considerations and perceived severity of consequences is problematic within research in this domain and can serve to limit the realism of such research (Stewart et al., 2018). For example, it would be considered unethical to cause participants undue stress by including a severe threat of consequences – whether for revealing or concealing information. The low level of perceived risk to the participant and the low perceived seriousness of the offence within Study 4 were thus considered necessary. However, the pattern of results shown demonstrate a need to ensure that the perceived consequences are sufficiently severe to both mirror real world situations and provide a need to disclose guilty knowledge. It is worth noting that some participants did demonstrate a desire to explain their lack of disclosure during the debrief stage. This could be interpreted as indicative of moral or ethical stress, or a conflict between the values of the participant and their perception of the ethics of the situation engineered by the confederate (see Cialdini, 2016 for some discussion of this), and suggests that for at least some of the participants the decision to withhold information was not one they took lightly. However, only a minority of participants expressed this discomfort, despite repeated prompts from the experimenter to consider the integrity of the data they were providing.

**2.2: Key Considerations in the Application of Social Influence Techniques**

Taken together Chapters 8, 9, and 10 demonstrate both the potential ease of application of social influence techniques in investigative contexts and offer empirical support (from my own research and that of others) for the use of social influence techniques as a means of increasing cooperation of reluctant witnesses. However, alongside considering the effectiveness of such an approach, it is important to question the appropriateness of any technique which subtly (or even covertly) influences individual decision-making and behaviour. There are two key issues to consider here; the long-term impact of such an approach and the ethics of social influence techniques.

The ***long-term impact*** of social influence techniques is of interest for two reasons. Firstly, in terms of whether social influence effects would continue to increase willingness to report over a longer-term period of time. There is reason to believe this might be the case. Previous research has demonstrated that relatively simple social influence manipulations can have a longer-term impact. For example, priming participants with an American flag when declaring voting intentions increased Republican voting intentions (along with other measures of political beliefs and attitudes) and in some instances these effects lasted up to eight months after exposure to the prime (Carter, Ferguson, & Hassin, 2011. See also Cialdini, 2016). That this long-lasting effect has been demonstrated in the context of voting suggests a need for caution when applying social influence techniques in a policing context.

It is possible that social influence techniques will lead to positive long-term outcomes. It is relatively well established that individuals prefer to behave in a manner consistent with their attitudes, values and previous behaviour, and this preference for consistency is particularly pronounced in individualistic cultures (e.g. Cialdini et al., 1999; Cialdini 2001a; Petrova et al., 2007). In the context of reluctant witnesses, this might suggest that if a reluctant witness can be persuaded into cooperating on one occasion then this might continue throughout the current investigation (e.g. give a statement, give an interview, provide evidence in court) or in future situations (e.g. the witness provided information in Situation A, therefore their preference for consistency might lead them to provide information in Situation B). Within the line of research presented in Chapter 9, foot-in-the-door requests were shown to increase initial compliance in comparison to door-in-the-face requests. The hope therefore is that this

request format might then increase further cooperation. This may be in part because of the principles underpinning foot-in-the-door requests, primarily that of commitment and consistency (Cialdini, 2001a). This preference for consistency (and long-term foot-in-the-door approach) has been demonstrated in high-stakes contexts, for example in eliciting compliance from prisoners of war (Coughran, 2007 cited in Goodman-Delahunty & Howes, 2016).

However, it is also important to consider the potential for unintended negative consequences. Social influence is generally accepted in marketing and business contexts, with the assumption that this is partially self-policing. For example, Cialdini (2016) argues that unethical use of persuasion is not an effective business strategy in the long-term. However, while persuasive techniques are accepted (or at least expected) in marketing contexts, the public might have a different attitude towards the use of social influence by official bodies like the police. This is as yet unexplored. Anecdotal evidence from teenagers and young adults suggests that a wide variety of viewpoints should be expected in response to such a question. It is likely that the use of persuasive techniques in an investigative setting would be seen on a continuum, with the acceptability of the approach varying with a number of contextual factors. However, this is something which future research should seek to address more formally in future. In particular, future research should address the impact of persuasive techniques on institutional trust (or procedural justice and police legitimacy). For example, what would be the impact on trust for (i) the individual interviewer and (ii) the institution the interviewer represents (e.g. the particular police force or the police in general) if the target of an influence attempt become aware of this attempt? Future research should also address whether these views would differ with the *type* of influence technique. For example, while false disclosure of "pseudo-rapport" is often viewed unfavourably (as a lie or disingenuous interaction) if discovered (Abbe & Brandon, 2013; Meissner et al., 2017), anecdotal evidence suggests that sequential requests may not be viewed with the same manner.

It is also important to consider the ***ethics of social influence***, in general and in the context of information elicitation in particular. The more powerful the influence technique, the more important it becomes to question whether it is ethical (Cialdini, 1999). Cialdini (1999) argues that principles of influence work for the agent of

influence (the influencers) because they also benefit the targets of influence (those being influenced). The underlying logic of this is that susceptibility to principles of influence is generally adaptive; for example, following suggestions of authority figures, or those we have a personal relationship with usually repays reciprocal benefits. When used effectively persuasion can be two-sided, based upon trust, equality, and mutual respect, and can result in mutually satisfactory solutions (Gass & Seiter, 2013). Persuasive techniques in themselves can be viewed as ethically neutral (McCroskey, 1972, cited in Gass & Seiter, 2013). Instead the influence techniques (the means) takes on the moral character of the goal on the persuader (the ends; Gass & Seiter, 2013). Research has also suggested that the ethical acceptability of some techniques might vary depending on the outcome. For example, Wong and Howard (2018) found that perceptions of the acceptability of door-in-the-face techniques in a negotiation context varied with two factors; (i) whether or not the influence strategy was detected, and (ii) whether or not the individual benefitted from the strategy. Taken together, these arguments suggest that the ethics of persuasive techniques is not a clear-cut issue.

However, social influence techniques can be used ethically, provided a number of conditions are met. Firstly, public and private organisations should be guided by the principle of transparency. Use of persuasive techniques (including those that covertly influence behaviour) should not be constrained or outlawed, providing the persuader would be happy to reveal both their methods and their motives to the general public (Thaler & Sunstein, 2009). Ethical influence attempts should also (i) treat the target of the attempt with respect, rather than as a means to an end, (ii) consider how any imbalance in power within the interaction might impact the ability of the target to freely decide upon their course of action (e.g. where the influencer is in a position of authority over the target, they should reiterate the freedom of the target to comply or otherwise), and (iii) provide the opportunity for the influence attempt to be a two-way process in which each party could influence the other (Gass & Seiter, 2013). Finally, deception should not be employed to artificially create a situation where influence is possible (Cialdini, 1999). In this sense, Cialdini (1999) suggests that those who seek to benefit from principles of influence strive to behave as sleuths, utilising only those principles which emerge naturally within the situation, and so using powerful principles of influence effectively and ethically. Where persuasive techniques are used unethically,

this is likely to be damaging in the long run (see Cialdini, 2016 for discussion of the consequences of this approach on business).

In considering the application of social influence techniques to an investigative context, it is important to consider the potential impact on the concept of policing by consent. The need for a fair trial necessitates that evidence from a witness is given freely, without pressure or influence from the prosecution (Spencer & Stern, 2001). Throughout the history of psychology and law there have been examples of persuasive tactics in interviews which clearly do not adhere to this guidance. For example, those techniques which form the Reid interrogation approach (building pseudo-rapport, minimisation, etc.) offer clear examples of exerting pressure on the interviewee and as such are widely considered to be unprofessional, unethical, and often illegal (Vallano et al., 2015; see also Memon, Vrij, & Bull, 2003). These tactics represent examples of psychological coercion, or information elicited by "brute force; prolonged isolation; deprivation of food or sleep; threats of harm or punishment; promises of immunity or leniency; or, barring exceptional circumstances, without notifying the suspect of his or her constitutional rights" (Kassin, 1997, pp.221, cited in Bartol & Bartol, 2015, pp.64). This definition clearly does not apply to the use of social influence.

In contrast, social influence in an investigative context has the power to benefit the target if used effectively. Research (both within the present thesis and the wider literature) suggests that in many cases the decision to cooperate or otherwise is a difficult one and one which must be made in a domain in which the witness is unlikely to have much experience. Social influence may ease the burden on the witness during this decision-making. For example, Thaler and Sunstein (2009) argue that nudges (or social influence techniques) are of greater benefit when the choice to be made is difficult, complex, or infrequent, or when the individual has limited opportunities for learning or quality feedback on their decisions. Furthermore, there are safeguards which can be put in place to ensure the witness remains happy with their decision. Thaler and Sunstein (2009) argue that people are particularly prone to making decisions they may later regret when (i) they make the relevant decisions infrequently, and therefore lack expertise, and (ii) are likely to be in a heightened emotional state. This essentially describes the situation in which many witnesses will find themselves when approached by investigating officers for information. Thaler and Sunstein (2009) suggest that it is

therefore important to allow an opportunity for an individual to reverse a decision they have already made (e.g. to reverse the decision to provide information). This also suggests a need to be wary of in regard to use of social influence techniques in the immediate aftermath of an incident. Overall, it seems that social influence techniques have the potential to benefit both the officer seeking information and the witness who might be struggling with the decision on whether or not to provide information. However, further research is needed to fully explore the potential ethical implications of this approach.

