University of Strathclyde

Department of Psychology

Measuring Interrogative Suggestibility: Questions of Reliability and Validity

Stella Anne Bain

A thesis submitted in fulfilment of the requirements for the Degree of Ph.D.

February 2002

Acknowledgements

I would like to say a big thank you to my Ph.D. supervisor, Dr. James Baxter, for his guidance, support and patience over the last four and a half years. I really appreciate all the help you've given me over the years, and in particular I'd like to thank you for all your encouragement and help in the publication of my two papers. The first one certainly would not have happened without you.

I'd also like to thank my mum and dad, and my brother and sister for all their support throughout. I certainly wouldn't have been able to continue without the financial support, and mum, all those beers and chats after a hard day at university were well appreciated.

Thank you also to all my friends for general support and encouragement. In particular I want to thank Mhairi and Theresa, I'll bet you feel like you did this Ph.D. too!

Finally, I would like to thank all the participants who gave up their time to take part in my studies, especially those who were tested by my "abrupt" alter ego in Studies 1 & 2. I hope you've all forgiven me. Thank you also to Glasgow City Council for allowing me access to schools, and to all the teachers who showed an interest and helped me carry out Study 2. Another thank you to Mhairi for persuading her boss to allow me to test her work-mates when I thought there wasn't another willing participant left in the world.

ABSTRACT

Gudjonsson developed two scales to measure interrogative suggestibility: Gudjonsson Suggestibility Scales 1 and 2 (GSS 1 and GSS 2; Gudjonsson, 1984a; 1987c). The aims of the present thesis were to examine issues related to the reliability and validity of these scales. Three studies are presented. Study 1 assessed the effects of two interviewer styles on measures obtained on the GSS 1. The hypothesis was that a generally abrupt demeanour adopted by the interviewer would lead to higher scores than a friendly demeanour. Results showed that participants tested in the Abrupt condition gained higher scores on two of the post-feedback GSS measures than those tested in the Friendly condition. It was concluded that post-feedback scores may be more sensitive to social aspects of suggestibility than responses to leading questions. Study 2 assessed the effect of the same interviewer demeanours on a sample of adolescents, a more vulnerable population (e.g. Richardson, Gudjonsson, & Kelly, 1995). It was hypothesised that the abrupt demeanour would produce higher GSS 1 scores, than a friendly demeanour and that this difference would be more marked than that found for normal adults. Results did not support the hypothesis. Scores were lower in the Abrupt condition; this difference was significant for post-feedback responses to leading questions. It was concluded that results provided further evidence that GSS scores are not readily predictable. Study 3 aimed to investigate indicators of "faking bad" on the GSS. It was hypothesised that participants instructed to fake suggestibility would demonstrate a unique scoring pattern. Results supported the hypothesis. It was concluded that an elevated pre-feedback score in the absence of any other raised scores may indicate malingering on the GSS. Issues related to the reliability and validity of the scales are discussed.

CONTENTS

CHAPTER 1: GENERAL INTRODUCTION

1.1. SUMMARY

This thesis is concerned with an evaluation of issues related to the robustness of the Gudjonsson Suggestibility Scales (Gudjonsson, 1984a; 1987c), a tool designed for measuring individual levels of interrogative suggestibility. The present chapter begins with a general discussion of the role psychological research and theory may have to play in the criminal justice system. It is concluded that research pertaining to suggestibility effects may be of particular relevance to police interview procedures. The theoretical background to interrogative suggestibility is then reviewed. It is shown that the term suggestibility refers to several different phenomena and that interrogative suggestibility is different from what Eysenck and Furneaux (1945) termed 'primary' and 'secondary' suggestibility, but that it may share some factors in common with 'tertiary' suggestibility. Police interrogations and interviews are then discussed. In particular the psychological literature pertaining to questioning techniques is reviewed. The section ends with an evaluation of current police training in investigative interviewing techniques. The following section discusses the cognitive and social mechanisms that may account for suggestibility effects. The roles of memory, cognitive dissociation, attention, compliance, and conformity are all discussed in relation to suggestibility effects. A review of the literature pertaining to suggestibility effects in children is then presented, highlighting the differences between children and adults. The final two sections of the chapter present the Gudjonsson and Clark (1986) theoretical model of interrogative suggestibility and an evaluation of this model. It is shown that factors relating to the individual as well as the situation can affect levels of interrogative suggestibility.

1.2. The Place of Psychology in the Criminal Justice System

The goals of the criminal justice system are to maximise the probability that guilty suspects are convicted, and to minimise the probability that innocent suspects are wrongly convicted. However, miscarriages of justice do occur. While proportionally it may be a small number, there have been numerous cases of mistaken identity and wrongful convictions in this country. Therefore, any contribution from other professions that has the potential to contribute towards meeting the above goals should be given due consideration and attention from the various authorities that comprise the criminal justice system.

Eyewitness testimony is one area of the criminal justice system where psychology could make such a contribution. Errors and inaccuracies of eyewitness report were first highlighted at the beginning of the last century (e.g. Stern, 1910; Munsterberg, 1908), when it was acknowledged that eyewitnesses can be unreliable. Modern experimental techniques have allowed psychologists to go beyond this basic finding. Research has addressed a wide range of factors, including the influence of race and sex (e.g. Brigham and Berkowitz, 1978), the effects of time delay and violence of incidents on subsequent recall (e.g. Clifford and Scott, 1978; Ellis, Shepherd and Davies, 1980), and type of questioning and attitudes on the quality of testimony and statements (e.g. Loftus, 1975; Snyder and Uranowitz, 1978; Gudjonsson and Clark, 1986).

There are two ways in which psychological research of this nature can make a contribution to the criminal justice system. Firstly, research findings can be used to

make specific recommendations for change in certain procedural aspects of the criminal justice system. Secondly, experimental research findings could be used to advise the judiciary or police of the problems associated with eyewitness testimony and identification. However, both of these approaches have had a limited impact on criminal justice in Britain.

Buckhout (1974) claimed that the reason psychology has failed to make any great impact on the criminal justice system is because the system is reactionary and closed minded. However, the fact that psychological findings are often dismissed by the criminal justice system may well be a result of the manner in which research evidence is presented to them (Wells, 1978). For example, Buckhout (1974) explicitly stated that "eyewitness testimony is unreliable". Given the importance of eyewitness testimony to the criminal justice system, it is hardly surprising that dismissing such testimony should be met with a negative reaction. Obviously, eyewitness testimony can never be eliminated from the criminal justice system. Apart from the important role that eyewitnesses play in both the police investigation of a criminal event and court procedure, any report to the police that a crime has been committed is a testimony, and any suspect may have an alibi which could prove their innocence and any report from them is also a testimony (Wells, 1978). Therefore, eliminating eyewitness testimony is impossible.

Given the importance of eyewitness testimony to criminal justice, the fact that it is fallible threatens the very concept of justice. There are two types of psychological research that address this issue. Both approaches investigate variables that affect eyewitness accuracy. The distinction between the two areas of research is that one

considers variables that cannot be controlled for in actual criminal cases (e.g. characteristics of the criminal event, the witness, or the defendant). Wells (1978) termed these "estimator variables" because these variables can only be used to estimate the likely accuracy of testimony. This does not mean that such research is of no value to the criminal justice system. However, it is not possible to exert independent control over estimator variables in actual criminal cases. The second type of research considers variables that can be controlled by the criminal justice system (e.g. interrogation procedure, question structure, and line-up instructions). Wells (1978) termed these "system variables" and argued that they have potential applications for change in the criminal justice system.

System variable research is likely to have more applications than estimator variable research to the criminal justice system (Wells, 1978). For example, research has addressed factors such as the influence of interrogation techniques and question structure on the accuracy of eyewitness testimony. Research on the influence of suggestive interrogation techniques has shown that some intervening interrogation techniques can alter subsequent recall of an event. For example, Loftus and Palmer (1974) showed participants a short film of a traffic accident and then interrogated them about what they had witnessed. The format of this intervening interrogation was varied so that half of the participants were asked "How fast were the cars going when they *hit* each other?" and the other half were asked the question with "hit" replaced by "smashed into". Participants' recall one week later revealed that those who had been asked the question with "smashed into" used were more likely to report having seen broken glass. This result indicates that suggestive interrogation techniques can influence later recall of events. Loftus, Miller and Burns (1978) have found similar

distortions to occur as a function of the duration between an event and a suggestive interrogation: the longer the duration, the more likely that misleading suggestions will be incorporated into subsequent report. Both these studies, and others yielding similar results, have important implications for the procedure and techniques used in police interviewing of eyewitnesses. See Loftus (1979a) for a general discussion of these issues.

The influence of question structure on accuracy of testimony is perhaps the most thoroughly researched system variable (Loftus, 1975; 1981; Gudjonsson, 1983; Gudjonsson and Clark, 1986). The precise nature of questions about an event has been found to have powerful effects on testimony. Lipton (1977) showed participants a film of a simulated murder and then interviewed them about it. Results showed that those participants who were permitted to give unstructured testimony (free recall of events with no questions) produced higher accuracy levels than those who were questioned about events. Of the procedures involving questioning, open-ended questions resulted in greater accuracy than leading questions or multiple-choice questions. It is well documented that leading questions can result in distortions of report during interviewing (Stern, 1938; Loftus, 1979a; Gudjonsson, 1983), and this has obvious implications for the use of such questions during police interviewing. Research concerned with system variables (Wells, 1978) could potentially be used to manipulate the relevant variables in an attempt to reduce inaccuracies in testimony. In effect, this would provide the criminal justice system with empirically validated methods that could be used to improve the criminal justice process by way of reducing inaccuracies in testimony.

As noted above, estimator variable research could have applications to criminal justice (Wells, 1978). For example, conditions that affect accuracy can be experimentally assessed. Such research has been used by experimental psychologists making court appearances as expert witnesses to cite research findings as a way of cautioning judges and jurors about the problems associated with certain types of testimony. However, this method of influencing the legal system is controversial, with psychologists (e.g. McCloskey and Egeth, 1983; Loftus, 1983) being divided in their opinions on the subject. Psychologists appearing in court as expert witnesses represent an explicit attempt to apply psychological findings to the legal system. Clinically oriented psychologists are well established as expert witnesses in the legal system. Opinions are offered in court as to defendants' mental competence or the likelihood of insanity as a mitigating circumstance. However, psychological opinion on eyewitness testimony has not been so well received in UK courts of law.

Experimental psychologists appear in American courts as expert witnesses in cases where eyewitness testimony is crucial to the proceedings. However, there is still debate amongst psychologists as to whether this direct intervention is warranted. McClosky and Egeth (1983) argue that psychologists do not have sufficiently consistent or convincing data to allow them to testify with certainty on even basic issues concerning eyewitness testimony. They also argue that there is no reason to believe that jurors are over-believing of eyewitnesses, and that they are aware of the failures of memory from their own life experience. They further argue that there is no evidence that psychological expert testimony allows jurors to reach any more valid or reliable decisions than they would otherwise. They therefore recommend that psychologists should seek to inform legal proceedings in other more moderate ways.

Loftus (1983) argued that there already is sufficient empirical evidence to warrant expert testimony on eyewitnesses, and that the legal system would benefit from the consideration of psychological findings and data concerned with the reliability of eyewitness accounts (Loftus and Ketchman, 1991).

In Britain the legal situation is somewhat different, and there are many more restrictions placed on expert testimony of any kind, but especially psychological expert testimony. Reservations about the acceptance of psychological evidence on testimony within the legal community are based on traditional legal considerations that apply to all types of expert testimony (Sheldon and MacLeod, 1991). These reservations can be broadly characterised as pertaining to the issues of the relevance and admissibility of evidence. The most basic law of evidence is that it must be logically relevant to some issue to be resolved by the court. To be legally relevant, any evidence must at least help to resolve a specific point. The issue of admissibility is concerned with the fact that any evidence presented in court must be beyond the experiences of the judge or jurors. Only if this is the case will an expert be permitted to testify. Turner (1974) ruled that expert testimony would not be permitted if it were concerned with issues of human nature and behaviour that lie within the limits of normal experience. Issues associated with the reliability of eyewitness testimony are deemed to lie within the domain of judges and jurors and therefore expert testimony on this issue has been excluded as invading the provedance of the jury (Turner, 1974).

The problem with the possibility of expert testimony based on estimator variable research (Wells, 1978) is that while it may be theoretically possible to asses the accuracy of a specific witness's testimony by considering all the relevant variables,

this would result in a lengthy checklist of factors with vast scope for interaction (Wells, 1978). Therefore, general statements about the accuracy of eyewitness testimony are more readily available. For example, psychologists can inform jurors and judges of the fact that in general accuracy levels for eyewitness testimony are low. General statements about eyewitness accuracy can only be made about the average level of accuracy. Such statements about an "average" person's performance may actually be representative of few. Giving evidence specific to an individual is really the only option available to the expert psychological witness (Sheldon and MacLeod, 1991). Norms and averages based on the analysis of group behaviour are of no value to the courts. To be included in court proceedings, the expert psychological witness must be able to testify about a particular issue that is specific to an individual. In other words, testify with "positive data" rather than "normative data" (Sheldon and MacLeod, 1991).

One type of evidence which fulfils these criteria is that relating to the extent to which a witness may have been influenced during questioning by the police prior to a court appearance, such that their testimony is no longer an accurate representation of the original event. This type of influenced behaviour is refered to as suggestibility (Binet, 1900; Stern, 1938; Loftus, 1979a; Gudjonsson, 1983). Much empirical work in this area has focused on how the questioning procedure can affect subsequent report and it is generally acknowledged that there is a need to control levels of suggestibility amongst interviewees if testimony is to remain as accurate and realiable as possible (cf. Gudjonsson, 1992a, Bain & Baxter, 2000; Baxter & Boon, 2000; Boon & Baxter, 2000).

1.3. The Historical Background to Interrogative Suggestibility

There are a number of circumstances under which a police interviewee may knowingly or unwittingly come to accept suggestions that are offered by the interviewer. The nature and wording of questions as well as the behaviour of the interviewing officer seem to be central to whether suggestions are accepted or not (e.g. Loftus, 1979a; Inbau, Reid and Buckley, 1986). Whilst these factors increase an interviewee's vulnerability to suggestions, it has also been noted that a tendency towards compliance and suggestibility is also crucial (e.g. Shepherd, 1991).

Suggestibility is a term that has been used to describe more than one type of phenomenon in the psychological literature, and is often poorly defined. The most basic distinction, which has often not been clearly differentiated, is that between a suggestion and suggestibility as a way of responding. In the very early literature no conceptual distinction is made (Gudjonsson, 1987a). For example, McDougall (1908) defined suggestion as:

> *"A process of communication resulting in the acceptance with conviction of the communicated proposition in the absence of logically adequate grounds for its acceptance"* (p.100).

Gudjonsson (1992a) argued that this definition implies that any suggestion inevitably leads to acceptance of the suggestion, which is not necessarily the case. According to Gudjonsson, McDougall (1908) fails to differentiate between a suggestive stimulus and a person's reaction to the stimulus. Any suggestion has the potential to elicit different responses (i.e. a suggestible or a non-suggestible response). Gheorghiu (1972) argued that for a situation to be defined as suggestive, it is essential that the

opportunity exists for a suggestible or non-suggestible response. If no such opportunity to give an alternative answer exists then the response must be considered coerced and as such the situation cannot be considered suggestive. Suggestibility is therefore a tendency to respond in a particular way to a suggestive stimulus. Whether a suggestion elicits a suggestible response may depend on a number of factors including the susceptibility of the individual, the nature and characteristics of the suggestion and the suggestor, and the situation in which a suggestion is offered. There is therefore clearly a fundamental distinction to be made between a suggestion as a stimulus and suggestibility as a potential reaction to such a stimulus.

Coffin (1941), in a review of theories of suggestibility, identified the earliest theories of suggestion as coming from hypnotists or the early nineteenth century. Coffin argued that the general principle behind these early theories was that every idea has the potential to be translated into an action, which was later termed an "ideo-motor" response (Hull, 1933). Therefore, the theory of suggestion was originally developed to serve as an explanation for hypnotic behaviour. Initially, the concept of suggestion was limited to the realm of hypnotic phenomena. Later, Bernheim (1910, as cited by Gudjonsson, 1992a) proposed that suggestion should be conceptualised as a normal phenomenon which may have an effect on people in a normal waking state. Bernheim used as an example the daily influence that people have on each other in terms of belief and attitude change. Despite providing no empirical evidence to back up his claims, Bernheim's ideas had considerable impact on the development of theories of suggestion. Early social psychologists' theories of suggestion included the possibility that the influence of suggestion could be expanded to include the normal waking state. It was thought that the influence of suggestion could be conceptualised as a continuum,

ranging from the suggestibility of a normal waking adult through to the extreme case of a hypnotised individual. Thus, suggestion was believed to be a unitary phenomenon with the differences associated with degree rather than type.

The growing interest in individual differences and experimentation at the beginning of the twentieth century led to the development of several tests of suggestibility. These tests were initially concerned with sensory and motor responses but progressively came to incorporate more complex responses such as changes in judgements, attitudes, beliefs and opinions. Binet's (1900) tests of progressive weights and lines were found, through the use of indirect suggestions, to result in perceptions of change where none had occurred. Other tests, for example Hull's (1933) "Body Sway" test, produced motor responses to direct verbal suggestions. There was little uniformity between what these different tests examined, the result of which was that a wide variety of different responses were measured and consequently widely varying definitions of suggestibility have been offered. However, there does seem to be some agreement over the nature of the response associated with "suggestibility". Generally definitions imply that suggestibility involves some kind of uncritical acceptance of suggestions (Coffin, 1941).

Several factor analytical studies have sought to examine the relationships between the different tests of suggestibility (Eysenck, 1943; Eysenck and Furneaux, 1945; Stukat, 1958). The results of these studies indicate that there are at least two independent types of suggestibility, which Eysenck and Furneaux (1945) term "primary" and "secondary" suggestibility. Primary suggestibility is associated with ideo-motor responses, involving apparently non-volitional or automatic actions to direct suggestion where the

desired response is made explicit. Eysenck and Furneaux found consistently high positive correlations between primary suggestibility and hypnotizability. Neuroticism was also found to be positively correlated with primary suggestibility. The most influential test of primary suggestibility is Hull's (1933) Body Sway test which has been consistently found to have high positive correlations with hypnotizability and susceptibility to post-hypnotic suggestions.

Secondary suggestibility is associated with indirect suggestions where the desired response is not made explicit or is concealed, and often involves changes in perception. Eysenck and Furneaux (1945) did not find this type of suggestibility to be correlated with an individual's susceptibility to hypnosis, nor does it correlate with primary suggestibility. In fact, secondary suggestibility does not seem to be identifiable as one singular phenomenon as different tests designed to measure it do not even correlate with each other (Evans, 1967). Eysenck (1947) equated secondary suggestibility with "indirection" or "gullibility" and defined it as:

> *"....the experience on the part of the subject of a sensation or perception consequent upon the direct or implied suggestion by the experimenter that such an experience will take place, in the absence of any objective basis for the sensation or perception"* (p.167).

Eysenck and Furneaux (1945) cite the Ink Blot test and Binet's "progressive weights" test as examples of secondary suggestibility. The ink blot test is a projective test of personality in which a subject's interpretations of abstract designs are analysed. The progressive weights test is one in which participants are asked to make comparisons of the weights of boxes which are in actual fact all of the same weight. According to Binet (1900) a suggestible response to these tests was assumed to include: a) the

acceptance of the mental influence of another; b) a tendency towards imitation; c) the influence of a pre-conceived notion that overrides the individual's critical reasoning; and d) expectative attention. Stukat (1958) found some support for Binet's theory through factor analysis. He found a) and b) to be comparable to his "need for conformity" factor, and c) and d) comparable to an expectative factor.

Eysenck and Furneaux (1945) also proposed a third type of suggestibility, "tertiary suggestibility", involving changes to attitudes and judgements as a result of interpersonal factors relating to the power and prestige of the suggestor. Whilst Eysenck and Furneaux fail to provide sufficient empirical evidence as to the existence of this type of suggestibility (Evans, 1967), the concept of "tertiary suggestibility" does appear to resemble part of what Gudjonsson and Clark (1986) labelled "interrogative suggestibility". Gudjonsson and Clark claimed that this type of suggestibility is unique to an interrogative situation. Interrogative suggestibility is of particular importance to police interrogations where the nature of the situation and the relationship between the interviewer and interviewee may have the potential to facilitate a suggestible response to the questioning procedure.

The only early work that includes the idea of "interrogative suggestibility" in the classification of the different types of suggestibility, is Stukat's (1958) factor analytic study (Gudjonsson, 1992a). This study included tests designed to measure "prestige" and "personal" types of suggestibility, and two leading question tests. The results showed a secondary factor with an extensive range which was different to Eysenck and Furneaux's (1945) secondary factor. Stukat's secondary factor represents tests where subjective influences on the part of the participant, such as expectations and the need

for conformity, affect their perceptions, judgements and memory (Stukat, 1958). The tests which Stukat found to have the highest loadings on this factor were:

1) "Contradictory suggestion" tests, where the experimenter contradicts a participant's judgement;

2) "Co-judge" suggestion tests, where a response is attempted to be influenced by co-judge suggestion in making a judgement;

3) "Weight and line pairs", where the participant is asked to classify non-identical stimuli following the suggestion that they are identical.

Stukat (1958) argued that the contradictory and co-judge tests were the most clearly related to personal influence and pressure from the experimenter, and so a need for conformity was seen to be the most important determinant of secondary suggestibility. Stukat argued that needs, attitudes, values and reinforcement can influence perceptions, memory and judgements, especially in an unstructured situation.

Whilst Stukat (1958) may have been the first to classify what Gudjonsson (1983) later called "interrogative suggestibility" as a distinct type of suggestibility, other earlier work (e.g. McDougall, 1908; Sherif, 1936; Coffin, 1941) does indicate the importance to the suggestibility process of some of the factors discussed by Stukat. McDougall (1908) related suggestibility to four discrete conditions: a) exceptional conditions of the brain (e.g. hypnosis, sleep and fatigue); b) deficient and poor organisation of knowledge related to the information being communicated; c) impressive characteristics of the person offering the suggestion (i.e. prestige and power); and d) the characteristics and disposition of the participant. Sherif (1936) argued that a stimulus is never perceived in isolation but is experienced, perceived, judged and reacted to in the context of other stimuli, present or past. In other words, an individuals

"frame of reference" influences their perceptions and judgements (Sherif, 1936). Coffin (1941) also believed that a suggestible response was a framework response where judgements and perceptions are influenced by internal factors (e.g. attitude, mood and personality) and the external attributes of the situation.

It would seem, therefore, that several distinct types of suggestibility have been identified. As was noted in the above discussion, motor responses are most commonly identified with primary suggestibility, which is also correlated with hypnotizability. Secondary suggestibility has been found to include a rather wide variety of tests, which are generally, but not wholly, characterised by sensory and perceptual processes and judgements. Tests included in this factor do not, however, appear to be interrelated. Gudjonsson (1987a) therefore concluded that there are sound theoretical and empirical reasons for conceptualising interrogative suggestibility as distinct from other classifications of suggestibility, and that the concept of interrogative suggestibility has little in common with conventional definitions of suggestibility.

Early researchers who were interested in the influence the nature of a question could have on recall and testimony include Binet (1900) and Stern (1938). Binet (1900) asked participants leading questions related to pictures they had formerly been shown. Stern (1938) found that leading questions could produce distorted responses because they imply the desired response, whether or not it is correct. Davies, Flin and Baxter (1986) note that Binet and Stern used static pictures as stimuli which therefore limits the forensic relevance of the studies. This issue was addressed in a study by Pear and Wyatt (1914). This study used a simulated event as the stimulus material for the test thus increasing the ecological validity of the test material.

A definition of interrogative suggestibility is not agreed upon by all authors on the subject. Powers, Andriks and Loftus (1979) have defined it as:

> *"....the extent to which [people] come to accept a piece of post-event information and incorporate it into their recollection"* (p. 339).

Whilst this definition emphasises the importance of memory processing in interrogative suggestibility, it also assumes that interrogative suggestibility involves the incorporation of suggestions into later recollections. Gudjonsson (1992a) points out that it has not been empirically shown that people necessarily incorporate suggestions into their later recollection even if they accept the suggestions at the time. Gudjonsson (1992a) also argues that the definition given by Powers et al. (1979) is too unspecific to allow for the development of testable hypotheses, and that Gudjonsson and Clark (1986) offer a more focused definition:

> *"....the extent to which, within a closed social interaction, people come to accept messages communicated during formal questioning, as the result of which their subsequent behavioural response is affected"* (p.84).

This definition indicates that there are five interrelated parts which Gudjonsson and Clark (1986) argue characterise suggestibility in the context of police interrogations. The first part of the definition refers to the nature of the situation in which interrogative suggestibility is likely to occur: police interrogations are closed social interactions. The second important component is that police interrogations involve a questioning procedure. Questions are related to information that the interviewing officer wishes to obtain from the interviewee and are mostly concerned with past

experiences and events, so the memory recollections of the interviewee are especially important. Thirdly, these questions can be leading if they contain premises and expectations or because of the context in which they appear. The fourth important part of this definition of interrogative suggestibility, is that there must be some kind of acceptance of the stimuli. Lastly, there must be some form of observable behavioural response which indicates whether or not the suggestion has been accepted.

1.4. Police Interrogations and Interviews

The interviewing of witnesses, victims and suspects is only one of several sources of information that are available to the police in the course of a criminal investigation. Other sources include forensic evidence and any information provided by informants. The relative importance of each of these sources varies considerably from case to case. However, conclusive forensic evidence is rare in the majority of cases and so information obtained through interviewing is often essential. It is also true that there are several types of information that can only be obtained through interviewing, most obviously a confession. For these reasons, the interviewing of witnesses, victims and suspects often becomes an important source of information for the police in the course of solving a criminal case. One result of relatively recent moves to audio or videotape police interviews is that any inappropriate use of pressure by the interviewing officers is also recorded. Clearly the identification of such pressure applied during an interview brings the evidence obtained into question. It seems prudent therefore to ensure that police questioning techniques minimise such pressure and that, through training ,and supervision, interviews are conducted with this problem constantly in mind.

Most police interviewees belong to one of four types: victims, witnesses, complainants (often the victims and sometimes witnesses), and suspects. Police interviewing of these different groups clearly differs in certain respects. However they have the common aim of obtaining information. Witnesses (who can include victims) in particular have the potential to provide the police with important information about an alleged offence or offender and for this reason play a central role, not just in police

investigations, but also in the criminal justice system in general. According to Kebbell and Wagstaff (1997) interviews with eyewitnesses have several specific objectives: 1) to discover whether there has been a crime committed and if so what the nature of the act was; 2) to find evidence which will identify the individual who may be responsible; 3) to obtain evidence that will prevent a guilty suspect from using an inappropriate defence; and 4) to determine whether an eyewitness is telling the truth. These aims have also been identified through research by the Home Office (Hooke and Knox, 1995) and by Gudjonsson (1992a). Whilst reliance on eyewitness testimony varies from case to case depending on what other information is available, the overall importance of this as a source of information demands that it is as complete and accurate as is possible.

The aims of any police interview are to obtain accurate, complete and relevant reports from interviewees. It is clearly important that any information obtained has evidential value and must be sought in accordance with the Codes of Practice (Home Office, 1978) for the police or it may have no value as evidence. According to Gudjonsson (1992a) the success of an interview may depend on a number of factors: the circumstances and nature of the interview, the personality and attitudes of both the interviewer and the interviewee, the relationship between the interviewer and interviewee, and the skills, experience and training of the interviewing officer. Interviewing police officers therefore are in a position to either inhibit or facilitate a successful interview. According to Gorden (1975) the skills and knowledge that are required for successful interviewing can be learned. Given this, it seems appropriate that police officers should be provided with training to ensure that they can maximise the success of an interview in terms or completeness, reliability and accuracy.

However, until relatively recently police training in Britain concentrated more on courses in the law and relevant procedure rather than training of effective interviewing skills (Shepherd, 1991). Police officers were therefore left to their own intuition, on the job learning and informal comments from other colleagues. This lack of formal training, especially in the basic principles of memory, resulted in police interviews being non-standardised and individualised (Gudjonsson, 1992a).

Unlike many other countries there are no direct judicial or quasi-judicial controls over police interrogation and interviewing in Britain. The code of practice for police consists of Home Office Administrative Directions and Judges Rules (Home Office, 1978), which the police in England and Wales are expected to follow. The rules and directions themselves are not law, but judicial recommendations. As well as these official guidelines there are unofficial guidelines for interrogation and interviewing techniques in the various manuals that have been published on the subject. However, almost all of these manuals originate from America. The first manual written for British police officers was Walkley's (1987) "A Handbook for Investigators", which was written with in the context of the Police and Criminal Evidence Act 1984 (PACE). Despite this, some of the recommended persuasive and manipulative tactics may be a breach of the Codes of Practice (Gudjonsson, 1992a). Overall these manuals tend to advocate the use of pressure, deception, persuasion and manipulation in order to get to the truth (Gudjonsson, 1992a). More recently official Home Office training manuals which mark the shift in ethos from *interrogation* to *investigative interviewing*, have been distributed to police officers in England and Wales. The issue of current police training will be returned to later in this section.

1.4.1. Questioning Techniques

Generally, police interviewers learn more about what they need to know or what direction an interview should take as the interview progresses. For this reason questions are often developed during the course of the interview. Typically, an interview will begin with an open question, that is, one that requires the interviewee to give a descriptive account For example "Can you tell me about what happened to you last night?" This allows the interviewer to gather some background knowledge which will allow for the formulation of relevant, specific and closed questions. Closed questions are far more restrictive and generally result in very short answers. For example "What time was it when the attack occurred?" These types of questions allow the interviewer to keep the focus of the interview on the most relevant issues. According to Gudjonsson (1992a) there are three types of closed questions: 1) questions that call for an identification of some kind; 2) questions that require the selection of one alternative from two or more possible responses that are provided by the interviewer; and 3) "yes-no" questions. "Selection" type questions can be misleading when the alternative responses are based on an uninformed premise (i.e. inaccurate information) (Gudjonsson, 1992a). "Yes-no" questions can also be useless if the interviewee has a strong tendency towards acquiescence. In fact, these questions often induce a response bias, such that if in doubt many people will respond affirmatively (Sigelman et al., 1981; Gudjonsson, 1986).

It is known that eyewitness reports can be unreliable, incomplete, partially constructed and malleable through the questioning procedure. Widely accepted research (e.g. Loftus, 1975) has shown that the wording of questions can have a substantial effect on the answers that are given, and that leading questions are particularly likely to alter an

interviewee's response. Leading questions are those that indicate the desired response within the question. Richardson et al. (1965) defined a leading question as any question that contains a premise or an expectation. A question that contains a premise is one that is based on prior knowledge or an assumption which may or may not be correct. Such a question's potential for distorting a response will depend on whether the premise is informed or uninformed. A question that is based on an uninformed premise may be knowingly or mistakenly agreed with by the interviewee (Gudjonsson, 1992a). Generally, closed questions of this nature will result in a greater possibility that an interviewee will agree with an incorrect premise. According to Gudjonsson (1984a) closed alternative questions of this nature which require a choice to be made from two false options are especially prone to distortion. For example "Did the assailant kick or punch the victim?" where neither occurred. A question that contains an expectation is one where the desired response is indicated, most often by the syntax or logic of the question (Gudjonsson, 1992a). For example, "Am I correct to assume that you can identify the assailant?" Richardson et al. (1965) argue that expectation may also be communicated by the interviewer's intonation or non-verbal behaviour and categorise two types of expectation based on differences in suggestive potential: 1) a weak expectation where there is the indication that the interviewer is not entirely sure or confident; 2) a strong expectation which indicates that the interviewer has a strong degree of certainty therefore putting pressure on the interviewee not to give a contradictory response.

Waterman, Blades and Spencer (2001) investigated the extent to which adults and children will speculate during formal interviews when asked closed questions that they do not have the information to answer. Participants were read two stories and

then asked questions regarding details of the stories. Some of these questions were answerable on the basis of the information provided and others were not. Half of both types of questions were closed questions requiring only a 'yes' or 'no' answer, and half asked about particular details from the narrative. All participants performed at a high level of accuracy on the answerable questions. However, with the unanswerable questions there was a significant effect for format. The majority of both children and adults indicated that they did not know the answers to questions requesting particular details. However, most of the children and over one fith of the adults provided a response (either 'yes' or 'no') to the unanswerable closed questions. This supports Gudjonsson's (1984a) argument that there is an increased expectation with this type of question, and that interviewees are more likely to provide inaccurate answers when faced with closed alternative type questioning.