## 2.3: Future Directions

Overall, the research outlined above demonstrates the potential of social influence techniques in an investigative domain. Further research will confirm and extend this line of research. First, some of the findings presented throughout this line of research merit further investigation. For example, the difference in compliance shown in Study 3 between the control condition (target request only) and the foot-in-the-door condition was not significant, yet the reliability of this effect across a number of different studies (see Chapter 8) suggests a need for further research.

The finding that foot-in-the-door requests (which present a small initial request followed by a larger target request) are more effective than door-in-the-face requests (where the initial request is a large one, followed by a retreat to the target request) is promising in terms of the application of this technique. Witnesses often find themselves in a situation of escalating commitment (e.g. agreeing to speak to police, providing a statement, attending court, and so on). In addition, the findings of Study 2 highlight the potential suitability of foot-in-the-door requests for use in an information elicitation context. For example, among the responses obtained through Study 2 were the suggestions that (i) reluctant witnesses are more likely to provide information that they believe is already known to the police and (ii) that officers suggest "seizing the opportunity of taking a statement at the time, even if this leads to a shorter or less detailed statement than desirable" (Respondent 33, specialist gun and gang crime unit, ten years of experience). Both of these comments imply the presence of a small initial request (by confirming information already known or providing even a short statement) which can present a start point upon which officers can then aim to build compliance. The idea of escalating commitment by steadily increasing the level of compliance is

fundamental to the foot-in-the-door principle. That this naturally emerges in an investigative context suggests that foot-in-the-door requests could be relatively easily incorporated into police practice. As discussed throughout this thesis, ease of implementation and a low cost in terms of necessary training and resources is key to the successful application of techniques in frontline policing. This suggests that use of social influence techniques in investigative contexts merit further investigation (indeed presentation of this research at academic-practitioner conferences has garnered interest from practitioners in a diverse range of policing roles).

Research will then extend this line of research. For example, research will explore whether some forms of reluctance are best addressed by different social influence techniques. The research outlined in Chapters 5 and 6 suggests a number of reasons for reluctance (e.g. fear, lack of trust in the police, personal cost or reputational damage, disinterest, and so on). It is likely that different social influence techniques will be more or less effective depending upon the reason for the underlying reluctance. For example, the escalating commitment approach of foot-in-the-door techniques may mean that this approach is particularly useful where the scale of the commitment is a concern. In contrast, Meissner et al. (2017) highlight the potential of affirmation-based techniques in overcoming identity concerns. Such techniques (e.g. affirming the individual's values, beliefs, and experiences where they are relevant to the self-concept) should be explored in the context of reluctance as a result of concern of reputational damage or becoming known as a "snitch". Relatively simple adaptations to the paradigms identified throughout this body of work (Study 3 and Study 4) would provide a basis for exploring these avenues of research.

Future research should explore the longer-term impact of use of social influence techniques on perceptions of the police and long-term willingness to report crime. For example, alongside the potential consequences discussed above, Meissner et al. (2017) suggest that some social influence techniques such as reciprocity have the potential to function as trust-building techniques ("reciprocity is at the heart of trust") and so increase trust and facilitate disclosure. Future research should address whether this approach serves to increase trust only in the *individual* officer or whether this technique can begin to overcome reluctance resulting from a lack of *institutional* trust (e.g. lack of trust in the police or low perceptions of police legitimacy and procedural justice).

The above line of research contributes to a body of literature demonstrating the effectiveness of guilty knowledge paradigms. This is a realistic paradigm which allows for varied levels of information disclosure via an elaborate transgression (as in Evans et al., 2013). The adaption of this paradigm incorporated in Study 4 allowed a natural guilt-innocence dichotomy to emerge among participants. Future research should explore how the patterns of disclosure among participants change when participants are not given the opportunity to participate in the cheating. For example, an individual performance (where a participant-confederate pair work separately in the same room) versus collaborative performance (as in Study 4) manipulation would allow the comparison of rates of disclosure where the participant works individually (and is merely a witness to the cheating) and those rates where collaborative performance is key (and so the participant is an accomplice to the cheating). Study 4a included questions about such a hypothetical scenario. The findings of Study 4a suggest an overall slight drop in disclosure where the participant is merely a witness. However, it is possible that these rates would increase in practice, particularly if the participant had not spent time getting to know the confederate (see Chapters 5 & 6 for discussion of how prior relationships influence disclosure).

It would be of interest to explore how reluctance to disclose key information changes where the interview itself is more challenging. Within Study 4, participants were presented with a series of five basic questions, which were broad enough to allow the appearance of cooperation while withholding all key information. No follow-up questions were asked. While offering insight into the general behaviour of reluctant witnesses, this is not representative of real-world investigations where follow-up questions are encouraged in order to gain additional detail and probe accounts (see for example the account, clarification, and challenge stage of PEACE interviewing.). Future research would benefit from varying the interview questions asked and including follow-up questions in order to explore how the difficulty of the interview impacts the decision to withhold or conceal information, particularly where the lack of disclosure is identified or directly challenged by the interviewer.

### 3: Conclusion

In conclusion, the body of work presented within this thesis proposes two evidence-based means of eliciting complete and accurate accounts of events from

witnesses. Firstly, the use of self-generated retrieval cues builds on principles of memory to provide an effective and easily implemented means of facilitating full, reliable, and detailed accounts from cooperative witnesses. Secondly, the use of sequential requests (particularly foot-in-the-door) to increase the cooperation of reluctant witnesses. This strand of work draws on principles of social influence to develop evidence-based means of inducing cooperation in an investigative context. Overall the programme of research presented throughout this thesis has addressed two live operational challenges faced by frontline officers and delivered empirically supported candidate techniques by which to overcome such challenges. Both techniques are theoretically informed, cost effective, and easily implemented with an evidence base supporting their effectiveness. Ongoing research seeks to confirm and extend the findings presented throughout, with a view to honing these approaches for use in practice.

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**Appendices**

The following are included in the appendices:

Appendix A: List of supplementary materials available on the Open Science Framework

Appendix B: Table A1. *Common features of encounters with reluctant witnesses: all categories*

Appendix C: Table A2. *Giving intelligence or evidence: Compelling factors (all categories)*

Appendix D: Table A3. *Giving intelligence or evidence: Preventing factors (all categories)*

Appendix E: Table A4. *Best practice techniques for eliciting intelligence and evidence: all categories*

Appendix F: Table A5. *Best practice techniques for building rapport: All categories*

Appendix G: Table A6. *Common features of witnesses giving evidence in court (key categories)*

Appendix H: *Figure A1*. Study 4, Lineup A

Appendix I: *Figure A2*. Study 4, Lineup B

Appendix J: *Figure A3*. Study 4, Lineup C

Appendix K: Study 4b Transcripts


Please note that all appendices and additional supplementary materials can also be found on the Open Science Framework using the following link: https://osf.io/bnjum/?view_only=8aca61a60ed5467cbfbf9c57ca3fee8d

**Appendix A**

The following appendices and additional supplementary materials can be viewed on the Open Science Framework using the following link:
https://osf.io/bnjum/?view_only=8aca61a60ed5467cbfbf9c57ca3fee8d

Study 1a & 1b instructions:

      Cue generation instructions – SGC keywords

      Cue generation instructions – SGC event-line

      Cue generation instructions – SGC concept map

      Control condition instructions – OGC keywords

      Control condition instructions – no cues

      Free recall instructions

Study 2:

      Reluctant witness survey

Social influence systematic review:

      Searchable database

Study 3:

      Video stimulus

      Social distance mentalizing task instructions

      PARH

      Witness statement instructions

      Coding framework

Study 4:

      Fast Friends adaptation

      Social Axioms Scale II

**Appendix B**

Table A1.