It is well documented that leading questions give rise to distortions during interviewing (Stern, 1938; Loftus, 1979a). Even when a question does not contain a strong expectation distorted responses still occur (Gudjonsson, 1984a). The nature of any police interview or interrogation gives the interviewing officer control over the immediate situation. This can result in interrogation bias if the interviewing officer begins the interview with specific assumptions and expectations which affect the direction of the interview. The interviewer is likely to be especially sensitive to any information which reinforces their assumptions and expectations and may ignore or distort any information which is contradictory (Gudjonsson, 1992a). According to Trankell (1972), the function of any police interview makes it probable that even the most skilled and experienced interviewers may be inclined to bias the nature and outcome of the interview. When based on uninformed premises, or incorrect

assumptions, interrogation bias may result in a distorted or incomplete report of the facts. This outcome would be extremely undesirable and may negatively affect the course or outcome of a criminal case, perhaps resulting in a false identification or confession.

An American study by Fisher, Geiselman and Raymond (1987) offers a fairly in-depth analysis of what happens inside American police interviews. Fisher et al. analysed eleven tape-recorded police interviews with eyewitnesses. The interviews had been conducted by eight different, experienced detectives who averaged 10.5 years of police service. The various interviews covered a wide range of crimes, interview conditions and victims, so therefore can be considered to be fairly representative of various types of crime. Fisher et al. found that the only element shared by the interviews was a very loose structure, which confirms the view that police interviews are non-standardised and individualised. Typically the interviews began with the eyewitness being asked to give a descriptive narrative of what they had witnessed. Following this general beginning, Fisher et al. found more variation among interviews than uniformity. At some point during the course of the interview, the interviewer typically asked a number of direct questions, seemingly with the aim of obtaining specific information. In some interviews the direct questions were asked one after the other, in others, direct questions were asked individually and distributed throughout the interview. Fisher et al. concluded that the timing of these questions generally seemed to be unconnected to the comments from the eyewitness. The most distinct features of the interviews were found to be: 1) that there was very little uniformity in the structure of the various interviews; 2) that most of the questions about specific facts were asked in a very direct form; and 3) that the interviewer offered little or no

assistance to try and enhance the eyewitnesses recollection. Fisher et al. argue that they believe these circumstances exist in part because of a lack of training in conducting interviews with co-operative witnesses.

Fisher et al. recommend several conceptual guidelines, based on generally accepted principles of memory, which they believe would promote effective eyewitness recollection. It is universally accepted that more information exists in the memory than can be accessed (Baddeley, 1999), and therefore that not being able to remember is often a failure of retrieval. When a witness says that they cannot remember a specific fact, it may be that an appropriate retrieval cue would help them remember. Accordingly, an effective interviewer should ideally be able to determine the cue required to access the hidden information, but without leading the interviewee. Fisher et al. argue that an effective technique would be to encourage the interviewee to think about the psychological and physical context of what they witnessed, thus hopefully providing more cues to aid the retrieval process.

Another generally accepted principle of memory, which Fisher et al. believe could be utilised to aid eyewitness recollection, is that sometimes information which is not accessible from one perspective may be accessible from another (Anderson and Pichert, 1978). Therefore, if the initial direct question fails to elicit the desired information, the interviewer should try a variety of different questions. Fisher et al. found that typically in the interviews they analysed the interviewer did not pursue a matter through alternative questions if the witness claimed they could not remember. More recent research (e.g. Boon & Noon, 1994) has demonstrated that there are some problems with the use this change of perspective technique. Boon and Noon (1994)

found that encouraging participants to change perspectives increases inaccuracies in recall. Fisher et al. also recommend that the interviewer should endeavour to co-ordinate questions with the mental representation of the crime that the eyewitness is using. The mental representation can be used to answer questions if they are compatible with the image. If questions are incompatible with the image, then the eyewitness will have to make an effort to create a new image which is more appropriate for the line of questioning. This process would detract from effective memory retrieval (Fisher and Price-Roush, 1986). Inferring the eyewitnesses' mental representation of the crime scene could prove to be problematic for police officers and could perhaps require more than the careful listening that Fisher et al. recommend. It seems more realistic to encourage police interviewers to ask specific follow up questions immediately following the eyewitnesses description of some feature of the crime, before they have moved on to describe another feature. Indeed, Fisher et al. found that in almost every interview, the sequencing of questions seemed incompatible with the eyewitnesses mental representation and were frequently asked in the same order regardless of what type of information the witness had provided in their descriptive account. It therefore seems likely that in most of the interviews the eyewitnesses' recollection of the event was not maximised through appropriate questioning.

Two other techniques that could potentially impede memory retrieval which were used by the interviewing officers in all of the interviews analysed, were frequent interruptions and excessive use of the question-answer format. An initial request for an open ended description from the eyewitness is a highly recommend technique (e.g. Stone and DeLuca, 1980). However, Fisher et al. found that in not one of the

interviews was the witness permitted to finish this description without any interruption. Obviously this results in the possibility that important information will be missed out, it is also likely to cause the witness to break concentration. Several interruptions are likely to result in the witness developing the expectation that they will continue to be interrupted (Fisher et al., 1987). If the witness believes that they only have a limited period within which to give an answer, it is likely that the answer will be shorter and less detailed than one without such perceived limits. Fisher et al. found that the interviews were generally conducted as essentially a series of direct, brief questions which elicited an even more direct, briefer answer. They argue that the result of this format is that the eyewitness tends to wait for the interviewer to formulate the next question and therefore the active mental processing is transferred to the interviewer while the interviewee remains largely passive. This is clearly an undesirable consequence of this technique, as effective memory retrieval requires active participation on the part of the interviewee. Another limitation of this technique is that if the interviewer does not ask a specific question or there is information which cannot be anticipated, those details may not be offered. Clearly there is the functional need for both open ended and closed questions during police interviewing, however, Fisher et al. recommend that interviews be structured around open ended questions rather than closed ones.

The nature of the police interview situation and the fact that the interviewer is a formal authority figure are both likely to result in the interviewee experiencing a heightened state of anxiety. An effort should be made on the part of the interviewer to establish some form of personal rapport with the interviewee at the beginning of the interview. This would serve to relax the interviewee and should allow for more

effective memory retrieval (Fisher et al., 1987). Watzlawick, Beavin and Jackson (1967) propose a model of communication where interactants communicate their definition of the type of relationship that they each perceive to be the case, or would like to be the case. They suggest that with any interaction between two or more people there is some communication of relationship information. According to Bateson (1972) a relationship can be either up-down (dominant/ submissive) or across (equal). In up-down relationships it is understood that the one in the up status is hypothetically the one with power, especially expert power and coercive power (Shepherd, 1991). This person therefore has a greater capacity to impose their definition of the interaction on the other person. This type of relationship is of particular advantage and importance to police officers as it communicates a tight and inflexible control over the content and conduct of the interview (Shepherd, 1991).

Any interview relationship is typically up-down, but this is particularly expected and assumed to be the case in the police context. This up-down relationship increases the interviewing officer's potential to regulate the interview in such a way as to distort information so that it fits their preconceptions, and create a situation which may lead to the interviewee accepting this information (Shepherd, 1991). This process is aided through the use of leading questions and excessive closed questioning. Shepherd (1991), an experienced British police officer, argues that this all too common approach to interviewing by the police is unethical. He suggests that it is important to communicate respect to the interviewee and that assertive behaviour, rather than dominant, would be most effective in achieving this aim. Shepherd argues that unethical interview techniques and dominant behaviour interfere with an interviewee's ability to make sound judgements and that this results in an interviewee who can be:

1) forced and intimidated into making choices they wouldn't usually make; 2) denied the freedom to make choices they would normally make. Such a situation is likely to result in a report of information that could potentially range from the partially to the wholly inaccurate (Shepherd, 1991). Unethical interview techniques do not only include such openly coercive techniques. More subtle forms of pressure, for example a particularly abrupt or aggressive interviewer manner, may result in suggestible responses on the part of the interviewee (cf. Baxter & Boon, 2000). Clearly it is undesirable that any interviewer should exert an influence of this kind over an interviewee and there is a need to control both coercive and suggestive questioning techniques in forensic contexts.

1.4.2. The Cognitive Interview

In view of the potential for distortion through the interviewing process, psychologists (e.g. Loftus, 1979a) have argued that dependence on eyewitness testimony and identification may lead to wrongful convictions. Researchers have investigated factors that affect accuracy of eyewitness testimony in a variety of different conditions (e.g. Fruzzetti, Tolland, Teller and Loftus, 1992; Hollin, 1989). Much of this work has taken place in the laboratory which has lead to questions regarding ecological validity (Malpass and Devine, 1981) as some factors that may exist in the real world (e.g. stress) can not ethically or realistically be included in the laboratory situation. Due to the practical necessity for police to conduct eyewitness interviews, Fisher, Geiselman and Raymond (1987) suggest that a better approach to the problem of accuracy in forensic investigation is to aim research towards improving eyewitness interview techniques and maximising the completeness and accuracy of these reports.

Geiselman and Fisher (1985) argue that this aim can be achieved through "cognitive interviewing", a technique based on the basic principles of memory and cognition.

The cognitive interview relies on cooperation from the interviewee whether they are a witness, victim or suspect. The original format of the interview (Fisher, Geiselman & Amador, 1989) comprises four techniques: 1) interviewees are encouraged to report everything regardless of how important they deem it to be or however partial the memory may be; 2) interviewees are also asked to mentally reinstate the context of the to be remembered event. This calls on interviewees to reconstruct a mental image of both the physical and the personal / emotional aspects of the witnessed event. The reasoning behind this is that any feature of the environment in which an event is encoded could in principle act as a retrieval cue (Memon & Bull, 1991); 3) events are to be recalled in a variety of different temporal orders, for example reversing the order of events, or beginning with the most memorable aspects and ending with the least. Research has shown that this can result in a more complete and accurate report of events (Geiselman & Callot, 1990); 4) interviewees are encouraged to change perspective and report the event from the perspective of another person who was present. Again there is research to support the idea that this technique results in a more complete report of events (Anderson & Pichert, 1978). However, it has also been noted that such a technique can encourage distortion and fabrication of details and so care must be taken when using this particular technique (Fisher & Geiselman, 1992). Since this original formulation, Fisher and Geiselman have further developed the cognitive interview to included some principles of effective interpersonal communication (see Fisher & Geiselman, 1992). The enhanced cognitive interview, as well as the aspects outlined above, includes recommendations for interviewers to

spend time establishing rapport with the interviewee and explaining the purpose of the interview.

Several studies have examined the effectiveness of the cognitive interview (e.g. Geiselman, Fisher, MacKinnon & Holland, 1985; 1986; Fisher, Geiselman & Amador, 1989). In general, these studies have shown that the cognitive interview elicits more correct information than a standard interview. Increased accuracy using the cognitive interview has been found for different types of interviewees: normal adults and adults with learning disabilities (e.g. Milne, Clare & Bull, 1999), the elderly (Mello & Fisher, 1996), and children (Saywitz, Geiselman & Bornstein, 1992). However, as was previously noted, the applications of the cognitive interview are seriously limited by the fact that it relies entirely on a cooperative interviewee. The cognitive interview has also sometimes been found to increase the report of distorted or fabricated details (for a meta-analysis see Köhnken, Milne, Memon & Bull, 1999), an effect which may be an inevitable artefact of a technique that actively encourages imaginative reconstruction of an event.

1.4.3. Police Training in Investigative Interviewing

As was noted in the previous section, until relatively recently there was a lack of formal training in interview techniques for British police officers. Prior to 1992 the formal training that did exist focused on the more procedural aspects of interviewing and the relevant laws. Research findings (e.g. Baldwin, 1992a; Moston, Stephenson, & Williamson, 1990) highlighting deficiencies and considerable variations in officers' interviewing skills, lead to the Association of Chief Police Officers (ACPO) instigating the design of a one week training course in investigative interviewing in

1992. This marked a shift in ethos from *interrogation* to *investigative interviewing* and resulted in the development of the PEACE training approach with the aim of standardisation of investigative interview training across England and Wales. PEACE is an acronym which identifies the various components of this model of interviewing: Preparation and planning, Engage and explain, Account, Closure, and Evaluation.

1.4.4. Background to the PEACE Training Approach

Moston, Stephenson, and Williamson (1990) analysed 1067 tape-recorded interviews with suspects, from 10 Metropolitan police stations. The results of this analysis provided evidence of the emphasis that is placed on obtaining a confession from such an interview. It was noted that interviews were brought to an end as soon as a confession was obtained. As Moston et al. point out, should the confession subsequently be withdrawn, the premature end of an interview will ensure that it is unlikely that there will be any evidence on tape which may further damage its authenticity. Moston et al. argue that the preoccupation with obtaining an admission considerably reduced the effectiveness of the interviews in their sample. They also found that the interview skills of officers varied considerably, with some officers performing relatively well during interviews and others demonstrating a general lack of interview skills. Despite this, Moston et al. identified a general complacency in the attitudes of officers towards the task of interviewing. They suggest that such a widespread attitude may, in part, be due to ambiguity surrounding what sort of behaviour is appropriate during interviews under PACE. In light of these findings, Moston et al. strongly recommended the need for formal training in interviewing techniques for all officers. They emphasised that such training should place the

interview in the context of the entire investigative process and not simply be seen as a means for gaining a confession.

Baldwin (1992a) reached similar conclusions to those of Moston et al.. This study was concerned with an evaluation of the benefits of video recording interviews with suspects as opposed to audio alone. However, the study also allowed for an evaluation of the interviews themselves. Baldwin examined four hundred video recordings and two hundred audio recordings of police interviews, of these, Baldwin judged 64% to have been conducted competently which leaves a sizeable minority of 36% that were judged by the researcher to be unsatisfactory. Baldwin made four main criticisms of the interviews in his sample:

1. *Ineptitude*: Officers were found to appear nervous, ill at ease, and lacking in confidence in the interview room. Even in the most straightforward of cases, interviewing officers were unfamiliar with the evidence and frequently appeared unacquainted with the relevant written statement. Many of the interviews were judged to be unfocussed, and lacking in structure and clear purpose. In general, Baldwin felt that the officers appeared to be unprofessional, and even unskilled, interviewers.

2. *Assuming guilt*: As with Moston et al. (1990), Baldwin found that officers generally approached the interview with the agenda of obtaining a confession, and in the majority of cases this was what they achieved. Baldwin warned that such an assumption of guilt can be dangerous as it clearly affects the type of questions that are asked and the general tone of the interview. Leading questions, repetitive questioning and allegations were all frequently observed, and the tone adopted for questioning was

often one of extreme scepticism. It should be noted that these types of techniques are no longer tolerated by lawyers, who will now intervene to prevent this type of questioning from occurring. Baldwin argued that admissions obtained in this manner amounted to officers putting words in suspects' mouths. Such confessions are insufficient to sustain a case as officers fail to obtain any further confirmatory evidence which would be needed should the confession subsequently be withdrawn (McGurk, Carr & McGurk, 1993). It would therefore have been not only unprofessional to conduct an interview in this manner, but also counterproductive.

3. *Poor interview technique*: This category included a whole array of problems associated with the technical aspects of interviewing. Problems included continual interruptions of suspects; officers not having a clear grasp of the legal requirements needed to prove an offence; failing to control the interview; overreacting to provocation or aggressive behaviour from the suspect; and becoming agitated at any intervention from a third party, especially a legal representative. Again, it should be noted that these types of behaviours would no longer be tolerated on the part of an interviewing officer.

4. *Unfair, questionable or unprofessional conduct*: Of the sample, there were a relatively small number of cases where officers were thought to have behaved in an unacceptably aggressive or harassing manner. These instances left the researcher feeling particular uneasy regarding the outcome of the interview, especially where juveniles or young people were involved. There were also some cases where suspects were offered an unfair inducement to confess. For example, receiving a lighter sentence.