*Common features of encounters with reluctant and hostile witnesses (all responses)*

| Category and Subcategory | Reluctant Witness Encounters | |
| --- | --- | --- |
| | n | % |
| *Crime Type* | *N = 39* | *87%* |
| Gang crime | 19 | 49% |
| Violence | 18 | 46% |
| Gun crime | 11 | 28% |
| Murder | 7 | 18% |
| Knife crime | 6 | 15% |
| Domestic violence | 5 | 13% |
| Serious violence | 3 | 8% |
| Drugs | 2 | 5% |
| Crime handled by a specialist unit | 2 | 5% |
| All crime | 2 | 5% |
| Sexual crimes | 1 | 3% |
| Serious crime | 1 | 3% |
| Alcohol-fueled violence | - | - |
| *Individuals Involved* | *N = 16* | *36%* |
| Members of (or affiliated to) gangs or organized crime groups | 4 | 25% |
| Independent witnesses | 6 | 38% |
| Witness-suspect profile overlap | 2 | 13% |
| Youth witness or suspect | 2 | 13% |

|                                                                                  | Reluctant Witness Encounters | |
| --- | --- | --- |
| Category and Subcategory | n | % |
| Friends or family of hostile witnesses | 1 | 6% |
| Witness recognizes (or is known to) the victim or perpetrator | 1 | 6% |
| Avoiding police contact | 1 | 6% |
| Large number of witnesses to incident | 1 | 6% |
| Black community involved | 1 | 6% |
| Suspect is integral to witness' life | 1 | 6% |
| Witness or suspect is from a Christian home | 1 | 6% |
| Witness is a direct victim (or close associate of the victim) | - | - |
| Witness is a family member or close associate of the suspect | - | - |
| Witness has siblings in gangs or organized crime networks | - | - |
| Witness was involved in events surrounding the incident | - | - |
| Witness was approached as part of a Trace Interview Eliminate or alibi investigation | - | - |
| *Neighborhood* | *N = 11* | *24%* |
| Incident is witnessed close to home | 8 | 73% |
| Incident takes place in an area with high levels of gang crime and anti-social behavior | 1 | 9% |

| Category and Subcategory | Reluctant Witness Encounters | | |
|---|---|---|---|
| | n | % | |
| The crime is viewed as a local issue | 1 | 9% | |
| The crime takes place in public | 1 | 9% | |
| The witness lives in close proximity to the victim or suspect | 1 | 9% | |
| *Fear and Minimising Risk* | *N = 10* | *22%* | |
| Fear of repercussions | 8 | 80% | |
| Fear of being recognised | 1 | 10% | |
| Aware of negative reputations of those involved | 1 | 10% | |
| Fear outweighs desire for a conviction | 1 | 10% | |
| Intimidation is likely | 1 | 10% | |
| *Culture and Social Norms* | *N = 6* | *13%* | |
| Lack of interest in becoming involved | 2 | 33% | |
| Anti-snitching culture or code of non-cooperation | 2 | 33% | |
| Involvement hidden from parents | 1 | 17% | |
| Preference for unofficial 'restorative justice or retaliation | 1 | 17% | |
| Refusal to give information or evidence | - | - | |
| False information given | - | - | |
| Police dislike or distrust | - | - | |

|                                                         | Reluctant Witness Encounters | |
| ------------------------------------------------------- | --- | --- |
| Category and Subcategory                                | n   | %   |
| Loyalty to those involved outweighs desire to cooperate | -   | -   |
| Lack of cooperation regardless of what is offered by police | - | - |

*Note: Primary categories (and their associated n's and category percentages) are shown boldface and italicised. Subcategories (their associated n's and the percentage of category responses referring to each subcategory) are listed as body text.*

Table A2.

*Giving intelligence or evidence: Compelling factors (all responses)*

| Category and Subcategory | n | % |
|---|---|---|
| ***Justice or prosocial motives*** | ***N = 53*** | ***76%*** |
| Morals or desire to do the right thing | 16 | 30% |
| Sense of duty or personal responsibility | 9 | 17% |
| Desire to do something about the problem caused by suspects | 7 | 13% |
| Desire for justice | 7 | 13% |
| Depends upon crime type & seriousness | 5 | 9% |
| Offence was morally wrong or emotionally harmful | 3 | 6% |
| General desire to help | 3 | 6% |
| Desire to help police | 2 | 4% |
| Desire to help a friend | 1 | 2% |
| ***Interpersonal factors*** | ***N = 45*** | ***64%*** |
| *Event-related* | *31* | *69%* |
| Support (or pressure) from family & friends | 8 | 26% |
| Loyalty, concern or empathy to victim & family | 6 | 19% |
| Relationships between witness (or victim) & offender | 4 | 13% |
| Personally affected | 3 | 10% |
| Position in gang/group (e.g. seeking exit from gang culture) | 3 | 10% |
| Crime has affected a loved one | 2 | 6% |
| Witness' own position | 2 | 6% |
| Loyalty | 2 | 6% |
| Know people involved | 1 | 3% |
| *Investigation-Related* | *14* | *20%* |
| Support & reassurance from police | 4 | 29% |

| Category and Subcategory | n | % |
|---|---|---|
| Fear the police (and so respond to requests) | 3 | 21% |
| Assurance that will not need to go to court | 2 | 14% |
| Time to reflect & reach a decision | 2 | 14% |
| Consistent contact with investigative team | 1 | 7% |
| Rapport with investigator | 1 | 7% |
| Commitment from investigative team | 1 | 7% |
| *Personal gain* | *N = 18* | *26%* |
| Competition or retribution (e.g. eliminate rival gang members) | 5 | 28% |
| Personal gain (e.g. from prosecution of offender) | 4 | 22% |
| Improve own situation | 2 | 11% |
| 'Least bad' option personally | 2 | 11% |
| Money (e.g. from criminal injuries, reward, etc.) | 2 | 11% |
| 'Fresh start' through witness protection | 1 | 6% |
| Want to talk about what they saw | 1 | 6% |
| Desire for revenge | 1 | 6% |
| *Practical considerations* | *N = 16* | *23%* |
| Possibility of a summons or arrest warrant | 5 | 31% |
| How many people the witness thinks know the information | 2 | 13% |
| Perceptions of the strength of evidence | 2 | 13% |
| Only witness to events | 1 | 6% |
| Suspect unlikely to know who the witness is | 1 | 6% |
| Anonymity | 1 | 6% |
| Special measures provided | 1 | 6% |
| Witness is aware they have the ability to help with investigation | 1 | 6% |

| Category and Subcategory | n | % |
|---|---|---|
| Position has changed (e.g. others will not know they have given information) | 1 | 6% |
| Witness will make their own decision | 1 | 6% |
| *Emotion* | *N = 12* | *17%* |
| *Fear* | *8* | *67%* |
| Need to safeguard self & family | 3 | 38% |
| Generic fear | 2 | 25% |
| Fear of what the suspects will do next | 1 | 13% |
| Likelihood of repercussions | 1 | 13% |
| Feel safe in assisting police | 1 | 13% |
| *Other* | *4* | *6%* |
| Anger at suspects | 2 | 50% |
| Excitement | 1 | 25% |
| Disgust | 1 | 25% |
| *Procedural Justice & Police Legitimacy* | *N = 9* | *9%* |
| Confidence in and a positive relationship with police or criminal justice system | 3 | 33% |
| Fear the police (and so respond to requests) | 3 | 33% |
| Respect for the police (respond to requests) | 2 | 22% |
| Believe supporting police & criminal justice system will make a positive impact | 1 | 11% |
| *Understanding of Criminal Justice System* | *N = 6* | *9%* |
| Understand criminal justice process | 3 | 50% |
| Witness understands the importance of their evidence | 2 | 33% |
| Ignorance that they don't have to give evidence | 1 | 17% |

*Note: Primary categories (and their associated n's and category percentages) are shown boldface and italicised. Subcategories (their associated n's and the percentage of category responses referring to each subcategory) are listed as body text.*

**Appendix D**

Table A3.

*Giving intelligence or evidence: Preventing factors (all responses)*

| Category and Subcategory | n | % |
|---|---|---|
| **Emotion - Fear** | **N = 63** | **91%** |
| Fear of retribution, intimidation, or threats to self or family | 41 | 65% |
| Generic fear | 7 | 11% |
| Fear of attending court & giving evidence | 7 | 11% |
| Fear of facing offender in court | 3 | 5% |
| Fear of cross examination | 2 | 3% |
| Fear of public speaking | 1 | 2% |
| Fear of being investigated themselves | 1 | 2% |
| Fear of own issues coming out in court | 1 | 2% |
| **Procedural Justice & Police Legitimacy** | **N = 37** | **54%** |
| Mistrust or lack of confidence in police & criminal justice system (e.g. to manage information appropriately) | 15 | 41% |
| Previously experienced or aware of poor treatment of witness/victims by police or criminal justice system | 5 | 14% |
| Perception of police influenced by culture/social influence | 3 | 8% |
| Negative perception of or attitude towards the police | 3 | 8% |
| Relationship with the police | 2 | 5% |
| Lack of understanding of the process | 2 | 5% |
| Previous experience as a suspect | 1 | 3% |
| Believe suspect is likely to return to the neighborhood | 1 | 3% |
| Believe police cannot protect them | 1 | 3% |
| Disengaged from authority | 1 | 3% |
| Believe suspect will not receive any meaningful censure | 1 | 3% |

| Category and Subcategory | n | % |
| --- | --- | --- |
| Public swayed by media portrayal or police (particularly reporting on mistakes made) | 1 | 3% |
| Lack of understanding of safety measures | 1 | 3% |
| *Reputation* | *N = 18* | *26%* |
| Avoiding being known as a snitch/informant/becoming known for assisting police | 14 | 78% |
| Gang affiliation or membership (or 'street status') | 3 | 17% |
| Unwilling to risk being ostracized | 1 | 6% |
| *Personal cost* | *N = 14* | *20%* |
| Unwilling to give time required for court case | 4 | 29% |
| Longer term impact on own life too much | 4 | 29% |
| Avoiding press intrusion & harassment | 2 | 14% |
| Unwilling to incriminate self or family | 2 | 14% |
| Aware of the issues giving a statement could cause | 1 | 7% |
| Work/travel/family commitments preventing court attendance | 1 | 7% |
| *Disinterest* | *N = 14* | *20%* |
| Lack of interest in involvement (including 'not my problem') | 12 | 86% |
| Attitude of someone else will give information | 1 | 7% |
| Incident had no direct impact on own life/not personally affected | 1 | 7% |
| *Interpersonal factors* | *N = 14* | *20%* |
| *Event-related* | *8* | *57%* |
| Loyalty to or pressure from family & friends | 7 | 88% |
| Loyalty | 1 | 13% |
| *Investigation-Related* | *6* | *43%* |
| Lack of support | 2 | 33% |
| Approaching witness while in a group | 1 | 17% |

| Category and Subcategory | n | % |
|---|---|---|
| Lack of contact | 1 | 17% |
| Pestering from police | 1 | 17% |
| Poor approach to witnesses (e.g. rude/pestering) | 1 | 17% |
| *Ideas of Justice* | *N = 11* | *16%* |
| Anti-snitching culture | 4 | 36% |
| Different code of ethics | 3 | 27% |
| Want to deal with it alone/sort it out themselves/get revenge | 3 | 27% |
| Depends on crime seriousness | 1 | 9% |
| *Practical considerations* | *N = 1* | *1%* |
| Perceptions of the strength of evidence | 1 | 100% |

*Note: Primary categories (and their associated n's and category percentages) are shown boldface and italicised. Subcategories (their associated n's and the percentage of category responses referring to each subcategory) are listed as body text.*

**Appendix E**

Table A4.

*Best practice techniques for eliciting intelligence and evidence (all responses)*

| Category and Subcategory | Eliciting Intelligence | | Eliciting Evidence | |
|---|---|---|---|---|
| | n | % | n | % |
| ***Interpersonal Factors*** | ***N = 19*** | ***56%*** | ***N = 12*** | ***41%*** |
| Listen to, and allay concerns (offer reassurance) | 5 | 26% | **-** | **-** |
| Build trust | 4 | 21% | 1 | *8%* |
| Stress human side of the case & encourage empathy | 3 | 16% | 1 | *8%* |
| Non-corporate dress | 3 | 16% | 1 | *8%* |
| Build trust with & gain intelligence from those close to the witness | 3 | 16% | 1 | *8%* |
| Witness appropriate speech | 2 | 11% | - | - |
| No jargon | 2 | 11% | - | - |
| Build rapport over time | 2 | 11% | - | - |
| Appropriate dress (consider whether uniform will help or hinder) | 1 | 5% | **-** | **-** |
| Remove 'police' barriers | 1 | 5% | - | - |
| Don't force the decision (allow the witness time) | 1 | 5% | 1 | *8%* |
| Refer to appropriate support agencies | 1 | 5% | 1 | *8%* |
| Utilise officers who have built rapport/specific contact person | 1 | 5% | 1 | *8%* |
| Reassurance of confidentiality | 1 | 5% | - | - |
| Non-corporate speech | 1 | 5% | 1 | *8%* |
| Introduce conversation unrelated to the incident | 1 | 5% | **-** | **-** |
| Offer encouragement | 1 | 5% | - | - |
| Deliver on promises | - | - | 2 | 17% |

| Category and Subcategory | Eliciting Intelligence | | Eliciting Evidence | |
|---|---|---|---|---|
| | n | % | n | % |
| Continued contact & support | - | - | 1 | 8% |
| Warm communication | - | - | 1 | 8% |
| Sense of duty | - | - | 1 | 8% |
| Honesty | - | - | 1 | 8% |
| Limit repetition for the witness | - | - | 1 | 8% |
| Provide support. | - | - | 1 | 8% |
| Spend time with the witness | - | - | 1 | 8% |
| Personalise request | - | - | 1 | 8% |
| *Minimising risk* | *N = 17* | *50%* | *N = 17* | *59%* |
| Neutral interview environment | 6 | 35% | 1 | 6% |
| Witness protective measures | 4 | 24% | 8 | 47% |
| Court-based safety measures | 3 | 18% | 8 | 47% |
| Utilise support agencies | 3 | 18% | 1 | 6% |
| Sometimes intelligence is all that will be given | 2 | 12% | - | - |
| Limit peer influence | 1 | 6% | 1 | 6% |
| Phone interview | 1 | 6% | - | - |
| Flexiblity around the witness | 1 | 6% | 1 | 6% |
| Contact away from the scene | 1 | 6% | - | - |
| Relocation | 1 | 6% | 2 | 12% |
| Anonymity | 1 | 6% | 1 | 6% |
| Monitor risk around witness's family | 1 | 6% | - | - |
| Use intermediaries | 1 | 6% | - | - |
| Use witness contact officers or witness services | 1 | 6% | 1 | *6%* |
| Use an ABE interview | - | - | 1 | *6%* |

| Category and Subcategory | Eliciting Intelligence | | Eliciting Evidence | |
|---|---|---|---|---|
| | n | % | n | % |
| Gather evidence from witnesses in groups | - | - | 1 | 6% |
| Highlight the continuing risk | - | - | 1 | 6% |
| Be realistic about the court process | - | - | 1 | 6% |
| *Necessary explanations* | *N = 13* | *38%* | *N = 9* | *31%* |
| Criminal justice process & its importance | 4 | 31% | 2 | 22% |
| Importance of engagement | 3 | 23% | - | - |
| Importance of information | 3 | 23% | 2 | 22% |
| Intelligence & source handling procedures (including confidentiality) | 2 | 15% | - | - |
| Protective measures & special measures available | 2 | 15% | 4 | 44% |
| Intelligence vs. evidence | 2 | 15% | - | - |
| Possible positive outcomes | 1 | 8% | - | - |
| Importance of evidence | 1 | 8% | - | - |
| Process of providing evidence/the court process | 1 | 8% | 1 | 11% |
| Civic duty to assist | 1 | 8% | - | - |
| How information used | 1 | 8% | - | - |
| The type of crime & why it occurs | - | - | 1 | 11% |
| Highlight court-based safeguards | - | - | 1 | 11% |
| Be honest about outcomes | - | - | 1 | 11% |
| Be honest about timeframes | - | - | 1 | 11% |
| *Police role* | *N = 6* | *18%* | *-* | *-* |
| Establish what happened | 1 | 17% | - | - |
| Explain police role is to help | 1 | 17% | - | - |
| Research the interviewee's background | 1 | 17% | - | - |

| Category and Subcategory | Eliciting Intelligence | | Eliciting Evidence | |
|---|---|---|---|---|
| | n | % | n | % |
| Provide support | 1 | 17% | - | - |
| Support before, during & after trial | 1 | 17% | - | - |
| Give honest explanations | 1 | 17% | - | - |
| *Additional considerations* | *N = 4* | *12%* | *N = 8* | *28%* |
| Other issues affecting witness behavior | 1 | 25% | 1 | 13% |
| Depends upon the witness's opinion of the crime | 1 | 25% | - | - |
| Depends upon the witness-victim relationship | 1 | 25% | - | - |
| May only provide 'already known' information | 1 | 25% | - | - |
| Consider the witness's reasons for providing information (e.g. deflect police from their own role) | 1 | 25% | - | - |
| Corroboration from additional witnesses can ease pressure on witness | 1 | 25% | - | - |
| Court attendance is the issue | - | - | 2 | 25% |
| Law change essential around anonymity | - | - | 2 | 25% |
| Check understanding | - | - | 1 | 13% |
| Take a statement at the time | - | - | 1 | 13% |
| Administrative procedure is problematic | - | - | 1 | 13% |
| Protection schemes difficult when requiring a break from the community | - | - | 1 | 13% |

*Note: Primary categories (and their associated n's and category percentages) are shown boldface and italicised. Subcategories (their associated n's and the percentage of category responses referring to each subcategory) are listed as body text.*

**Appendix F**

Table A5.