Baldwin admited that the interviews included in his study did not constitute a perfectly representative sample. Indeed there was no scientific basis to the composition of the sample: which interviews were included was affected by some extraneous and uncontrollable factors. For instance, only those officers who were prepared to use the video equipment in the first place could be included in the evaluation. There was also variation between stations in what sort of cases were video recorded. Some stations used the video equipment primarily for more serious cases, where as others appeared to include a more random selection of interviews. The sample therefore included an array of different cases and hundreds of different interviewers. Perhaps the most important qualification, which again Baldwin makes himself, is that the very presence of the video equipment for the experiment may well have affected how the interviews were conducted. It seems fairly probable that officers who know the interview is being video recorded for evaluation will take greater care over the proceedings and will be less likely to employ questionable methods. In fact this is one of the reasons for the introduction of audio and video recording: inappropriate pressure and conduct is also recorded. However, in reality the original recording is rarely referred to. Instead the interviewing officer's written summary of the interview is used as evidence (Stockdale, 1993; Baldwin, 1992a).

Despite these qualifications, Baldwin's study remains one of the largest and in-depth studies of what happened inside of the police interview room ten years ago, events which have only recently been open to outside scrutiny. What Baldwin's evaluation showed is that there was great individual variation in officers' abilities as competent interviewers. Baldwin did not specify what the precise criteria for his assessment

were; his evaluation was aimed at determining whether an interview could be described as fair and professional, taking consideration of factors such as the suspect's vulnerability, age, attitude and personality. Professionalism was assumed to mean that the interviewing officer demonstrated the basic rules of good interview practice, such as allowing the suspect a fair opportunity to freely give their report of events, listening patiently to their answers to questions, avoiding harassing, coercive or authoritarian tactics, and being firm, but fair when challenging a suspect's story against the evidence. On this basis, Baldwin rated only 40% of officers in the sample as competent since three quarters of their interviews were considered to be satisfactorily conducted. This was a rather low percentage and indicated that there was ample room for improvement in interview practice. The PEACE training approach and associated improvements in practice was in direct response to these findings as well as those of Moston et al. (1990).

As well as there being variation in officers' levels of interviewing skills, Baldwin also found marked variation in the amount of interview training reported by officers. Some of this variation can be accounted for in terms of rank and length of service; however, there were some fundamental differences between forces in their approach to such training. The extent to which training and practical interview skills are related is clearly an important question, and as Baldwin points out, attendance on a training course does not guarantee that an officer will prove to be a good interviewer. Indeed, the results of Baldwin's evaluation indicated that the correlation between training and performance was fairly low, which showed that training on its own does not guard against poor standards in the interview room. Clearly some officers have better social and interpersonal skills, and are therefore predisposed to be better interviewers than

others. However, these skills can also be learnt through proper training. Therefore, training has an important role to play, and the majority of officers can be trained to perform at least at moderate levels of competence (Baldwin, 1992a).

Baldwin reaches four main conclusions from his study. Firstly, senior police officers at the time did not recognise that a problem existed. Until it is recognised that some officers' standards of interviewing are unacceptably low, nothing will change. Baldwin recommends that senior officers should routinely view a random selection of video recorded interviews. Secondly, attendance at a training course is not enough; there must be practical testing of interviewing skills. Rigorous testing following training would ensure a minimum standard which all officers must reach. Thirdly, the training that existed at the time was thought to be too advanced for the needs of most officers. Baldwin found that there was an emphasis on psychological techniques that were inappropriate and emphasised some controversial approaches such as reading body language or picking up on non-verbal signs of deception. These types of ideas can be dangerous as they may encourage officers to employ coercive techniques and there is also no evidence to support the idea that they are effective. Baldwin recommends that what is needed for the majority of officers is basic communicative and social skills training. Lastly, Baldwin recommends the production of a simple handbook that could be distributed on a national level to all officers who are involved in interviewing. This would help to establish a minimum standard and explicate the necessary codes of practice.

The weaknesses and shortcomings identified by the above research, along with judicial criticism of police practice in several high profile cases, led to a national

review of police interview practice by the Association of Chief Police Officers (ACPO) and the Home Office (HO). It was this review that led to the *investigative interviewing* ethos and the PEACE training approach.

1.4.5. The PEACE Training Approach

The PEACE interview model along with the relevant laws such as PACE (1984) was distributed to all officers in England and Wales in the form of two booklets: *A Guide to Interviewing* (Central Planning and Training Unit, 1992a) and *The Interviewer's Rule Book* (Central Planning and Training Unit, 1992b). The PEACE model of interviewing is not mandatory, but instead represents guidelines for good practice. The booklets were produced to reflect the new training approach. A five day PEACE training course was developed, which was initially aimed at officers with less than six years service but who had completed their two year probationary period. The aim of the course is to ensure that all officers develop the basic skills needed to apply the model and reflect the principles set out by the ACPO and HO. The five elements of this course are: preparation and planning; engage and explain; evaluate.

1.4.6. Evaluation of PEACE Training

McGurk, Carr and McGurk (1993) initially evaluated PEACE training during the pilot phase before it was introduced formally in England and Wales. The aim was to assess officers interviewing skills both prior to and following training. The results of this were compared with a control group who received no training. This control group was matched according to age, work location, and experience. Officers were assessed on a number of different levels: a theory test, simulated interviews with witnesses and suspects, and real life interviews with suspects. This assessment occurred prior to,

immediately following, and six months after training. Overall McGurk et al. found officers' knowledge and skills performance to have increased following training and to be significantly better than the control group. This improvement was sustained to the six-month follow-up. They therefore concluded that providing officers with a model for investigative interviewing and allowing them the opportunity to practice skills was a successful training approach. The most significant learning appeared to be in the "planning and preparation" stage. However, "closure" was rated poorly for both groups before and after training. The results indicate that in a real life situation closure of the interview may be rushed or omitted altogether. This is cause for concern since this phase of the interview may play an important role in influencing perception of the police when co-operation may be needed at a later date. On the theory based test, officers who received training demonstrated ability to adopt and differentiate between the cognitive interview and conversation management approaches. There was also evidence of learning with regard to questioning techniques, PACE and codes of practice, listening skills, and understanding the need to interview witnesses.

To date this study by McGurk et al. has been the only evaluation of the efficacy of the PEACE training approach. Further research is needed to assess how the training model transfers to the everyday workplace and continuing assessment of how training is administered. The trainers involved in the pilot courses had received a two week briefing on the course materials and methods and were considered by McGurk et al. to be adequately prepared and experienced trainers. However, presumably some of the efficacy of any training depends on who delivers it. Milne and Bull (1999) suggest that this is indeed one of the problems with PEACE training, that those who now administer the training have been trained by "cascade training". In other words, those

originally trained to run the course have passed their knowledge onto colleagues who now administer training without the benefit of any first hand training of their own. In fact, Milne and Bull report that it is now the case that those administering training are the fifth or sixth generation of officer removed from the original trainers. This method surely leads to an unacceptable level of dilution and diversifies the understanding of the investigative interviewing model (Hodges, 1995 as cited in Milne and Bull, 1999), when the opposite of this was the original aim. It would seem that there is a good argument for the development of an external body to regulate and administer investigative interview training to police officers.

1.4.7. Current Supervision of Police Interviews

As well as improved training opportunities, Baldwin (1992a) also emphasised the role of supervision for raising standards. At present the responsibility for the management and supervision of interviews lies within the police service. During their initial tutorship officers progress from sitting in on senior officers' interviews to conducting their own interviews under direct supervision. However, following this period there is no formal policy for the direct supervision of interviews conducted by junior officers. Stockdale (1993) found that a significant number of officers completing their tutorship had in fact been allowed to conduct interviews unsupervised despite their lack of training and experience. For junior officers who have completed their tutorship, supervision of interviews and feedback from supervisors was found to be virtually nonexistent.

Stockdale also found that supervisors provided very little feedback or guidance to junior officers preparing the written record of interviews. Officers are therefore left to

rely on self-monitoring, informal comments from other colleagues, and criticism from the CPS. This is surely an unacceptable situation given that it is the transcript of an interview and not the original video or audio recording that is most often referred to and presented in court. Therefore an officer's representation or perception of what happened during an interview is what is relied on and without any kind of supervision it comes down to a matter of trust that this is a fair representation. There is clearly plenty of potential for officers to inadvertently or otherwise misrepresent the content of an interview and it would therefore seem appropriate to provide a high level of monitoring for junior officers and frequent checks on other officers' interviews and transcripts. However, it should be noted that defence counsel has access to both the original recording and the transcripts and that either or both may be presented in court. The reason defence prefer to use the transcripts is that the original recordings may present their clients in a more unfavourable light.

Baldwin and Bedward (1991) found that fifty percent of the written records of interviews they examined did not provide a fair summary of the content of the interview, and in one third of these cases Baldwin and Bedward judged the written summary to provide a misleading or distorted view of the interview. Similarly, Baldwin (1992b) found that in less than one third of the cases examined was the written record an accurate and succinct summary of the interview. Based on this study and previous research (Baldwin and Bedward, 1991), Baldwin concluded that there are widespread problems with providing accurate written records of interviews. He argues that such problems are likely to persist as long as the responsibility for the management and supervision of the task remains within the police service.

Stockdale (1993) lists four benefits of monitoring recorded interviews: 1) to improve interview standards and evidential quality; 2) to identify training needs; 3) to identify problems before they are raised in court; 4) to ensure officers' compliance with PACE, and the integrity of the investigation. It would seem that training is only one step in improving interviewing standards. Clearly the management and supervision of interviews on a day-to-day level has an important role to play if the standards of interviewing are to continue to be improved. Despite this, Stockdale (1993) found junior officers reported that supervisors vary a great deal in their ability, availability and willingness to provide help and support. It was also reported that many sergeants were seen as neither happy with nor prepared to adopt a more active supervisory role. Reasons given for this include lack of time and resources. It would seem that the pressures of day-to-day policing make it difficult to implement such on the job training and supervision. Indeed, many officers felt that the monitoring of interview standards was not a job for supervisors, but should be implemented by the Inspectorate of Constabulary or a panel of 'experts'.

It would seem then that, as with training, although there is some level of support within the police force for changes that would improve practice and standards of interviewing (Stockdale, 1993), how this translates to everyday practice comes down to the individual and is therefore likely to vary enormously. The original aims of PEACE to standardise investigative interview training, set a minimum standard and improve everyday practice seem unachievable without monitoring and, as noted above, it may be too much to expect senior officers to assume full responsibility for this and certainly expecting officers to rely on self-monitoring is wholly unrealistic. It may be that the only way to ensure adequate training for all officers and careful

monitoring of interviewing standards is for an external body to assume the responsibility.

It seems that both training in interview skills and continuous monitoring of standards for all police officers is necessary if standards of practice are to be both improved and maintained. As the research by Baldwin (1992a, 1992b) has shown, there are significant deficiencies and variations in officers' interviewing skills. Amongst other things, Baldwin's research highlights the problem of suggestive interviewing techniques. This research found a high incidence of leading question, repetitive questioning, direct allegations and a general tone of extreme scepticism. All of these techniques increase the pressure on an interviewee, and Baldwin found that in the majority of cases where such techniques were used a confession was obtained. Leading questions and repetitive questioning are well recognised as leading to suggestible responding on the part of the interviewee (Loftus, 1979a; Gudjonsson, 1992a). Such suggestive interview techniques can be subtle and are not openly coercive. However, they can have a significant effect on an interviewees testimony, particularly if they are psychologically vulnerable (cf. Gudjonsson, 1995).

With the introduction of video or tape recording of police interviews with witnesses or suspects, any use of inappropriate levels of pressure applied by interviewers is also recorded. Identification of this type of pressure can make the evidence obtained during the interview look questionable. Therefore, in the interests of justice and sound police interview practice, all officers should receive proper training in interview skills so as to eliminate the use of suggestive interview techniques. With proper training officers should be able to keep the extent to which they influence the interviewee to a

minimum, and thereby reduce the likelihood that the evidence obtained will be challenged or dismissed because of the way in which it was obtained.

1.5. Cognitive & Social Mechanisms Underlying Suggestibility Effects

1.5.1. The Role of Memory

Memory for events has long been recognised as being malleable and inaccurate (Loftus, 1979a; Pope, 1996). We tend to believe that if we remember an event in a particular way that our memory is an accurate representation of what really happened. However, this is not necessarily the case. At any of the three stages of acquisition, retention and retrieval, memory is open to distortion (Gudjonsson, 1992a).

Several factors related to both the event and the witness have been identified as affecting the acquisition stage (Loftus, 1979a; Loftus, Green & Doyle, 1990). For example, the length of time an event is witnessed for (Ellis, Davies, & Shepherd, 1977), the lighting conditions (Yarmey, 1986), or the emotional state of the witness (Christianson & Loftus, 1991). Event and witness factors such as these can affect the strength of the original memory for an event, which is one factor involved in suggestibility effects (Shaughnessy & Mand, 1982). According to Milne and Bull (1999), the extent to which misleading information is incorporated into memory is assumed to be a function of the original trace strength. The stronger the memory trace is the less likely it is that an individual will be susceptible to suggestion.

However, most important to this discussion are those post-event factors that can lead to distortions of memory. Memory distortion that is the result of post-event misinformation or suggestion is referred to as the misinformation effect (Loftus & Hoffman, 1989). Early research in this area of memory distortions (e.g. Loftus & Palmer, 1974; Loftus, 1979a) sought to address the issue of what happens to a

person's memory of an event when they are exposed to misleading post-event information. The experimental paradigm for such studies is one in which a group of participants witness an event and are later exposed to misleading information concerning the event. Another group of participants witness the same event, but are not exposed to the misleading information. Participants exposed to the misleading information report a significantly higher number of inaccurate details than do those participants who have not been misled. This robust finding has been replicated many times using this paradigm, with differences in accurate recall between control and experimental groups reaching as much as 40% (Ornstein et al., 1996).

Two hypotheses have been proposed to account for the misinformation effect: the alteration hypothesis and the coexistence hypothesis (Toland, Hoffman & Loftus, 1991). However, it has also been argued by McCloskey and Zaragoza (1985) that misinformation does not affect memory for events. Instead they argue that the misinformation effect is an artefact of the experimental paradigm used. The alteration and coexistence hypotheses share the assumption that exposure to misleading information interferes with the original memory of an event, and results in erroneous reports of that event. The difference between them lies in the type of interference that is thought to occur, and thus in their respective implications for the retrieval of the original memory. If misinformation alters the original memory (i.e. is permanently integrated into the cognitive representation of the event), then accurate retrieval may be impossible. However, if it is the case that the misinformation coexists with the original memory, then it may still be possible to access the original memory (Toland et al., 1991).

According to the alteration hypothesis (e.g. Loftus & Hoffman, 1989), memory for misleading suggestions in some way "overwrites" and therefore replaces aspects of the original memory. Information concerning an event is believed to be stored in memory as an integrated whole. New information about the event, whether misleading or not, is thought to be integrated into the original memory. If there are inconsistencies between the new information and the existing memory, then integration alters the representation of the original information. Therefore, the assumption is that misinformation renders the original memory inaccessible. In contrast to this, the coexistence hypotheses (e.g. Berkerian & Bowers, 1983) does not view the original information as being altered, instead the misleading information is believed to coexist with the original memory. The misleading information is thought to be more readily accessible, perhaps due to the recency of this information (Berkerian & Bowers, 1983; Lindsay & Johnson, 1989). Although the misleading information may be more readily accessible, it is assumed that the original memory remains intact.

Source misattribution has been proposed as an explanation for how two memories of the one event can coexist. Source misattribution is the result of a failure in the source monitoring process. It is proposed that confusion occurs between the source of the original memory and that of the misleading information (Lindsay & Johnson, 1989; Belli, Lindsay, Gales, & McCarthy, 1994; Johnson, Nolde, & De Leonardis, 1996). Participants may erroneously attribute the source of the misinformation to the original event rather than external post-event sources and thus include this information in their report of the event. In this situation, misled participants genuinely believe that they witnessed the suggested information as part of the original event. Studies have demonstrated that people can confuse one external source of a memory with another

external source (e.g. Hashtroudie, Johnson & Chrosniak, 1989; Ferguson, Hashtrudie, & Johnson, 1992). It would seem that people can have difficulty in remembering the source of a memory that may otherwise be quite vivid.

McCloskey and Zaragoza (1985) argued that misleading suggestions neither alter the original memory nor do they render it inaccessible. Instead, they argued that the misinformation effect, rather than being the result of memory impairment, is due to a response bias that is inherent in the standard experimental paradigm (as outlined above) used in misinformation effect studies. McCloskey and Zaragoza argued that in such studies some participants in both conditions will fail to store aspects of the original information for reasons other than being misled. With a forced choice recognition task, such as is used in misinformation effect studies, participants who have forgotten the original detail are likely to resort to guessing. In the case of the control group, half of those who guess the answer should be right. The misled participants who have forgotten the original detail may remember the misinformation and respond accordingly. This clearly would result in the misled group exhibiting a poorer performance than the control group, a result that is not due to memory interference from the misinformation. Participants who have been misled will therefore be biased towards providing misinformation, whereas the control group will have no such bias. McCloskey and Zaragoza termed this bias "misinformation acceptance". They argued that although memory impairment may be partly responsible for differences between control and experimental conditions in misinformation studies, other processes such as misinformation acceptance could also be contributing to the misinformation effect.

In an attempt to control for such a response bias and eliminate misinformation acceptance, McCloskey and Zaragoza (1985) proposed a modified test procedure. In this modified procedure, a novel item is introduced at the recognition stage so that the original item is tested against the novel item rather than the misinformation. If the misinformation has impaired memory for the original event, misled participants should not perform as well as controls. If, however, misinformation has not impaired memory of the original details then there should be no difference in performance. McCloskey and Zaragoza's results supported this hypothesis and they concluded that misinformation does not affect memory. However, although exposure to misinformation may not lead to memory impairment per se, memory impairment in terms of forgetting or failing to encode the original detail in the first place, clearly facilitates the misinformation effect and therefore contributes to suggestibility effects.

1.5.2. Cognitive Dissociation

The concept of dissociation dates back to early work by Janet (1889, cited by Schumaker, 1991). According to this view of cognition, consciousness is not a singular and continuous state. Instead it is thought of as a hierarchical system of cognitive control where various processes are independent, or largely independent, of each other (Schumaker, 1991; O'Brien & Opie, 1998; Dennett, 2001). Information can therefore potentially be processed along several independent pathways. Volition, self-initiative, and critical awareness are the higher levels of control from which it is thought a person can be temporarily disengaged should the situation be demanding enough. According to Bowers (1992), this lack of control from the higher levels of cognition is associated with clear behavioural changes.

The concept of dissociation has been used to explain hypnotic suggestibility (Hilgard, 1986; Evans, 2000). It is argued that hypnotic responsiveness is dependent on a dissociative state. For hypnotic responding to be made possible, the individual must be disengaged from their higher-order, or executive control, functions. According to Cardeña and Spiegel (1991), the suppression of these functions is a necessary prerequisite for hypnotic suggestibility. As well as hypnotic responding, some personality disorders have also been explained in terms of cognitive dissociation. For example, borderline and multiple personality disorders (Brenner, 1994), and post-traumatic stress disorder and fugue (Schumaker, 1991). Whilst a full discussion of the relation of cognitive dissociation to personality disorders is beyond the scope of the present discussion, it is worth noting that the concept of dissociation is not limited to hypnotic responding. Indeed, more subtle aspects of dissociation have also been associated with non-pathological behaviours.

According to Schumaker (1991) dissociation is potentially the underlying mechanism for all suggestive responding, and a variety of other, related behaviours. He argues that dissociation can help explain the apparent irrationality associated with suggestive responding, and that in fact, it is our ability to dissociate that makes suggestible responding possible. Dissociation is seen to necessarily precede suggestibility effects. Gheorghui (1989) also argued that the ability to override or neutralise our rational and critical thinking abilities is a necessary prerequisite to suggestive responding. Whilst the idea that our critical thinking abilities are an automatic feature of cognition may be a controversial one, this argument is consistent with models of information processing which emphasise non-conscious acquisition of information (e.g. Lewicki, Hill & Czyzewska, 1992). It seems that the ability to dissociate allows us to suppress or

ignore our conscious monitoring processes, which then facilitates the potential for suggestible behaviour. According to Schumaker dissociation can be viewed as an "ongoing regulatory mechanism" rather than an "arbitrary feature of cognition". He further argues that at "some preconscious level, 'decisions' are made regarding the *degree* of 'dissociative control' that is required in light of intrapersonal, interpersonal, and situational factors" (Schumaker, 1991, p. 114). Schumaker's use of the word 'decisions' suggests an active cognitive process. However, it is more likely that any cognitive dissociation that may occur is more akin to a passive relinquishing of control.

From this point of view, interrogative suggestibility can be argued to involve an element of dissociation at its core. Essentially, dissociation is thought to neutralise higher-order controls such as critical thinking abilities, and therefore enhance the potential for an individual to accept and incorporate seemingly logic defying information. This idea is reflected in the definition of suggestibility given by McDougall (1908), which emphasises the uncritical, automatic, and irrational nature of suggestive responding. According to Rhue and Lynn (1991) dissociation can be seen as goal oriented as it allows for the control of internal experiences, such as the reduction of negative affect. As such, it is a form of coping mechanism (Shaffer, Brown & McWhirter, 1998) and may underlie the avoidance coping mechanisms thought to be associated with interrogative suggestibility effects (Gudjonsson & Clark, 1986).

1.5.3. Focus of Attention

In a process referred to as social comparison (Festinger, 1954), we rely heavily on those around us to make sense of the social situations we find ourselves in. Other people provide us with information about subjective and objective reality, and information about ourselves. The extent to which this process of social comparison occurs, and the effect that it has on our behaviour, depends on both situational and dispositional factors. According to Schachter and Singer (1962) people use sources of external information to help them understand internal experiences. Essentially, this is a fundamental point in social psychology, and is at the core of much social psychological phenomena, such as social influence, conformity, compliance, self-perception, and impression formation (Gibbons & McCoy, 1991). In a social psychological approach to suggestibility effects, Gibbons and McCoy (1991) argue that a key element of social influence, and therefore suggestibility, is focus of attention. They argue that when attention is directed outside of the self, there is an increased likelihood that the individual will come to rely on external sources of information for interpretation of internal experiences. The result of an external focus of attention is that behaviour becomes much more responsive to external cues, and vice versa.

The basic premise of self-awareness theory (Duval & Wicklund, 1972) is that attention can be directed either outward at the environment or inward to the self. According to Duval and Wicklund (1972), when attention is directed towards the self we engage in a process of self-evaluation. This process involves a comparison of current behaviour or some salient aspect of the self with the individual's ideal for that behaviour or aspect of the self. More recently, Gibbons (1990) suggests that directing

attention inwards to the self results in accessing a cognitive representation of the self, or self-schema (Carver & Scheier, 1981). The result of this process is thought to be a strengthening in the link between what is experienced internally and external, observable behaviour (Gibbons, 1990).

In light of this, suggestibility effects should be most likely to occur when attention is externally focussed as opposed to self-focussed. Gibbons, Carver, Scheier, and Hormuth (1979) examined this hypothesis in a series of studies concerned with mirror-induced self-focussed attention and the placebo effect. They argued that if awareness of internal states is increased when attention is self-focussed, then reliance on external information, whether accurate or misleading, should also be reduced. In other words, self-focussed attention should reduce suggestibility. Participants were led to believe that a drug they were about to take would cause arousal symptoms as a side effect. Those self-aware participants reported experiencing fewer arousal effects of the placebo than did those participants who were not in the self-aware condition. Results of these studies supported the hypothesis; suggestibility was reduced when participants were self-focussed as opposed to externally focussed. It would seem then that if focus of attention is inward an individual may be fairly resistant to external sources of information, and communication, as internal cues are of greater importance. If, however, the social situation demands an external focus of attention then an individual may devalue internal cues and become relatively more sensitive to external cues, and thus more susceptible to suggestive influences.

1.5.4. Compliance & Conformity

Suggestibility can also be understood in terms of social influence effects. Suggestibility involves the responder yielding to an influence, the communication of which often involves some form of interpersonal interaction. Other forms of influenced behaviour which also involve yielding to the judgements or opinions of others, but which have not been categorised as suggestibility include compliance and conformity. Compliance involves yielding to a direct or indirect social pressure and results in an observable behavioural response. Compliance does not involve private acceptance of information, but refers to behaviour changes for some immediate instrumental gain (Gudjonsson, 1992a). Conformity, on the other hand, is generally thought to involve genuine persuasion and thus private acceptance. Compliance does not reflect internal change and so usually persists only for as long as the behaviour is under surveillance. Due to the internalisation involved in conformity, behaviour or attitude changes may be long term or permanent.

A classic study in this area is that by Asch (1951), in which participants conformed to obviously erroneous judgements of line lengths. Individuals were tested in groups of 9 or 10 where unbeknownst to them they were in fact the only real participant in the group otherwise made up of confederates. Participants were shown a standard line and asked to make a perceptual judgement about which of another three lines was equal to the length of the standard line. Participants were asked to call out their answers. Testing was arranged such that the genuine participant was always the last to provide an answer having heard the responses of all confederates who gave a unanimously wrong answer. The results of the study revealed that one third of participants consistently gave the same answer as that given by the confederates despite the fact

that it was an obviously wrong answer. One fifth of participants did not yield at any point throughout the experiment. Asch (1952) identified three different modes of yielding: 1) those that claimed responses were accurate and not at odds with their perceptions; 2) those that attributed their lack of agreement with the majority to some weakness of their own; 3) those who were more concerned with not appearing different or foolish than they were with accuracy on the task. It seems then that both conformity and compliance affected results obtained by Asch. On the one hand, some participants appear to have been genuinely swayed by the majority, internalising the obviously wrong judgement. On the other hand, many of the participants yielded for more pragmatic reasons, such as fear of looking foolish, and thus did not internalise the judgement of the majority.

Whilst recognised as a classic study in the psychology of social influence, Asch's (1951) study has been criticised on the grounds of the triviality of the task involved; complying or not does not hold any serious consequences for the self or others. Milgram (1963) attempted to replicate Asch's findings, but with consideration to the consequences of choosing to conform. Milgram's study involved participants being asked to assume the role of "teacher" and administer electric shocks to confederates who were the "learners". The teacher's role was to administer a progressively higher shock to the learner every time they gave a wrong answer to a cue word, the aim being to see how far the teacher would go in obeying the experimenter's instructions to continue despite the protests and then eventual screams of the confederate. An astonishing 65% of the participants in Milgram's study continued to obey the experimenter and persisted in administering levels of electric shock classified as dangerous and severe to the victim that had stopped responding and had previously

complained of a heart condition. Milgram's results have been explained in terms of obedience to authority figures; participants continued to obey the instruction of the experimenter despite the cries of pain from the confederate. In this case it is more problematic to separate compliant responses from conformity effects, but it is likely that both affected results obtained.

Betz, Skowronski and Ostrom (1996) used a modified Asch (1951) conformity paradigm to demonstrate that social pressure can affect memory reports. In this study, participants were read a story and then completed a recognition memory test for the details of the story. Some participants were then exposed to misinformation regarding the responses of six other participants on the test. Following this, these participants completed another recognition test for this misinformation in order to assess how much had been stored. In the final part of the study, participants completed a cued recall test of their memory for the original story. The results showed that those participants, who were exposed to the misinformation about the other participants, and therefore the social pressure, were significantly influenced. Overall, participants were more likely to change initial responses if they were told that other participants had given answers that contradicted their own. A follow-up study showed that even when participants were told that they had received misinformation, their memories for the story were still influenced by it. This study by Betz et al. is a clear demonstration of the effect that social pressure can have on responses and also memories of an event. Those participants whose memories for the original event were influenced by the responses of the confederate, despite being told that it was erroneous information, had clearly internalised the information. As such, this is a powerful demonstration of the

effects of conformity. It is exactly this kind of social pressure that underlies the shifts in responses associated with interrogative suggestibility.

Similarly, Hoffman, Granhag, Kwong See, and Loftus (2001) demonstrated the impact that social influence can have on source monitoring decisions. Again, in an Asch-like conformity paradigm, Hoffman et al. showed participants pictures of some objects and asked them to imagine others. Later, participants were shown names of objects and asked to indicate if they had previously seen that object, if it had been imagined, or if it was new. Prior to presentation of the test items, participants were exposed to responses from a 'previous participant', who was actually a confederate. Responses to old items were always correct. However, responses to new items were either congruent with the correct answer (i.e. the confederate responded 'new' when the item was new) or incongruent (i.e. the confederate responded 'imagined' when the object was new). Hoffman et al. further attempted to influence participants by manipulating the credibility of the confederate. Results showed that accuracy levels dropped significantly when participants were exposed to inaccurate responses from a high-credibility confederate. These results demonstrate the effect of social conformity influences on source monitoring decisions. These results further show that undermining the credibility of the confederate reduces levels of conformity. This influence of credibility and prestige is an ongoing theme in suggestibility research (e.g. Binet, 1900; Baxter, 1990; Roebers & Schneider 2000) and one that will be returned to later in this thesis.

Conformity and compliance effects, such as those described above, have been explained in terms of two distinct social influence processes: informational and

normative influences (Deutsch & Gerard, 1955; Kelley, 1952; Butler, 1998). Informational influence refers to the tendency to accept information from others as evidence about reality. This may happen for example when there is a degree of uncertainty, either because stimuli are ambiguous or because there is social disagreement (Hogg & Vaughan, 1995). Informational influence most closely reflects conformity as it is thought to cause true cognitive change. Normative influence is an influence to conform to the expectations of others and may occur under circumstances where people seek social approval or acceptance, or are motivated by a specific goal. Normative influences result in temporary compliance and do not reflect true cognitive change. According to Baxter (1990), distinguishing between normative and informational influences may be problematic as they are likely to covary and therefore may also be difficult to separate. Baxter also argues that distinguishing between compliance and conformity influences in eyewitness testimony research is also likely to prove extremely difficult. Testing an individual's commitment to an answer, without introducing the idea that the initial answer is wrong or in some way unsatisfactory is likely to be almost impossible. A participant who attributes a previously given answer to a perceived demand, may also be a participant who "confesses" such a perception due to a new perceived demand to do so (Baxter, 1990).

Compliance effects can be differentiated from conformity on the basis of internalisation, whereby conformity involves private acceptance and internalisation of the communicated information, but compliance reflects only a surface, superficial change. According to definitions of compliance and suggestibility, the distinction between the two again relies on the issue of private acceptance; suggestibility necessarily involves private acceptance and incorporation of information. The

theoretical distinction between suggestibility and conformity therefore seems problematic; both involve private acceptance and internalisation of the communication, both are interpersonal in nature, and both are thought to persist after the interaction has ended. Possibly one distinction between the two is that with suggestibility the individual is unaware that they are being influenced, whereas with conformity the individual is more aware of the influence process and makes a conscious decision to accept the influence. Also important is the fact that conformity is often thought of as involving a many on one social interaction and acceptance of an idea because it is perceived to be held by a group, whereas suggestibility is generally thought of as involving a one on one interaction, and uncritical acceptance of an idea simply because it is presented as an idea. In light of this, suggestibility can be viewed primarily as susceptibility to an informational influence, whereas conformity may be seen as essentially susceptibility to normative influence (c.f. Deutsch & Gerard, 1955). However, again it is likely that both informational and normative influences are present in both types of communication. Whilst there is considerable overlap between the processes of suggestibility, conformity and compliance, there are also important theoretical distinctions. Differentiating between these influences may in practice prove problematic and essentially each process may best be defined primarily by the social dynamics of the situation in which it occurs.

1.6. The Suggestibility of Children

1.6.1. Early Research on the Suggestibility of Children

Problems related to the suggestibility of child witnesses are well documented (see Baxter, 1990; and Ceci and Bruck, 1993 for reviews). Historically, children have been viewed as inaccurate and suggestible witnesses as compared to adults (e.g. Binet, 1900; Stern, 1910). More recently, perhaps because of society's heightened sensitivity to the occurrence of child sexual abuse and the concurrent pressure to identify and convict such offenders, the problem of suggestibility in children has become the focus of much research (Warren & McGough, 1996). Given the increasing frequency with which children are being called to give evidence in court (Ceci & Bruck, 1993), it seems prudent to consider questions such as whether factors affecting the reliability of adults' testimony are the same as those that affect children, and indeed whether children are more likely to give inaccurate testimony due to greater susceptibility to associated pressures. However, a review of the literature reveals some fundamental contradictions. Children have been described as both resistant to suggestion and as reliable as adults (e.g. Goodman, Rudy, Bottoms, & Aman, 1990; Flin, Boon, Knox, & Bull, 1992), and as unreliable and susceptible to influence from authority figures, and therefore highly suggestible compared to adults (e.g. Candel, Merckelbach, & Muris, 2000; Robinson & Briggs, 1997).