*Best practice techniques for building rapport (all responses)*

| Category and Subcategory | n | % |
|---|---|---|
| ***Trust-Building & Approach-Based*** | *N = 20* | *59%* |
| Listen to the witness's concerns & reassure | 7 | 35% |
| Empathise | 5 | 25% |
| Build trust | 3 | 15% |
| Non-judgemental approach | 2 | 10% |
| Engage | 2 | 10% |
| Personalise the approach | 2 | 10% |
| Treat the witness as a human being | 1 | 5% |
| Talk about a trusted member of the community | 1 | 5% |
| Put the witness at ease | 1 | 5% |
| Befriend the witness | 1 | 5% |
| Create feeling of a two-way process | 1 | 5% |
| Patient & concerned approach | 1 | 5% |
| No pressure on the witness | 1 | 5% |
| ***Verbal Techniques*** | *N = 19* | *56%* |
| Discuss topics unrelated to the crime | 8 | 42% |
| Establish common ground | 5 | 26% |
| Witness-compatible language/appropriate style of speech | 5 | 26% |
| Identify witness interests | 3 | 16% |
| Show interest in the witness & their lives | 3 | 16% |
| Polite | 1 | 5% |
| Speak honestly | 1 | 5% |
| Be open to witness-led conversation | 1 | 5% |

| Category and Subcategory | n | % |
| --- | --- | --- |
| Non-corporate approach | 1 | 5% |
| *Non-Verbal & Demeanour-Based* | *N = 3* | *9%* |
| Non-corporate dress | 1 | 33% |
| Relaxed | 1 | 33% |
| Friendly | 2 | 67% |
| Calm | 1 | 33% |
| *Non-Rapport-Based Techniques* | | |
| *Does Not Fall Within Recognised Rapport Techniques* | *N = 10* | *29%* |
| No jargon | 3 | 30% |
| Open communication | 1 | 10% |
| Take verbal account, then statement | 1 | 10% |
| Open questions | 1 | 10% |
| No interruptions | 1 | 10% |
| Offer practical safety advice | 1 | 10% |
| Don't force own interpretation of the incident | 1 | 10% |
| Meet in advance of interview | 1 | 10% |
| Be honest about possibility of attending court | 1 | 10% |
| Be flexible around the witness | 1 | 10% |
| Consider the interview environment | 1 | 10% |
| Gain evidence through ABE | 1 | 10% |
| Disguise witness commitment - "we'll discuss/sort that out later" | 1 | 10% |
| Disagree with question premise. Rapport less important | 1 | 10% |
| Witness will assist when there is a personal benefit, not because of rapport | 1 | 10% |
| Encourage an open account | 1 | 10% |

| Category and Subcategory | n | % |
|---|---|---|
| *Unclassifiable* | *N = 7* | *21%* |
| Research & use previous knowledge of the interviewee | 2 | 29% |
| Rapport as an ongoing process | 2 | 29% |
| Slow build up | 1 | 14% |
| Rapport building from Tier 3 training | 1 | 14% |
| Consistency in officers dealing with the case | 1 | 14% |
| *Explain* | *N = 6* | *18%* |
| Realistic & honest about CJ process | 3 | 50% |
| Honest on what can be delivered | 2 | 33% |
| Explain special measures available | 2 | 33% |
| Explain intelligence vs. evidence | 1 | 17% |
| Explain ongoing police actions | 1 | 17% |

*Note: Primary categories (and their associated n's and category percentages) are shown boldface and italicised. Subcategories (their associated n's and the percentage of category responses referring to each subcategory) are listed as body text.*

**Appendix G**

Table A6.

*Common factors among witnesses giving evidence (all responses)*

| Category and Subcategory | n | % |
|---|---|---|
| *Interpersonal relationships & network* | *N = 13* | *42%* |
| Independent witness (no connections to those involved) | 5 | 38% |
| Supportive parents/stable family unit | 2 | 15% |
| Family difficulties | 1 | 8% |
| Depends upon relationship with victim | 1 | 8% |
| Vulnerable member of gang | 1 | 8% |
| Close relative affected (emotional commitment to justice) | 1 | 8% |
| Not involved in a gang | 1 | 8% |
| Criminal associations | 1 | 8% |
| Connected to (but disapproving of) criminally involved tend to be reluctant | 1 | 8% |
| *Personal factors* | *N = 10* | *32%* |
| Older (not school age) | 3 | 30% |
| Witnessed crime while at work | 1 | 10% |
| Able to be relocated | 1 | 10% |
| Have something to gain from having officers onside (or 'owe' officers) | 1 | 10% |
| Confident & unafraid of confrontation | 1 | 10% |
| Confident speaker | 1 | 10% |
| Younger witness | 1 | 10% |
| No previous experience of court | 1 | 10% |
| Previous positive experience of police or criminal justice system | 1 | 10% |
| Fear | 1 | 10% |

| Category and Subcategory | n | % |
|---|---|---|
| ***Prosocial behaviour*** | ***N = 10*** | ***32%*** |
| Strong sense of community & duty | 3 | 30% |
| Criminally involved (or anti-police) tend to be hostile | 3 | 30% |
| Engaged in society | 3 | 30% |
| Employed | 2 | 20% |
| Uninvolved in events surrounding incident | 1 | 10% |
| Looking to exit gang lifestyle | 1 | 10% |
| ***Other considerations*** | ***N = 7*** | ***23%*** |
| Individual decision | 2 | 29% |
| Full range of ages & backgrounds | 2 | 29% |
| Witness to a minor crime | 1 | 14% |
| Some Black or Minority Ethnic communities still show generic reluctance to get involved | 1 | 14% |
| Limited public understanding of criminal justice system as more than common sense | 1 | 14% |

*Note: Primary categories (and their associated n's and category percentages) are shown boldface and italicised. Subcategories (their associated n's and the percentage of category responses referring to each subcategory) are listed as body text.*
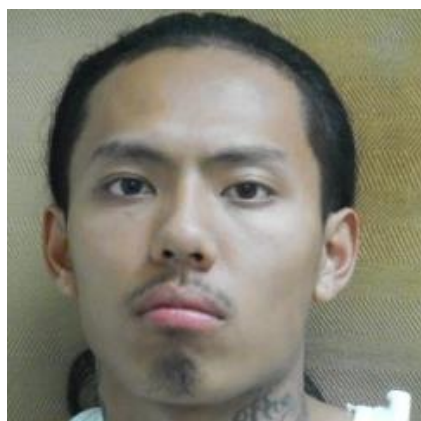
# Appendix H

*Figure A1*. Study 4, Lineup A.

*Figure A2*. Study 4, Lineup B.

**Appendix J**

*Figure A3*. Study 4, Lineup C.



1

2

3

4

5

6

**Appendix K**

**Transcript 1**

Question 1

*Interviewer: Can you tell me in as much detail as you can how you made the decision not to…*

Participant: what not to pick between…?

*I: Yes, not to make a choice*

P: Umm we made the decision together but we kind of erm talked about the features that we saw so if the men had you know facial hair erm I noticed that erm so things to do with like the lips so especially erm there were three guys so there...there was the two guys so I think it was between (gestures at photos) so we looked at things to do with the lips and they didn't quite match up if that makes sense erm but I was close in picking erm between these two (gestures) but something about them seemed a bit off but I dunno. I just yeah

*I: Okay so you were looking at individual features and…?*

P: Yeah erm

*I: and just some of the faces didn't?*

P: And the side profile wasn't up to much either and we didn't get to see the hair because erm one of the guys had a cap and it had writing on it and the other one just had like a pullover sort of hoodie thing and even looking at it like (gestures at photos) that just didn't and I don't know it just seemed a bit off erm

*I: Okay, so they were a bit indistinctive in the video?*

P:  Yeah and with the hair they had like different hair styles as well we just didn't quite think they would match or if they didn't have the hat

*I: Okay*

Question 2

*I: So you said you worked together but you sort of were looking at it individually as well so how did that work?*

P: Okay so erm maybe our answers could have influenced what we thought but erm we just sort of mana…we just sort of came up with erm an idea that it didn't they didn't have they weren't the guys in the video

*I: And did you always agree on that?*

P: Errm kind of. I think she thought one of the guys was number four but I didn't. Yeah

I didn't think it was and erm but what erm I thought it was one of the other guys so I think it was on the other sheet (gestures at photos) erm yeah I thought it was between two and five, but yeah we didn't end up going for for that that yeah

I: *Okay. So you didn't always agree but you kind of…*

P: Yeah we kind of just shifted between our answers and we just talked about it in detail yeah.

I: *Okay. Okay, that's really interesting*

Question 3

I: *And is there, is there anything else you want to tell me about any of this?*

P: Erm I think it was just a bit unusual like the set up. I know it was meant to be a mock but just some of the things. I think she was carrying, I don't know if it was cinnamon or whatever. It was like a condiment and it was just I thought that was a bit odd and just yeah

I: *(Laughs) Yep, there's some unusual items in there to throw you off a little bit. Okay, well that was great, thank you very much for that. That was really helpful. There's nothing else that you want to add?*

P: No, I'm fine

I: *Okay.*


**Transcript 2**

Question 1

*Interviewer: So erm what in your own words can you explain like in as much detail what happened when you are her were doing the lineup task*

Participant: Oh when we were talking amongst ourselves?

I: *Yeah when I left to, when you were choosing who was in the video and who wasn't*

P: Because basically when we were watching the video we were trying to like erm look at the faces and stuff like that and then we went oh one of the guys is tall, one of the guys was a bit chubby, and one of the guys erm he had like a moustache and a beard and then we looked at the lineup from the first guy I think the first paper we were looking for the chubby guy and none of them appeared to be as chubby as the first guy so we're like maybe he's not included and I was trying to recognise – I've got quite a good memory – so I was trying to look at the face and none of them matched the image that I had in my head. And for the Asian guy was none of them had a beard and none of

them had a moustache and even erm although he was wearing a hoody and he was covered erm I felt like his face was a bit bigger than the people in the lineup. Some of them I mean I knew straight away that it wasn't – I think between 5 and 6 I felt like maybe closely it could be one of them because we feel like in the lineup they weren't wearing any hoodies and the hoody restricted us to see his proper actual face

*I: Okay, okay that's useful erm.*

Question 2

*I: So can you explain to me how you made your decision that there was nobody there?*

P: Errr from the first one we were like from the first one I was like oh the guy he was a bit chubbier and none of these guys appear to be as chubby as… they seem like average so we were like no

Question 3

*I: and you both? Did you both agree on that, like there was no argument about it?*

P: Yeah. Yeah. Because she's second year, I'm first year so she was like oh I've done previous studies and she goes sometimes there's nobody there like so she had that already in her mind that maybe this is just a lineup and they don't actually have the actual suspects

*I: Okay, that makes sense*

P: But when she said that to me I agreed and…because I realised like you know you have we were trying to catch their features but none of their features matched. Yeah

*I: Okay.*

Question 4

*I: Is there anything else about the study you want to say?*

P: No. We've done similar things with one of our lab reports where we had to look at lineups

*I: Yeah, yeah. Okay, so, well then that's it if you have nothing else to ask me about or tell me anything about? Errm thank you for doing this.*


**Transcript 3**

Question 1

*Interviewer: Do you mind telling me like what, when you were viewing it, umm why didn't you guys choose someone, like what exactly happened when you were?*

Participant: Umm because firstly we were focussing like on the features of the face

facial like like how they were shaved or not shaved and how the structure of the bones is and like after we discussed some of the people didn't have like the matching erm like I don't know like nose or cheekbones or like or like it could be because of the video like the quality wasn't that good so we can't really judge and so like after like discussion we we we kinda can tell that they are not included for some reason because I mean erm firstly erm like there are some features that one person has but other features which we identified in the video that the other person had so we don't want to pick two so it's just not included

*I: Okay, that's good.*

Question 2

*I: So in as much detail as possible when you guys were doing the lineup task together how did you like how did you both decide that? Like was there any disagreement between you two at all?*

P: Errm at first yes erm we talked about how err because when we looked at the video err we kind of have each of us was discussing during the video about how they look like and like the their features and how tall they were like we kind of sorted like we talked about those features and erm when we saw the the lineup we analyse it and err well there there was some moment that we could have mistaken like some of the features of one person to another but in the end we kind of figure it out and then we sorted it in categories like if this guy has like cheekbones like this shape or like that guy has the big lips or like something like that or like some beard or moustache that they had and erm it quite didn't match in the first and third one in the lineup yeah

Question 3

*I: Okay, and you both you both agreed on that?*

P: Yes, agreed to that decision, yes

*I: Okay*

Question 4

*I: Okay, and is there anything else about how you made your decision or anything else at all about the study that you want to tell me?*

P: Errrm, not really, because erm well I mean this is like erm the the study could have you know focussed us on like looking at the people when the the thing happened so we were kind of focussed like on what was happening there and then we focussed on the facial features and everything so I think like that's partly the reason why we made this decision

*I: Okay, yeah that makes sense. Okay, well if you're happy with that and with everything else, and if you don't have any questions for me?*

P: No

*I: That's fine, thank you for doing that*


**Transcript 4**

Question 1

Participant: It seems as if this is part of the study. I don't know because I do quite a lot of like psychology studies and it just seems like just the whole you know we're first to disagree and then check kind thing I feel like this is a part of it

*Interviewer: Well we haven't, I mean we haven't done too many of it yet so I'm not sure*

P: No, no it's just sometimes you never know with psychology experiments because this could be a part of the act. This literally could be an act right now

*I: We're a tricky bunch (laughs). Well, I don't know what to tell you because this is just what we have to do. Well, erm could you give me a little bit of information, like when you guys were doing the lineup task how like how did that go?*

P: Erm you mean like picking the pictures?

*I: Yeah, like how did you guys come to not agree?*

P: Well we because erm the girl there said that she didn't feel like any of them were the culprits and I although I didn't really recognise any in particular, I just thought that there's no disadvantage to anybody in if this was a genuine lineup to have have a guess and pick considering that you'd be there as a witness anyway and subsequently there would be five actors and one criminal amongst the group so it doesn't disadvantage anyone to actually give it your best

*I: Okay, so in your own words could you tell me exactly like what happened when you were like what were guys talking about when you chose to do the lineup?*

P: Erm…yeah, no I mean it was relatively straightforward erm she thought that she couldn't recognise any of them therefore she didn't want to erm make a decision on that

*I: Okay*


P: Erm because she thought that it was fake and that like yeah

Question 2

*I: Was there anything in particular of how you made the decision that they were there and she wasn't she decided that they weren't there?*

P: No, I think it was just a matter of she didn't recognise anyone on the screen and I felt that perhaps although I didn't necessarily recognise anyone 100% there was no disadvantage against actually just like choosing against a lineup

Question 3

*I: And did you always agree or disagree? Always disagreed?*

P: Oh we disagreed yeah.

*I: Totally?*

P: Yeah it's just it was pretty straightforward I just picked the ones I felt and she just thought that it was fake so

Question 4

*I: Is there anything else you want to add?*

P: No

*I: Alright, well I guess if you have nothing else to add then and you have no questions or anything?*

P: No, none at all

*I: Okay, well thank you for staying a little bit extra.*


**Transcript 5**

Question 1

*Interviewer: I know you didn't agree on some of them, but erm even –*

Participant: Or like, don't seem to agree at all because I actually like pressured to put six and she pressured not to put anything for the other ones so we kind of like were clashing but I mean I believe it is one of the guys from line C but like she didn't and so I just said 'okay okay' because I already had [inaudible] so I was like okay

*I: okay so when I stepped out of the room before with the lineup task how did you sort of where did how does the discussion go to come about to a decision?*

P: Erm well we were just like discussing how similar the guys on the video are to…lineups and I was erm talking about some features and she was just saying it's not like it's not similar enough and it's probably just none of them and it's kind of like a trick like check if we are actually paying attention but like I didn't think so because erm for lineup c it's definitely like the guy has quite thick lips and I think it's either two or five. I noticed like this kind of of shaped nose and erm it just like you don't see much

because of the hoody that's why it's a bit difficult to pick one but I think it's definitely one of them because like the resemblance is just there.

Question 2

*I: What you were saying in your own words just tell me as much as possible about what you were, the lineup task as you were saying before how you went about the lineup task*

P: Erm even how I was discriminating or what I think about the resemblance or like the whole thing?

*I: Yeah, the whole thing, yeah.*

P: So yeah we were trying to [inaudible] about what we saw err and I believe that err the well she immediately said that it's none of them like she looked at a…like none of them are actually 100% similar so she doesn't think and for line B I agreed because err I actually like feel very lost when I look at pictures I'm just like I cannot identify the person but for lineup A I was sure it's erm number 6 so I said like we shouldn't and pointed out some features of the face that I think it's the guy but she was still like 'no the guy is slimmer I don't think it's that guy' and I was just like like can we at least put this one so she agreed but for lineup C erm like I couldn't be as persuasive because there I myself didn't really understand 100% how the guy looks because the hoody's like you almost don't see his eyes and so he kind of like in… in a dark face and because he's dark it's like really difficult to point out the features but I still perceived that his lips are quite thick and err his nose is kind of like erm I don't know how to describe this in English but like the shape of nose err I could kind of picture it and erm I thought it's either guy 2 or guy 5 because like even if we don't see his dreadlocks it doesn't mean he doesn't have one because he's in a hoody but she was like erm 'no I don't think it's one of them' and because I wasn't sure myself so I kind of erm conformed here because

Question 3

*I: Ah okay, so she was sure and you weren't too sure?*

P: Yeah

*I: So with lineup A you were both 100% in your decisions and you couldn't come to an agreement, but she sort of said to put 6 down because she was adamant about the other ones not being there? Okay, excellent*

P: Just because like we were completely disagreeing about two things so it was kind of like we did my thing for one and I think for another because like each of us were more persistent on one of them

*I: Okay, so you didn't always agree then*

P: Do participants normally agree with each other? Or...not really?

I: *Some of them do, yeah. Some of them do, it doesn't really. Yeah some people see things differently but so far the ones we've run have agreed most of them but erm but that's fine. It doesn't matter.*

Question 4

I: *Alright, so I've sort of got the story about how you picked each individual one so that's good. How you picked them, and how you didn't agree, is there anything else that you discussed or went through in order to pick them?*

P: No, not really.

I: *Anything else that would be helpful to know?*

P: It's just because she thought that like the trick that it's none of them but

I: *Okay, so she just didn't think it was any of them, but you thought it was some of them so of the time but not all of the time?*

P: Uh-hum

I: *Okay, excellent, well thank you for doing that.*


**Transcript 6**

Question 1

*Interviewer: If you could answer with as much detail, in your own words, what exactly happened when you guys were doing the lineup task.*

Participant: Umm so, with the…?