Early research on the suggestibility of children found them to exhibit higher levels of suggestibility than those found for adults. Whipple (1909, 1911, 1912, 1913) is often cited as providing a definitive and influential review of this early literature (e.g. Baxter, 1990; Ceci and Bruck, 1993; Goodman, 1984). Early work considered

pioneering is that of Binet (1900), Stern, (1910), Varendonck (1911, as cited in Ceci and Bruck, 1993), and Lipmann (1911). The work of Varendonck provides a particularly clear illustration of high suggestibility levels found in children (Baxter, 1990). As part of this research, 8 year-old boys provided written answers to questions put to them by teachers about a fictional man approaching then in the school playground. Although no one had approached the children, 7 of the boys provided the experiments with a man's name. Following a suggestion from the teacher as to what the fictional man's name was, 17 of the boys agreed with this suggestion. Later the boys were questioned by a number of lawyers and provided descriptions of the fictional man's appearance. There may be several factors at work here that make this a particularly clear example of heightened suggestibility effects in children. For instance, the fact that the boys were initially tested as a group may have increased the pressure for them to give in to the perceived demands of their teacher for fear of appearing foolish in front of the rest of their classmates (Baxter, 1990). Equally, the fact that they were tested by their teacher whom they see everyday, rather than an anonymous adult, may also have increased the pressure to comply with demands. Although Varendonck's study does not allow for a direct comparison with adults, it does seem to provide a particularly clear example of the very high levels of suggestibility that children can demonstrate when confronted with such social pressures.

Stern (1910) provides an early example of age differences in the accuracy of report. One study included participants ranging from 7 - 18 year olds and involved a paradigm still in use today. Participants were shown a picture for a short period of time immediately following which they were asked for free recall on the details of the

picture. They were then asked a series of questions regarding the picture, some of which contained no misleading information, and others that were misleading in that they asked about details that were not in the picture. In line with contemporary research, Stern found that free recall produced the fewest errors; where as the misleading questions produced the most errors. Overall the youngest of the children were found to be the most suggestible, but even the 18 year olds were occasionally misled by questions. Stern made several observations that continue to be themes of contemporary research (Ceci & Bruck, 1993). Firstly, he warned about the effects of repeating questions and argued that initial verbal answers to questions are better recalled than the actual events themselves. Stern also commented on the "force" that questions have in determining answers, arguing that many children will provide answers to questions because they view it as essential. In this way, Stern saw the questioner as often responsible for inaccurate testimony, a theme that again has received recent attention in suggestibility research (e.g. Bain & Baxter, 2000; Baxter & Boon, 2000).

Binet (1900) and Lipmann (1911) can also be credited with predictions and hypotheses, which remain the focus of modern and influential research in this area. Binet studied children between the ages of 7 and 14 and the results of his research led him to claim that suggestibility reflected two factors. Firstly, the influence of a prominent thought (autosuggestion) that develops from within the individual, which is not the result of external influences, but does prevent critical analysis of the situation. Secondly, factors that originate externally from the individual and reflect a mental obedience to other individuals. Binet can be considered particularly prescient in three ways (Ceci & Bruck, 1993). Firstly, he made the distinction between errors in report

caused by actual memory changes and those that are caused by social conformity, which can include attempts to please adult authority figures and do not necessarily reflect incorporation of the suggestion into the original memory for the event. Secondly, Binet considered whether the original memory trace is itself impaired or actually coexists alongside the trace of the misleading suggestions (cf. Loftus, 1979a). Finally, Binet highlighted the correlation between lack of self-confidence and accuracy of testimony (cf. Gudjonsson and Lister, 1984). This work by Binet was supported by that of Lipmann (1911) who also argued that children's suggestibility was the result of cognitive as well as social factors related to children's tendency to comply with authority figures.

1.6.2. Contemporary Research on the Suggestibility of Children

As noted above, a review of the contemporary research reveals some fundamental contradictions. Specifically, there is disagreement over whether children are generally more suggestible than adults. The vast majority of studies investigating age related differences in suggestibility involve laboratory studies of the "misinformation effect" (Loftus, Miller, & Burns, 1978). In this paradigm, children view an event and are later exposed to leading or misleading information that contradicts selected aspects of the event. It is generally accepted that misinformation effects can occur in participants of all ages, from very young children through to adults (e.g. Ceci, Ross, & Toglia, 1987; Cohen & Harnick, 1980; Zaragoza, 1991). However, disagreement between researchers exists on the issue of whether there are developmental differences in the misinformation effect, and whether children's heightened levels of suggestibility can be attributed to a greater sensitivity to situational demand characteristics or differences in cognitive development.

Many studies have reported age trends in the malleability of children's report. For example, Roebers and Schneider (2000) examined developmental patterns in the effect of misleading post-event information in two different types of eyewitness interview. A total of 284 participants representing four different age groups (6, 8, and 10 year old children, and adults) took part in the study. All participants were shown a video depicting a conflict between school children. Participants then received two interviews, one three weeks after the video and the other four weeks after. The social demands of the interview were manipulated between participants at the three-week interview stage: half of the participants were asked suggestive and misleading questions and the other half were asked open-ended and unbiased questions. All participants then received the same neutral set of recognition questions during the interview at the four-week stage. The results indicated that with regard to correct, incorrect and "I don't know" answers to cued recall questions, younger children have particular problems with the misleading questions. The six year-olds responded inaccurately to questions pertaining to peripheral as well as central events in the film, and gave fewer correct and more incorrect answers than all other age groups. Adults outperformed all other age groups with regard to peripheral questions and overall gave fewer incorrect and more "I don't know" answers than all the children.

Roebers and Schneider (2000) concluded in support of previous research, that: children under the age of 10 benefit from non-suggestive questioning in terms of overall accuracy, both in cued recall and later recognition (Poole & Lamb, 1998); children under the age of 7 are disproportionately vulnerable to misleading questions (Greenstock & Pipe, 1996); adults are not immune to the effects of misleading post-

event information (Loftus, 1979a; Zaragoza & Lane, 1994). In terms of overall accuracy, children's testimony suffered from the misleading interview as opposed to the open-ended unbiased questioning. Adults, on the other hand, were relatively more resistant to the suggestive interview techniques. Roebers and Schneider further concluded that whilst in principle their results could be attributed to greater memory impairments on the part of the younger children, it is also likely that the differences are a result of differences in perception of the social demand characteristics. They argued that adults were better able to perceive the intention of the interviewer when asking the misleading questions and were therefore better able to decide whether to rely on their own memories or accept the information provided. Children seemed to experience much more difficulty in assessing the meaning of the social situation during the interview, the information contained in the misleading questions, and their own memories for the event.

Ackil and Zaragoza (1995) also argue that memory impairment for details is only part of the explanation for suggestibility effects in both children and adults and emphasise the importance of the social dynamics of the situation in terms of the perceived credibility and knowledge of the source. They suggest that the desire to perform well may lead participants to report everything they believe to be part of the original event without considering whether they can specifically recollect it or whether it has been learnt from a post-event source. Alternatively they suggest that some participants may incorporate suggestions into testimony due to feeling under pressure to do so. Under some conditions adults, like children, will report that they believe they saw suggested items (Zaragoza & Lane, 1994). However, this effect is variable and is not an

inevitable consequence of mere exposure to suggestion (Zaragoza & Koshmider, 1989).

Ackil and Zaragoza (1994) conducted a study to examine whether there are developmental changes in the ability to accurately monitor the source of suggested information. They aimed to examine the extent to which children who report misleading information actually believe they remember the details as part of the original stimulus. They tested 474 participants from four different age groups (5-7 year olds, 8-10 year olds, 10-11 year olds, and college age students with a mean age of 20.1 years). Participants viewed a video of an event and were then read a summary of the story containing misleading information. After completion of a filler task participants were told that the experimenter who had read the summary had made some mistakes and that not everything that she had mentioned in the summary had in fact been in the video. It was put to participants that their task was to identify the source of each test item. A different experimenter tested participants on their memory for the event so as to reduce the difficulties that may be associated with reporting inaccuracies between the original event and the post-event summary to the experimenter who delivered the summary. All participants were tested immediately following the summary and with a one-week delay.

Results of the study showed that the 5-7 year olds had higher misattribution scores than any of the other age groups of participants. The college students had the lowest misattribution scores overall. The 8-10 year olds and the 10-11 year olds did not significantly differ from each other. The effects of delayed testing increased misattribution scores for all participants, but the college students demonstrated a

smaller effect for delay than all the other age groups. With regard to suggestibility, as measured by the self reported belief that participants remember suggested items as part of the original event, participants were more likely to report belief in seeing critical items if they had been suggested as opposed to if they were new, control items. Ackil and Zaragoza found what they claimed to be a clear developmental trend in the tendency for participants to attribute suggested items to the original event: age related differences in source monitoring errors and suggestibility scores, with younger children being the most susceptible to these types of errors. Ackil and Zaragoza therefore argued that the source monitoring approach has an important contribution to make to an understanding of children's suggestibility.

One problem with comparing various studies on the suggestibility of children is that whilst they generally use a similar paradigm, the specifics of the stimuli and format of the questions vary from one study to another. However, as can be seen from the above examples, age related differences in the suggestibility of children have been found. Whilst research on developmental differences in suggestibility does not demonstrate a consistent or simple relationship between suggestibility and age (Ackil & Zaragoza, 1995), generally, younger children are more sensitive to suggestion and misleading information than are older children, and children in general are more susceptible than adults. Several causal mechanisms to account for children's heightened sensitivity to suggestion and misinformation have been identified. Most of these factors can be classified as social, although clearly, because children do become more cognitively sophisticated with development, memory based differences between very young children and older children could be expected (Ceci & Bruck, 1993). According to fuzzy-trace theorists, the normal developmental path for memory is from weak,

verbatim memory traces of events to more durable gist like traces (Brainerd & Reyna, 1998). There is evidence to support the theory that this results in age related differences that favour reduced suggestibility effects in older children (e.g. Toglia, 1991).

Social mechanisms that affect levels of suggestibility in children are of particular importance, because if they can be identified and understood, then they can potentially be brought under the control of the interviewer (Baxter, 1990). In any interview or conversation the listener tries to understand the intent of the speaker; often this goes beyond analysis of the direct meaning and involves understanding the indirect meaning of messages being conveyed. The relationship between interviewer and interviewee is of particular importance with regard to children; from an early age children see their adult conversation partners as co-operative and truthful (Garvey, 1984; Romaine, 1984). Generally speaking, children are co-operative conversational partners and try to supply adults with the sort of information and answers that they think are being sought (Ceci & Bruck, 1993). It has also been argued that children's natural tendency to trust their adult interviewer can also result in them providing responses to questions regardless of their understanding or knowledge of the events in question (Hughes & Grieve, 1980). This type of behaviour seems to reflect children's desire to please or comply with someone that they perceive to be an authority figure. Unless children are given good reason to doubt the motives and credibility of an adult, it is likely that in most circumstances children will see all adults as authority figures and believe them to know best (cf. King and Yuille, 1987).

Repetition of questions has been found to be problematic with adults as it implies negative evaluation, on the part of the interviewer, of the interviewee's initial response (Gudjonsson, 1992a). Similarly, children have also been found to change their answers to questions in response to being re-questioned (e.g. Siegal, Waters & Dinwiddy, 1988; Poole & White, 1991). Poole and White (1991) examined the effects of repeated questioning within and between sessions on children aged four, six and eight years. Results indicated that repeating open-ended questions had little effect on the children's responses. Repetition of yes/no questions resulted in the younger children being most likely to change their responses both within and between interview sessions. Results also indicated that when children were questioned about an event for which they had no information, many answered with guesses. Repeating questions was also found to decrease the frequency with which qualifiers (such as "it might have been") were used, and as a result, the children sounded increasingly confident about their answers.

The question remains as to whether children's susceptibility to suggestion during interview reflects a social compliance to their perception of the interviewers intentions and wishes, or whether it reflects fundamental cognitive change such that they come to believe their false statements. Bruck and Ceci (1999) suggest that the answer may not be as straight forward as an either or solution. They hypothesise that children may initially knowingly comply with suggestions, but that social factors during the interview may result in the incorporation of the suggestions into their memories for the event. As the above discussion shows, problems related to child witnesses are well documented (see Baxter, 1990; and Ceci & Bruck, 1993 for reviews). Historically, children have been viewed as inaccurate and highly suggestible witnesses compared to

adults (e.g. Stern, 1910), and as noted, more recent studies generally support this view (e.g. Candel, Merckelbach & Muris, 2000; Robinson & Briggs, 1997). The results of these studies seem to indicate that even though children can be found to be no more susceptible to the effects of leading questions than adults (e.g. Flin, Boon, Knox & Bull, 1992), they do seem to be more sensitive than adults to the social aspects of suggestibility. Children appear to be more sensitive than adults to the expectations and instructions of those people they perceive to be in authority (Zaragoza, 1987), which therefore may make them more sensitive than adults to differences in the social dynamics, and therefore, the suggestiveness of an interview situation. This is an issue which will be returned to in Chapter 3 of this thesis.

1.7. The Gudjonsson & Clark (1986) Theoretical Model of Interrogative Suggestibility

Gudjonsson (1989a) argues that there are four conceptual differences that differentiate interrogative suggestibility from other types of suggestibility. Firstly, unlike other types of suggestibility, interrogative suggestibility involves the questioning of an individual within a closed social interaction. Secondly, the suggestive stimuli are, in the main, about past experiences, events and recollections and not about motor or sensory experiences related to the immediate situation. Thirdly, interrogative suggestibility involves uncertainty on the part of the individual, which is related to their cognitive processing capacities. Lastly, interrogative suggestibility generally takes place in a highly stressful situation where there are important consequences from the interrogation. According to Gudjonsson (1983) there are two distinct types of suggestibility that are relevant to interrogative suggestibility. Firstly, Gudjonsson emphasises the influence of leading questions or suggestive stimuli on testimony, which is related to the early work of Binet (1900) and Stern (1938) into reliability of testimony. The second type of suggestibility is related to the extent to which interrogators can alter an unwanted answer through challenge or negative feedback. Gudjonsson argues that these two aspects of interrogative suggestibility are conceptually distinct, and through factor analysis has demonstrated that they are to some extent independent of one another (Gudjonsson, 1984a, 1992b).

Given that the legal system in general is interested in the extent to which an individual's testimony can be considered to be reliable, and that there is a lack of objective psychometric tests to quantitatively measure this type of suggestibility

(Gudjonsson and Gunn, 1982), Gudjonsson (1984a) therefore developed such an instrument. Two scales of interrogative suggestibility (the Gudjonsson Suggestibility Scales) were constructed for research and clinical purposes with the aim of being able to objectively measure any individual's response to the leading questions and negative feedback of the police interview situation. The scale measures the two factors of "yield" to leading questions and "shift" of previous answers in response to negative feedback independently. Thus, the scale measures two separate factors, representing different types of suggestibility, both of which are relevant to the questioning of witnesses and suspects during police interrogation.

Gudjonsson and Clark (1986) later proposed a theoretical model of interrogative suggestibility concerned with explaining how people come to accept uninformed and incorrect premises and expectations during police interrogations that lead to inaccurate and unreliable testimony. This theoretical model explains suggestibility as arising out of the way in which an individual interacts with the social and physical environment. The fundamental premise is that interrogative suggestibility is dependent on the coping strategies an individual can implement during an interrogation. All witnesses, victims and suspects enter an interrogation with a general cognitive set regarding the situation. This cognitive set is related to their uncertainty about the subject matter of the interrogation, the degree of interpersonal trust they have with the interrogator, and their expectations regarding what is about to happen. This general cognitive set can facilitate either a resistant or suggestible behavioural response to the interrogation. When the police begin to ask questions, the individual's general cognitive set leads them to utilise one or more general coping strategies. An individual's cognitive

appraisal of each question put to them is affected by the variables of uncertainty, interpersonal trust and expectation.

The Gudjonsson and Clark (1986) model therefore stipulates three pre-requisites believed to be important for a suggestible response to occur:

1) *Uncertainty*: the interviewee is not completely sure of the right answer to a question. As has been noted previously, leading questions contain expectations and premises which may create doubts in a interviewee's mind. Some interviewees may agree with suggestions whilst knowing that they are wrong because of eagerness to please or reluctance to disagree with suggestions, and this is compliance rather than suggestibility. A person can only be said to be suggestible when they privately accept suggestions;

2) *Interpersonal trust*: the interviewee must believe that the interviewer's intentions are genuine and that there is no trickery involved. People who are suspicious of the interviewer will be reluctant to yield to suggestions and this is the link between uncertainty and interpersonal trust. Interpersonal trust may depend on whether the interviewee is able to detect that they are being misled. The better an individual's memory is for events, the more likely they are to detect that the interviewer is attempting to influence their responses;

3) *Expectation of success*: many people do not admit their uncertainty because they believe that either they must provide an answer, that they should know the answer, or that they are expected to know the answer and to be capable of giving it.

Gudjonsson and Clark's (1986) model therefore postulates that most people could be found to be suggestible assuming that the necessary conditions of uncertainty, interpersonal trust and increased expectation are all present.

The final factor that the Gudjonsson and Clark (1986) model identifies as being important to interrogative suggestibility is the impact of feedback. Positive or negative feedback may be communicated to the interviewee either implicitly or explicitly. For example, negative feedback may be communicated implicitly merely by repetition of particular questions and implicit positive feedback may be communicated through praise or sympathy following desired responses. Negative feedback will be discussed in some detail as it is a component of Gudjonsson's (1983a, 1984a) scale of interrogative suggestibility, where as positive feedback is not.

According to Gudjonsson (1984a, 1984b) negative feedback has been found to have two distinct effects. Firstly, it can make interviewees change or shift previously given responses. Secondly, it can increase an individual's susceptibility to further leading questions. Gudjonsson and Clark (1986) argue that negative feedback following specific questions is easier for an interviewee to cope with, purely because they can identify exactly which responses require changing. However, negative feedback following a series of questions is likely to have a bigger impact on interviewees as they are unable to identify which specific responses need to be changed. This situation therefore increases an individual's uncertainty. According to the model, the outcome of negative feedback is related to whether the previous behavioural response was suggestible or resistant.

A resistant behavioural response followed by negative feedback is thought to have the most practical implications (Gudjonsson and Clark, 1986). The negative feedback can either be accepted or rejected. If the interviewee rejects the negative feedback then

there will be no major effect on further susceptibility to suggestions. In fact, Gudjonsson and Clark argue that occasionally negative feedback can make resistant responders even more resistant to subsequent suggestions as the result of an increasingly suspicious cognitive set. Accepting negative feedback is thought to increase uncertainty as participant's accept that they have made mistakes but cannot identify which questions they have got wrong. Accepting negative feedback therefore further increases susceptibility to suggestions. Accepting negative feedback is also likely to negatively affect an individual's self-esteem and increases their anxiety, making them more likely to seek external cues rather than relying on their own internal frame of reference (Gudjonsson, 1992a). It is assumed that this affects an individual's general coping strategies in the direction of making them more suggestible. The model does not assume that accepting negative feedback necessarily leads to increased suggestible cognitive set, though it commonly does. For some, negative feedback may be construed as a challenge to improve, and thus make them more critical of the situation. Negative feedback is unlikely to follow a suggestible behavioural response in a real police interrogation as it would serve no useful purpose to the interviewer. If an interviewee responds in the desired way, there is no logical need for negative feedback. However, Gudjonsson (1992a) argues that there are two circumstances under which negative feedback may follow a suggestible behavioural response. Firstly, in the situation where several leading questions have been asked and the interviewee has only yielded to some of them. Secondly, where the interviewee has yielded to a suggestion within a false alternative, and it is in fact the other alternative response that is the 'desired answer'. Gudjonsson and Clark's model predicts that suggestible individuals will most readily respond to negative feedback by changing

their responses to false alternative questions, rather than closed questions, as it will seem clear as to which alternative they should have chosen.

Gudjonsson (1992a) argues that this model of interrogative suggestibility has several implications, which he has sought to test empirically. The empirical validation for the model will be dealt with in the following section, but the hypotheses which Gudjonsson draws from the model are as follows:

1) Interrogative suggestibility is a distinct type of suggestibility and will not correlate with other types, especially the hypnotic phenomena associated with primary suggestibility.

2) Interrogative suggestibility is potentially situation bound. This is especially so for the impact of negative feedback, which will vary according to the intensity and nature of such feedback. The model does, however, view suggestibility as being fairly stable over time due to the importance of cognitive and personality factors. Therefore, individual differences can be reliably measured and these serve as a prediction for how individuals would respond in a real police interrogation.

3) Uncertainty, interpersonal trust and expectations can be altered to some extent by the interrogator and this can manipulate an individual's level of suggestibility.

4) A suspicious cognitive set is more likely to result in a resistant behavioural response than a trusting cognitive set.

5) The type of coping strategy utilised during an interrogation will affect an individuals susceptibility to suggestions. Avoidance coping is most likely to lead to the acceptance of suggestions, whereas resistant coping strategies will involve a more critical analysis of the situation and therefore less susceptibility to suggestions.

6) Individuals with poor memory abilities and low intelligence will be more susceptible to suggestions than those with higher cognitive abilities.

7) Suggestibility is related to some personality characteristics such as low self-esteem, anxiety, lack of assertiveness and fear of negative evaluation.

8) Negative feedback can affect cognitive set and is likely to facilitate acceptance of suggestions.

9) There are significant differences between responses of suggestible and non-suggestible individuals to negative feedback.

1.8. Empirical Findings & Evaluation of the Gudjonsson & Clark (1986) model of Interrogative Suggestibility

1.8.1. Individual Differences & Suggestibility

Gudjonsson and Clark (1986) presented a model of interrogative suggestibility which aimed to identify what factors may influence how an individual responds to the two types of suggestive stimuli considered relevant to interrogative suggestibility: responses to leading questions and responses to interrogative pressure. The focus of this approach is therefore on individual differences in interrogative suggestibility and much empirical work has been carried out to examine those differences predicted by the model, as well as the potential effect of other individual differences. According to Gudjonsson and Clark, interrogative suggestibility depends on the coping strategies interviewees are able to utilise during an interrogation. All victims, witnesses and suspects enter an interrogation with a general cognitive set regarding the situation. This cognitive set is influenced by an interviewee's uncertainty about the subject-matter of the interrogation, the degree of interpersonal trust witnesses feel towards the interrogator, and their expectations regarding what is about to happen. According to the model, this general cognitive set can facilitate either a resistant or suggestible behavioural response to the interrogation.

Also considered important is any form of negative feedback communicated to, or perceived by, the witness. Usually this will be some form of disapproval or criticism of the witness and may be overt or implicit. Gudjonsson (1984a, 1984b) argued that negative feedback can have two distinct effects. Firstly, it can make interviewees change or shift previous responses. Secondly, it can increase an individual's

susceptibility to further leading questions. Negative feedback can either be accepted or rejected. If the interviewee rejects the negative feedback then there will be no major effect on further susceptibility to suggestions. Gudjonsson and Clark (1986) argued that, occasionally, negative feedback can make resistant responders even more resistant to subsequent suggestions because it makes them even more suspicious of the interrogator and the situation than they were before. Accepting negative feedback is thought to increase uncertainty, which increases susceptibility to suggestions. Accepting negative feedback is also likely to diminish an individual's self esteem and increase anxiety, if only temporarily, making them more likely to attend to external cues rather than relying on their own internal frame of reference (Gudjonsson, 1992a), making them more suggestible. The model does not assume that accepting negative feedback necessarily leads to an increased suggestible cognitive set, though it commonly does. For some, negative feedback may be construed as a challenge to improve, making them more critical of the situation and so less suggestible.

1.8.2. The Gudjonsson Suggestibility Scales

Gudjonsson developed two scales designed to measure an individual's level of interrogative suggestibility known as the Gudjonsson Suggestibility Scales 1 and 2 (GSS1 & GSS2 : Gudjonsson 1984a;1987c). These scales were primarily designed to be used as clinical or forensic tools to help assess the reliability of confessions that have been retracted, or to identify particularly vulnerable individuals who may require extra care during interviewing (Gudjonsson, 1992a). The scales aim to measure responses to the two principal types of suggestive influence thought to underlie interrogative suggestibility: leading questions and interrogative pressure

(Gudjonsson, 1983). Both types of suggestive influence may compromise the accuracy and reliability of testimony.

Each scale consists of a spoken narrative and twenty questions about the narrative. Fifteen of these questions are leading in that they suggest certain details that were not a part of the original narrative. Five are 'true' questions which do not contain misleading suggestions. The number of suggestions accepted by the interviewee provides an initial score termed Yield 1. Negative feedback is then administered. This is done by telling interviewees, 'firmly', that, 'You have made a number of errors. It is therefore necessary to go through the questions once again, and this time try to be more accurate'. The questions are then repeated. Three further scores are then calculated: Yield 2, Shift, and Total Suggestibility. Yield 2 is a measure of the number of suggestions that are accepted following the negative feedback. Shift is a measure of the number of responses an interviewee changes subsequent to the negative feedback and includes all twenty of the questions. Total Suggestibility is the sum of Yield1 and Shift. These scales have been extensively researched and have well established norms for different populations (see Gudjonsson, 1997). As such, they represent a useful research tool as they allow for direct comparison of the performance of different populations to the same stimulus set and associated norms.

1.8.3. Issues of Robustness

A review of validation studies of the Gudjonsson and Clark (1986) model of interrogative suggestibility and the GSS 1 and GSS 2 follows. However, with regard to construct validation of the scales, factor analysis of the twenty questions on both the GSS 1 and GSS 2 using varimax rotation shows the scales to have satisfactory

internal consistency. Gudjonsson (1984a) factor analysed scores obtained for Yield and Shift from a sample of 195 participants. Results showed that there were two main factors, with the 15 leading questions loading on the first factor and Shift items loading on the second factor. Gudjonsson (1992b) conducted the same analyses on the GSS 2, this time with a participants group of 129. Again, the results showed that Yield and Shift clearly load on two separate factors. This apparently robust factor structure confirms that the scales measure two separate responses: responses to leading questions and responses to interrogative pressure.

Inter-scorer reliability on the scales has also been assessed. Richardson and Smith (1993) looked at inter-scorer reliability of Yield and Shift on the GSS 1 with a sample of 57 juveniles with behavioural problems. Participants were aged between 10 and 17 years old. Scores from two independent assessors were compared through a series of correlations. Correlations obtained were extremely high, ranging from 0.949 to 0.994, showing strong agreement between scorers. Inter-scorer reliability on the GSS 2 was assessed by Clare, Gudjonsson, Rutter and Cross (1994). In this study the scoring from three independent raters, who were all experienced in using the scales, was compared. Again, the correlations obtained were extremely high, ranging from 0.989 to 0.996, and demonstrate strong agreement between raters. Thus, it would seem that the scoring of Yield and Shift are clearly differentiated and can be reliably scored.

Due to the nature of the scales, test-retest reliability is much more problematic to assess: performance within participants can not be assessed as the second testing would be affected by memory of the first testing session. However, performance on the GSS 1 and the GSS 2 within participants can be assessed. Gudjonsson (1997)

provides data (from Gudjonsson, 1987c and case files) from participants who have completed both scales. Results show that all correlations for suggestibility and memory score were highly significant. However, it is worth noting that all correlations for Shift scores were consistently lower than correlations for either Yield 1 or Yield 2, which may be indicative of potential problems with the scoring of Shift across situations.

The above research indicates that both the GSS 1 and the GSS 2 have robust factor structures. Both scales measure two relatively independent types of responding, which are assumed to constitute interrogative suggestibility: responses to leading questions termed Yield and responses to interrogative pressure termed Shift. Research has also shown that both scales possess inter-scorer reliability and that testing on both scales within participants yields results which are highly correlated. However, there are other issues of robustness which the research has hitherto not fully examined. For example, the extent to which scoring on the GSS may be affected by social mechanism such as compliance and/or conformity (cf. Baxter & Boon, 2000). Related to this is the extent to which a truly suggestible response can be differentiated from a non-suggestible, but still affirmative response; for instance a compliant response or an intentionally faked suggestible response (cf. Smith & Gudjonsson, 1986).

1.8.4. Cognitive Abilities

According to the Gudjonsson and Clark (1986) model, it is expected that individuals with poor memory abilities and those of low intelligence will prove to be more suggestible than those individuals with higher cognitive abilities. Gudjonsson (1987b, 1988b) examined the relationship between memory capacity, as measured by delayed

and immediate recall on the GSS1, and suggestibility score on the GSS1. Gudjonsson argued that the results of these studies show that the poorer a person's memory capacity is, the more suggestible they are likely to be.

Other studies examining the influence of memory strength on interrogative suggestibility indicate that the longer the duration between an event and the presentation of post-event suggestions, the greater the likelihood that the misleading suggestions will be incorporated into the final report of the event (e.g. Underwood and Pezdek, 1998; Hertel, Cosden and Jonson, 1980; Loftus, Miller and Burns, 1978). Loftus (1981) has also found that the manner in which suggestions are introduced can affect the extent to which participants rely on their own memory of events when answering misleading questions. Loftus varied the sentence construction of misleading questions by making the misleading information either the object of the auxiliary clause or the focus of the question. Results showed that explicitly directing a participant's attention to specific details caused them to examine their own memory of the event more carefully and consequently be more likely to detect discrepancies. Thus, misleading suggestions about peripheral details are less likely to be detected and therefore more likely to be unwittingly accepted.

More recently Zykowski and Singg (1999) examined the interaction between suggestive languange and delayed recall of an event. Participants were randomly assigned to three conditions where the description of a car accident varied in suggestiveness (contacted, bumped, or smashed). Participants were then questioned about the accident immediately following presentation, two weeks later or one month later. Results indicated that participants estimates of the speed of the car prior to the

impact were significantly affected by choice of language if questioning was delayed by several weeks. Those who had been assigned to the "smashed" condition were significantly more likely to overestimate the speed of the car if they were questioned two weeks or one month after presentation the event.

According to Gudjonsson and Clark (1986) a negative relationship between suggestibility and intelligence should be expected for two reasons. Firstly, uncertainty depends on memory capacity which is correlated with intelligence (Gudjonsson, 1992a). Secondly, people with lower intelligence may be limited in the intellectual resources they have available to deal with any unfamiliar task. Early studies indicated that there does appear to be a negative relationship between accuracy of recall and intelligence (e.g. Howells, 1938; Burtt, 1948). Gudjonsson (1983) examined the relationship between IQ, as measured by the Wechsler Adult Intelligence Scale, and interrogative suggestibility, as measured by the GSS1. The results showed a negative correlation with both Yield1 and Shift. However, Gudjonsson indicated that this negative correlation is affected by range effects. Such a relationship is only found when participants represent a large range of IQ scores, and will not be found when IQ scores range from average to above average. It is those individuals who fall some way below average intelligence who are found to be more susceptible to suggestion when compared with those of above average intelligence (Clare & Gudjonsson, 1995).

1.8.5. Method of Coping

The Gudjonsson and Clark (1986) model predicts that the type of coping strategy an individual is able to utilise during an interrogation will affect their susceptibility to

suggestive influences. Gudjonsson (1988a) cites Moos and Billings (1982) who propose three general categories of method of coping:

1) "Active-cognitive" methods, where people actively try to manage their thoughts and appraisal of the situation;

2) "Active-behavioural" methods, where there are behavioural attempts to deal directly and critically with the situation;

3) "Avoidance coping", where people avoid any critical appraisal of the situation.

Gudjonsson (1988a) predicted that avoidance coping would be associated with susceptibility to suggestion, and that active-behavioural and active-cognitive would involve a more critical analysis of the situation and therefore increase resistance to suggestion. A significant relationship was indeed found between method of coping and suggestibility: avoidance coping resulted in much higher suggestibility scores. Suggestible participants reported having given answers that seemed plausible and were consistent with external cues, rather than critically assessing each question and only giving definite answers to the questions they were sure about. Resistant participants indicated that their choice of response involved a critical analysis of the situation, which facilitated a problem solving approach to the questions. Gudjonsson's (1988a) results indicate that an active coping approach to an interrogation increases resistance to suggestion, whereas avoidance coping is likely to result in a suggestible response.