I: *When you guys were doing this? When you were like talking about who was in the video and what not. When I left the room, how exactly did that go?*

P: Errm so the – I can't remember the girl's name

I: *Sally*

P: Sally. Sally was errr looked on her phone…to see if she could match it to a picture she'd taken

I: *Oh. She took a photo?*

P: Yeah

I: *Oh okay.*

P: And…and then she realised that it was still here so she looked through errm through where on the video she found faces and tried to match it, and tried to look at where it was

Question 2

*I: We're interested now that she took a photo and looked back at that, so…what exactly happened when, how did you guys come to agree or disagree when you did the lineup task? What made you like make your choices?*

P: Errm so there was what I've just said so Sally took out the picture on her phone and then looking through the video to try and see matching faces and she couldn't match any faces. She asked me to do the same but I was just trying to see if there were any that I could erm remember

*I: okay. And….okay.*

Question 3

*I: Did you guys, did you always agree with her? Or was there any disagreement?*

P: Errm initially I was just looking at one of them and I said that I thought it was between two but I couldn't couldn't notice any that I recognised on the other two so I couldn't disagree with her.

Question 4

*I: Alright. Is there anything else about the lineup task or the video or anything of this study that you want to tell me?*

P: Oh just that I suspect that she's planted, that Sally's planted.

*I: Oh really? And any questions you have for me?*

P: No.

**Transcript 7**

Question 1

Participant: We were just both like we didn't know if we did something wrong or like, so

*Interviewer: No no, it's just good to understand what it is that's driven you to make those choices so that I can make it clearer in future*

P: Okay

*I: So, can you tell me in as much detail as you can and as honestly as you can how you made the, I mean how did you approach the task?*

P: So I knew that it was from the explanation given that it was to pick out suspects so when we were watching or at least when I was watching the video erm and when the suspects came about I like really paid attention to them because I felt like I need to remember them and who they are if we're going to like identify, so it was really that,

just like throughout the video just really paying attention to the men so that when we saw I guess like maybe I expected to see them there and umm I didn't see and then talking to her she didn't see them either so so that was just really it so we just were like do we choose someone but none of these people are them and so then we didn't choose anyone

Question 2

*I: So did you have any strategies for what you were discussing? Or anything like that? How did you make your decisions?*

P: Well definitely I mean at least I recognised that at least all three men were black so there was one of men that were like Asian or just other men that were brown but and I was just like that the one guy was definitely black, he was just light skinned. You know, he's not, he's not…

*I: He's none of those? (Laughs)*

P: Yeah, he's not Asian or or anything else umm so I was like this one is out of the question and then the other one there was like the young, well I guess they were all young but, there was the other one that was more athletic like and fit and I just remember looking at his face and like it just it just didn't match and there was the other guy who like popped out of nowhere, like the third guy and umm he also like there was more face time with him because there was a shot of him where you could see more of his face and err I was looking at like the other black men that seemed like they were a little heavier and I was like no that's not him. I don't know, I just just didn't So I just we discussed it and she felt the same as well so we were just like we shouldn't choose anyone

*I: No, that absolutely makes sense.*

Question 3

*I: So did you always agree, were there when you had to –*

P: - She did like she did I think she was like really trying to find one and I was just like it was a lot of there was a lot of me just like I don't think any of these guys are them and she was like well maybe and I'm like well maybe but I I really don't think any of them are them and then she was just like yeah, okay, okay.

*I: So it was kinda you both agreed but there was some deliberation?*

P: Yeah but there was some because you know I mean I was pretty confident but then I think she was just like I think well then there's this lineup of people and they chose them specifically so maybe they're in there and we're just like missing it like it was the

quality wasn't always perfect, and I was just like yeah I guess it's a point but then I don't feel comfortable choosing any of them because I don't think any of them are them

Question 4

*I: Okay, so that's good to know. And is there anything that you want to comment on about the way that the way that this has run, the way you made your decisions, the lineups we've chosen, the video, is there anything you want to tell me basically?*

P: No, that was really it, everything else is fine.

*I: Okay, so that's really helpful, thank you.*


**Transcript 8**

Question 1

*Interviewer: So kind of in your own words and in as much detail would you be able to tell me how, what kind of happened when you were doing the lineup task I guess?*

Participant: Erm so wait lineup task is that sat watching this?

*I: Yeah so when you were doing the lineup task where with the three and you were…*

P: Oh, the lineup! Sorry. Erm so first obviously we were watching the video and we just you know stared at it. And we weren't sure what we supposed to try and we weren't sure if we were supposed to memorise it or just look at it like we were trying to take in like, HP laptop like I don't know those kind of things. And yeah then the guys came erm I suppose we were just watching one, staring at their faces, and then Sally said like oh like she just doesn't remember anything and I was just like oh okay and then yep and then you came in and gave us the thing and I guess it was just kind of looking at the faces I don't know because we didn't want to send an innocent person to jail if it was a real thing and it does happen so erm I think. Yeah erm yeah and then like obviously there was a big like I don't know overweight, fat black guy and I feel like it's easy to like just put like faces that are like a bit chubbier and I don't know. You know what I mean (laughs) and then the like mixed race guy…just assuming he was mixed race…erm I feel like all the other guys didn't really look like, they look more more I don't know South East Asian rather than….I feel like he looked maybe more Arabic or oh I feel like I'm being like so stereotypical. It looks so bad!

*I: No, no, that was the task so no that's fine*

P: Yeah. And then when I did say like with the slimmer black guy oh maybe this one is

him because I thought maybe we should pick somebody, I mean we're supposed to, and she said yeah but I don't think we should because we can't you know

Question 2

*I: So is that how you arrived at your decisions?*

P: Yeah, yeah. The first, we were like we don't think for the mixed race looking guy, and the fat black guy we were like hmmm I pointed to a picture and she's like I'm not really sure and then she pointed to one and I was like I don't think that's him either and then we were well we don't think the other ones are him so that kind of thing. And then the final one I suppose that was a bit trickier but we kind of cancelled we basically cancelled out the ones we didn't think

Question 3

*I: Right, so did you guys always agree?*

P: Well pretty much I mean yeah, yep (laughs) I guess so, yeah

*I: Okay*

P: I think it was the point that if we were treating it like a real eyewitness thing like as I said we wouldn't want to just select someone that it maybe could have been. I'd want to be sure like that I guess

Question 4

*I: So is there anything else about during and these kind of details that you want to tell me?*

P: I suppose…I looked at the backgrounds of the pictures and I think on the last one there was like a brick wall but the rest were just like blank walls and I was like hmmm maybe this one is the guy because I think it was like taken in uni or something whereas all the rest of them weren't but then she was like yeah but his nose is smaller, no the guys nose was smaller, his is too big and I was like oh okay, I guess so, so yeah.

**Transcript 9**

Question 1

*Interviewer: Could you just like tell me in your own words basically just roughly how you once I left the room with the lineup and when you were watching the video how you guys came to the decision?*

Participant: Well er, one of the sheets of paper the lineup all the people that were different ethnicity like Asians, but all the men in the video were black so just immediately disregarded that one. So err the second one, because like when we were

watching the video we said like you memorise that one, you memorise that one, we can look from both, like and split up the sheets or whatever.

Question 2

*I: Okay and when you sort of had the lineups did you both come to the conclusions together, then you both agreed on the decisions?*

P: Well yeah. She, she immediately said erm this erm, my one's not on here erm and I was like well....I can't see mine on here, but are we supposed to just write one anyway so I was like shall we just write one and she was no, if we can't do it we'll just say we didn't…didn't find them on the lineups.

*I: Well you must both have very good memories. Like I said you're the only ones to get it correct so. You didn't take any notes did you? You just went from memory?*

P: No we just went from memory

*I: Right, okay.*

P: Did the guys in the video change as the video went along as well?

*I: No, it was difficult to see their faces though. That's why it's so surprising that you didn't put anything. Normally, because they are a little bit disguised people just guess the closest one or whatever*

P: This big guy at the end, he kind of pushed the lady over and then runs off, he's not in it, the shot until right at the end when that happens, I thought…it was like change blindness or something

*I: No, no, the three of them did stay the same the whole way. Alright.*

Question 3

*I: Anything else about the way you decision or..?*

P: No, that's it

**Transcript 10**

Question 1

*Interviewer: Just off the record if you don't mind just telling me like basically what happened, how did you come to your decisions, and obviously because you were trying to work together and –*

Participant: Yeah. So we were watching it and then obviously, it was quite fuzzy, and I really thought the first guy looked like someone I know so I was like 'okay, I'll keep

that in mind' and then it finished and we were just talking when we got the pictures she was just like it doesn't look like any of them and I was like 'really?! I think it does' and then she said no, it's like I don't think it's any of them and then we were just talking about it and she said that she was just like describing the different features and she was like they all look really different to how they looked and I was more like at first, I was like it's definitely one of those –

I: - *Sorry to interrupt you, but do you mind if I take some notes to discuss? So, in your own words, in as much detail as possible, tell me about what happened when you were making your decisions*

P: So, I'll start again.

I: *Sorry*

P: That's alright. Erm yes, once the video had finished, and once we got all the pictures, I was looking at them and thinking that some of them already definitely looked like him, like I definitely think the second one looked like number 4 and then I was just trying to decide about the rest, and then obviously, Victoria was like 'no, I don't think it looks like any of them' and erm we were just talking about that for a while and she was trying to tell me like none of their facial features looked the same and I was like 'I feel like they do' and I was like 100% certain that they were on the piece of paper because I was like I don't think, surely they wouldn't ask us to look at it if they weren't on it, and she said that they just looked like random pictures off the internet, and I agree with some of them, like some of them do just look like random pictures.

Question 2

I: *Okay, so there was some agreement there about some of them*

P: There was yeah. And more, like the more she talked about it the more I was like, umm I kind of agree. The only one that I actually like, the rest, the, because of… lineup A and C I was like I could not pick, but then lineup B was the only one where I was like oh no, I definitely disagree with you, but the other two I was like, yeah I kind of agree

I: *So she did manage to sort of sway you a little bit?*

P: Yeah, the more she spoke about it and err obviously like she's in second year and she was like oh I feel like this is more that they want us to pick someone and I was like well I don't know (laughs) I was like arrr I know know but yeah

Question 3

I: *Okay, is there anything else that helped you make your decision, or that was it just like, is there anything else that you haven't mentioned or?*

P: No, I just feel like usually because of…when it's faces I can be easily convinced that it's someone else. With some of those faces because they all looked kind of similar and like urgh I don't know anyway so

*I: Alright, no that's fine. Okay, well thank you for taking part in that.*


**Transcript 11**

Question 1

*Interviewer: So can you tell me how you went about making the decisions?*

Participant: Umm…well… I tried to like as best as I could remember the people from the video and then like I identified like okay there's one man wearing a hat, there's one man that's wearing a hood, there's one man that, another man that's wearing a hood like he's got a fairer complexion, he's got a moustache so I identified everything and then I just tried to match the characteristics to the pictures and then they didn't really match as to what I saw. I could be wrong, but they just didn't didn't match

*I: No, no you are right, erm it's three target absent lineups. Erm that's why I was so kind of thrown by it, because no, we haven't put the guys in these, but normally if you don't give an option to say that people kind of –*

P: Have most people like selected someone?

*I: Yeah,*

P: Wow.

*I: I mean we haven't run many people yet, but yeah, so far everyone has so, erm*

P: Another thing that struck me is errm almost everyone here looks American. I don't know how you can look American, but as in like, I feel like, yeah I'd say they look more African American than Black British

*I: Okay*

P: And these people look a bit more Hispanic, Mexican. There's not like a lot… obviously there are Hispanic and Mexican people in England, but not a large population so…

*I: That's really interesting that you say that. They are all American samples.*

P: Yeah, I thought so.

*I: You're the only person to say that. That's really weird.*

Question 2

*I: Okay, so, so you were talking about kind of focussing on on features like is there anything else you can tell me about the way that you did it? Like just anything that you picked out on any of the faces? Anything that stood out I suppose.*

P: Yeah, like for example, nose size, lip size, the the width that your eyes are like whether you have like bright eyes or squinted eyes. Those kind of things. Whether you have like ears that stick out like mine, or ears that are flat against your head. Just little things like that.

Question 3

*I: Okay, and did you guys always agree?*

P: Erm…yeah, like yeah I think I looked through this one first and I was like it's definitely not any of these guys and she looked at this and she was like I think it could be 2 but I don't think it is. It could have been 6 as well, but 6 has a beard and the guy that had the same sort of like lip and chin structure did not have a beard so

*I: Sorry, so just to confirm that was you thought it could have been those two or she did?*

P: She thought it could have been number 6 but he didn't have a beard

*I: So did you then like kind of discuss that together?*

P: Yeah we (inaudible)

*I: Okay, and what about with this one, did you agree on that one or was it again like some sort of debate?*

P: Well at first I thought it could be number 4 but he didn't have the same chin as the person that I thought it was so the person that I thought it was had like a more pointy chin so and he didn't and then none of the others that had like pointier chins looked like the same guy so

*I: Okay. So yeah, it was all kind of like feature based?*

P: Yeah.

Question 4

*I: And is there anything else that you want to tell me about any of this about the way that you made your decisions, or anything else that would be helpful for me to know?*

P: I think…don't like take this out of context really, but I think like because I am Black the way I see Black peoples features may be different

*I: But that is a thing in psychological literature, own race bias, we're better with faces for our own race*

P: Yeah so I mean like someone from another race can see a Black person and go oh

yeah okay they've just seen them. Me, if I had to look at them, I'm gonna notice oh yeah his hair is this way, or he has this haircut, he has this type of nose, he has these type of lips or his chin like I think it's just yeah easier to identify for me personally. I can't speak for everyone else. I could be wrong but…

*I: Okay, well thank you. That's all really helpful.*

**Transcript 12**

Question 1

*Interviewer: So, in your own words can you just tell me what happened, like how you guys made the decision together and what the process was like when you were working together with the task?*

Participant: So we sort of we just watched the video but then because…and then obviously we had all three of them laid out but because we were sort of just it was more like guesswork as in we weren't none of them none of the faces really resembled like how they actually looked and because because I kind of did eyewitness at A Level so I sort of understand how the kind of procedure goes and everything but umm yeah I suppose sort of I think it was group B with all the Hispanic umm guys in it we just sort of cancelled that out straight away umm and in terms of the other one the ones with the guy with the dreads I just thought if they had dreads on if we'd probably know if they had like some sort if they had long hair. Ummm it was actually sort of Victoria who suggested that none of them really looked alike. I I pointed to one of the guys and I wasn't too sure I was thinking maybe he was the main guy but then because it was again sort of guess work I didn't really want to just guess for the sake of it sort of so I just thought

*I: Yeah, so was she a bit more sort of sure than you?*

P: Yeah. She seemed to be more sure than me. And I didn't really want to just pick someone for the sake of picking them because that leads to sort of false accusations I'm sure in real case scenarios.

*I: Yeah, exactly. No it is important that it is like a real life scenario because obviously that is how people make eyewitness testimony.*

Question 2

*I: So you mentioned on one of them she was like more sure than you, so how did you make the decision together was she like did she know and you like you weren't really*

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*sure or –*

P: - Well I was looking about trying to find who of them resembled erm those in the the like in the video, but it seemed whilst I was sort of looking about she was at first more certain than I was and I think we just sort of discussed for a bit, she she was just like yeah none of them looked at all like them so I thought okay if you're confident I suppose we might as well say that then

Question 3

*I: So did you always agree on the decisions? When she said it did you always agree or was it –*

P: Errr at first there was a bit of disagreement because I was trying to like I was questioning why would they give us all these pictures of you know men if none of them are obviously but then I don't know, maybe because she's in second year and she's participate in that sort of thing before, so she's probably had like prior experience and that sort of thing but erm yeah

*I: So you trusted her judgment?*

P: Yeah

*I: She must have a good memory because all three of them were right so she must be doing something right*

P: Probably

Question 4

*I: Alright, that's pretty much it. Is there anything else like that it's important to add to that or is that pretty much everything that happened?*

P: No, that's it really.

*I: Okay that's fine.*

P: I wasn't sure if when you came in and you said that we were all right if that was a part of the whole experiment if you sort of just kind of faked it or not I wasn't too sure (laughs)

*I: (laughs) faked what?*

P: No when you came in and said that you were actually right I thought that you might have done that with everything that sort of participated that it was all a part of the study

*I: Oh! No, (laughs)*

P: I was a bit confused at first

*I: (laughs) It's because you're a psychology student. You're always critical and asking*

*questions*

P: yeah (laughs)

**Transcript 13**

Question 1

*I: Alright, so in your own words, when you guys were doing the lineup task, what what, how did it go?*

P: Erm we were just looking at the guys, erm, and they just didn't look like the people. The the short there was a short erm there was a short person in the video the shorter one that looks a bit Hispanic/Indian erm they didn't the people that were on there (gestures) didn't look like him at all

*I: Okay*

P: So we knew that that one was just not there, that was an easy one. It was the the two Black guys was kind of hard. Erm….they just had different features altogether

Question 2

*I: Okay, alright. And anything else about like how the lineup task went?*

P: As in like what it was that…

*I: When you two were talking about it, how did that go? Like how did you kind of make your decisions?*

P: Oh, there was a point where I thought that I had found one of the guys, but then she was like he looks nothing like that so she convinced me that it wasn't the guy, but I reckon if I was alone I would have picked number one from lineup C.

Question 3

*I: Okay, that kind of is like my next question, was there any agreement, or did you guys disagree at all?*

P: Erm yeah we disagreed with that paper.

*I: Just one?*

P: Yeah, and then I was like maybe she's right so I just swayed with what she said

Question 4

*I: Okay, alright. And is there anything else about, or anything else you wanted to add?*

P: Erm…..no