However, a recent study by Forester, McMahon and Greenwood (2001) did not find the same support for this aspect of the Gudjonsson and Clark (1986) model. In this

study participants completed the GSS 1 and the COPE inventory (Carver, Scheier, & Weintraub, 1989). The COPE Inventory was developed to assess a broad range of coping responses and is designed to assess how people respond when confronted with difficult or stressful events. Forester et al. found no significant relationship between method of coping as assessed by COPE and scores on the GSS 1, neither situational or dispositional coping strategies were found to be a better predictor of levels of interrogative suggestibility. Although this finding is in direct contrast to Gudjonsson (1988a) it does seem likely that ability to cope with an interrogation will affect levels of suggestibility in such a situation.

1.8.6. Negative Feedback

Thus far the discussion of empirical findings has addressed variables that can not be controlled for in an interrogative situation. However, the Gudjonsson and Clark (1986) model also predicts relationships between some variables that could potentially be manipulated during an interrogation. As previously noted, the model contains a negative feedback component, and it is predicted that negative feedback can increase a person's anxiety which may lead to a decrease in ability or motivation to critically examine the contents of questions. Gudjonsson (1984a) raised concern over the consistency with which negative feedback is administered. He indicated that where a participant has made no errors it may be awkward or embarrassing for the interviewer to administer the negative feedback and that this may affect the scoring of Shift. Haraldsson (1985) found a non-significant trend for Shift to be influenced by the experimenter. Haralsdsson argues that embarrassment over administering the negative feedback was the cause of this trend towards an experimenter effect. A similarly non-significant trend was found by Gudjonsson and Lister (1984), where the male

experimenter gained slightly higher Shift scores than the female experimenter. Gudjonsson (1992a) therefore stressed that the wording of the negative feedback should be exact to his specification and that it must be issued firmly. Standardisation in administering negative feedback is clearly important and differences in firmness of negative feedback may compromise the objectivity of this aspect of the scale.

Baxter & Boon (2000) argued that one effect of being firm rather than friendly in administering the negative feedback may be to maximise psychological distance giving the interrogator a "tactical advantage" over the interviewee (cf. Gudjonsson & Lister, 1984). Baxter & Boon argued that firm negative feedback may also have a related effect in that it precipitates compliance. They conducted a study to assess the impact of varying only the negative feedback component of the GSS2. Participants were tested under one of three conditions which varied the firmness of the negative feedback. The three conditions were defined as 'friendly', 'firm' and 'stern' negative feedback demeanour. Baxter & Boon found Yield 2 and Shift scores to increase as interviewer demeanour changed from 'friendly' through to 'stern' when administering negative feedback, although Total Suggestibility scores did not differ significantly across their conditions. They argued, in support of Gudjonsson (1983), that Yield 1 is primarily related to cognitive factors of the individual, whereas Yield 2 may better represent interpersonal influences present at negative feedback. They also argued that, because Total Suggestibility is a balanced measure of pre- and post-feedback interrogative suggestibility, it may be relatively insensitive to the effects of variations in interviewer manner in delivering negative feedback.

1.8.7. Anxiety

Gudjonsson (1992a) argued that interrogative suggestibility is mediated by "state" (i.e. situational stress) rather than "trait" anxiety. Some evidence suggests that there is a poor relationship between suggestibility and trait anxiety (e.g. Haraldsson, 1985) as measured by a self-report questionnaire (e.g. the EPQ, Eysenck & Eysenck, 1991). However, in one study Gudjonsson (1983) found a low but significant correlation ($r = 28$, $p<0.05$) between suggestibility and neuroticism as measured by the EPQ. A relatively high positive correlation ($r = 0.69$) has been found between the Spielberger State Anxiety Inventory (SSAI; Spielberger, 1969) and Shift scores on the GSS1. That Shift, and not Yield, was found to correlate with the SSAI suggests that state anxiety is associated with interrogative pressure rather than leading questions per se. The results of these studies support the hypothesis that suggestibility is most influenced by state anxiety. How anxious a person feels during an interrogation therefore seems more important than a general proneness to anxiety. However, an obvious qualification to this is that those with a general proneness to anxiety are more likely to experience a heightened state of anxiety during an interrogation than those without a general proneness to anxiety.

Therefore, the exact conditions of any interrogation or GSS testing situation could serve to increase or decrease the experienced level of state anxiety of all participants, but especially those scoring high on trait anxiety. There may be a relationship between trait anxiety and interrogative suggestibility, but situational conditions may serve to maximise or minimise the effect of trait anxiety. Gudjonsson, Rutter and Clare (1995) examined the relationship between anxiety and interrogative suggestibility for 161 suspects detained at police stations. Their results showed that trait anxiety correlated

more consistently with suggestibility than did state anxiety. They concluded that interrogative suggestibility cannot be easily evaluated from an individual's self-reported anxiety and that the situation in which people are assessed may influence the relationship between these psychological variables. Therefore, the situation may be more important in facilitating a suggestible response than a trait-like disposition to anxiety.

1.8.8. Self-Esteem & Feelings of Power & Control

The model also predicts a negative relationship between self-esteem and suggestibility, and such a relationship has been demonstrated in three studies (Baxter, Jackson & Bain, under review; Gudjonsson and Singh, 1984; Singh and Gudjonsson, 1984; Gudjonsson and Lister, 1984). The results of all of these studies indicate that those individuals who report feelings of powerlessness and incompetence are especially susceptible to suggestion in interrogations.

The relationship between feelings of personal power and competence associated with level of self-esteem and suggestibility can also be linked to individual differences in locus of control, that is, feelings of power and control over environmental events. Gudjonsson (1992a) argued that there are good theoretical and empirical reasons for expecting a relationship between suggestibility and locus of control. People who hold a perception of themselves as having a strong control over the environment (i.e. an internal locus of control) often view themselves as powerful (Hersch and Scheibe, 1967). Therefore, it seems reasonable to expect that people with a high external locus of control (i.e. those with low feelings of power over the environment) will be more susceptible to suggestion than those with an internal locus of control. Empirical

evidence indicates that those with an internal locus of control tend to be more resistant to pressure and influence from others than individuals with an external locus of control (Biondo and MacDonald, 1971; Avtgis, 1998).

The studies discussed above have investigated the effects of feelings of power and control over both personal and environmental events, and seem to be based on the assumption that these variables are fairly stable characteristics of the individual. They do not assess the extent to which feelings of power and control over the interrogative context could be manipulated and the resultant effect this may have on susceptibility to suggestion. The extent to which individuals may be made to change their responses through interpersonal pressure during an interrogation is surely an important issue, yet it is one that has not been extensively researched. Gudjonsson and Lister (1984) have examined the role of self-concept and locus of control in the extent to which individuals are susceptible to suggestion. In this study participants were placed under the same interrogative pressure. Correlations between self-report measures of the participants' perceived distance between themselves and the interrogator and suggestibility scores were examined. It was hypothesised that those who report a greater distance would be more suggestible than those who report less distance. Psychological distance between an individual and the interrogator may create a certain pressure that makes suspects or witnesses more susceptible to suggestion. This is a view supported by Gudjonsson and MacKeith (1982) and is also supported by the Royal Commission on Criminal Procedure (Irving, 1980).

The major finding of Gudjonsson and Lister's (1984) study was that the perception of distance between the participant and the experimenter was highly correlated with

suggestibility. They identified the variables of perceived lack of confidence and control in coping with the interrogation as being most clearly related to suggestibility. Feelings of anxiety and powerlessness were also identified as important variables. However, these results also suggest that certain interrogation techniques could be used to increase psychological distance in the interrogative context. By manipulating an individual's level of self-esteem and perception of power and control such techniques could perhaps make individuals more susceptible to suggestion than they would otherwise be in a context where such techniques were not used. However, Gudjonsson and Lister (1984) do not systematically investigate the effects of manipulating psychological distance in the interrogative context on susceptibility to suggestion. They proposed that their findings have practical implications for the interrogative context and suggest that extra care should be taken when interrogating individuals who have low self-esteem and perceive themselves as powerless and lacking in control over the situation. However, it seems prudent to investigate the effects that the interpersonal styles of different interrogators using the same technique may have on suggestibility levels.

1.8.9. Interviewer Prestige

Related to self-esteem is the role of the prestige, or perceived prestige, of the interviewer. Prestige has been considered an important variable that mediates suggestibility (Trankell, 1958; Morris, 1980). Issues related to the prestige and control held by an interviewer are discussed in the literature on interrogation techniques (Bartol, 1983). The literature suggests that an interrogator should attempt to communicate confidence and control over the situation and the suspect or witness. Implicit in this is the general principle that most can be obtained from an interrogation

by creating a psychological advantage for the interrogator and thus increasing psychological distance. However, Singh and Gudjonsson (1984) argued that because Shift and Yield correlate significantly with IQ (Gudjonsson, 1983), this suggests that suggestibility is a fairly stable characteristic of the individual. Further evidence they argue, is that Yield scores were found to correlate significantly with participants' scores on a self-report concept of "my self as I am generally" (Singh and Gudjonsson, 1984). Singh and Gudjonsson (1984) also found that perceptions of the experimenter were not generally found to correlate significantly with suggestibility. They therefore argued that either variables related to experimenter effect do not significantly mediate suggestibility or that participants were unwilling to rate the experimenter accurately.

Given that feelings of power and control related to self-esteem can affect suggestibility (Gudjonsson and Lister, 1984), and that manipulations of these variables may increase susceptibility to suggestion, it seems likely that the behaviour of the interviewer could play a role in mediating suggestibility. Gudjonsson (1989b) has found that some negative moods can affect suggestibility in a manner consistent with predictions made by the interpersonal trust component of the Gudjonsson and Clark (1986) model. Participants who become suspicious or angry with the experimenter are less susceptible to suggestion. Loftus (1979b) found that when questions were obviously misleading, participants often react by becoming less receptive to subsequent suggestions. It therefore seems that when participants are suspicious of the experimenter they tend to critically assess the questions and the situation more thoroughly and can more readily recognise that they are being misled. Gudjonsson (1989b) found some highly inconsistent GSS scores when the same people (in this case defendants) were tested on two separate occasions. It was

observed that higher suggestibility scores were associated with a moderate level of rapport and co-operation, and resistance was associated with expressions of suspiciousness or anger. According to Schooler and Loftus (1986) the role of interpersonal trust in interrogative suggestibility can also be interpreted in terms of discrepancy detection. A suspicious witness is therefore thought to be more likely to approach an interrogators questions in a critical manner and hence be in a better position to readily detect any discrepancies (Dodd and Bradshaw, 1980).

However, a moderate level of rapport and co-operation need not necessarily heighten suggestibility. Inbau, Reid and Buckley (1986) suggest the use of certain interrogation techniques which utilise interpersonal pressure as a way of increasing an individual's susceptibility to suggestion. As was noted in the previous section discussing police interviews and interrogations, these techniques may amount to intimidation and coercion and could not be described as rapport building. Perhaps when people feel they are not being allowed the freedom to give their own account of events they are more susceptible to suggestion. Those who feel some level of rapport and co-operation with the interrogator may be less likely to feel that their right to answer freely is being denied, and are therefore less susceptible to suggestion. Similarly, whilst certain interrogation techniques may serve to make some individuals suspicious of, and angry with the interrogator, the same techniques may cause others to experience a lower level of self-esteem or self-confidence, thus making them more susceptible to suggestion.

If, as Baxter and Boon (2000) have shown, the manner in which negative feedback is administered is important then there may be more general problems associated with

experimenter effect in the administration of the Gudjonsson scales. It may be that a particular style of interviewing results in higher suggestibility scores even where firmness of negative feedback is held constant. Psychological distance between an interviewee and the interrogator may create a certain pressure that makes the interviewee more susceptible to suggestion (cf. Gudjonsson & MacKeith, 1982; Irving, 1980).

Research cited in many of the reviews on eyewitness testimony (e.g. Davies, Ellis and Shepherd, 1981; Well and Loftus, 1984) draws attention to the fact that people differ in terms of total accuracy of recall for the same event, and also the extent to which they are susceptible to postevent suggestion. Therefore, the obvious question is why do people differ in level of accuracy and susceptibility to suggestion. As noted above, Gudjonsson has conducted much research which addresses this question. However, with some notable exceptions (e.g. Baxter and Boon, 2000; Boon and Baxter, 2000), the literature on suggestibility effects concentrates on the cognitive experiences of the interviewee. Gudjonsson and Clark (1986) argue that interrogative suggestibility "has a strong 'uncertainty' component which relates to the cognitive processing capacity and functioning of the individual". Although Gudjonsson does not ignore the potential importance of situational determinants of suggestibility he places greater emphasis on the role of stable individual differences in mediating suggestibility and states:

"One of the most difficult questions with regard to such concepts as 'suggestibility' and 'compliance' relates to the extent to which one can generalize from test scores to trait concepts. It is clear....that both suggestibility and compliance can be markedly influenced by situational determinants, such as state anxiety and mood.....However,

in spite of potentially important situational determinants, suggestibility and compliance have certain trait-like characteristics and can be reliably measured, at least in adults. There is no doubt that some individuals are generally more suggestible and compliant than others in a wide range of situations" (Gudjonsson, 1992a, p. 327).

In light of the evidence discussed above, it seems that some characteristics of the situation and some characteristics of the interviewer may have a greater effect on suggestibility than has previously been acknowledged.

1.8.10. Personality

Whilst suggestibility itself may not be a stable personality characteristic in its own right, it may be related to certain personality types. As was previously discussed, Gudjonsson (1992a) argues that suggestibility is related to state rather than trait anxiety. However, it seems plausible that trait anxiety may predispose an individual to state anxiety. Therefore there may be a relationship between trait anxiety and suggestibility.

The predictive potential of the introversion/extraversion distinction on accuracy of recall and susceptibility to suggestion has been investigated with mixed results (e.g. Clifford and Scott, 1978; Ward and Loftus, 1985). An extravert is a person whose attention is primarily focused on the external world of objects and events, whereas an introvert's attention is predominantly directed towards their inner world of ideas and concepts (Whitmont, 1978). This dimension is thought to be robust (Humphreys and Revelle, 1984) and also related to differences in effective cognitive processing (Eysenck, 1981). The differences between introverts and extraverts are thought to be

due to level of cortical arousal: extraverts are thought to be less aroused than introverts (Eysenck, 1967). Clifford and Scott (1985) hypothesised that because arousal interferes with memory retrieval (cf. Kleinsmith and Kaplan, 1964), extraverts should make better witnesses than introverts. However, no relationship was found between introversion/ extraversion scores and accuracy of recall.

Ward and Loftus (1985) looked at differences in suggestibility in relation to the extraversion/introversion dimension of the Myers-Briggs Type indicator (Myers, 1962). Ward and Loftus (1985) predicted that because high levels of arousal impede performance in tasks that involve the retention of information over a short period (Humphreys and Revelle, 1984), introverts should have lower levels of accuracy and consequently higher levels of suggestibility. Indeed, it was found that overall levels of performance were influenced by the personality classification of introversion or extraversion. Introverts were found to be more susceptible to misleading and inconsistent suggestions.

Although Ward and Loftus (1985) hypothesised that these differences might be because introverts' higher arousal levels could detract from the formation of the initial memory, not all of their results supported this. They therefore suggest that the differences in performance could possibly be a result of introverts having lower self-esteem and less confidence in their ability for the task, and therefore being more prone to rely on information form external sources. Ward and Loftus cite a study by Brooks and Johnson (1979) in support of this view. In this study introverts and extraverts were asked to choose adjectives which best described themselves. Extraverts were found to describe themselves as confident, whilst introverts did not. Extraverts were

also found to describe themselves as aggressive and assertive, and Ward and Loftus argue that these attributes may be used to resist misleading information from external sources. Thus, it may be that extraverts are less sensitive to external influences and generally less suggestible. Therefore, whilst interrogative suggestibility may not be a relatively stable independent personality characteristic, it may be that it is related to certain personality types.

CHAPTER 2: STUDY 1

2.1. ABSTRACT

Interrogative suggestibility may vary as a function of interviewer behaviour. The present study assessed the effect of two interviewer styles on measures of interrogative suggestibility obtained using the first of the Gudjonsson Suggestibility Scales (GSS1). It was hypothesised that a generally abrupt demeanour adopted by the interviewer would produce greater psychological distance, and therefore higher GSS1 scores, than a friendly demeanour. The study had a single factor between participants design. Participants were tested on the GSS1 by an interviewer whose behaviour was either 'friendly' or 'abrupt'. One female experimenter conducted all of the interviews. Fifty-five participants took part in the study. Most participants were first year undergraduate psychology students. Others were university administrative staff. Two of the GSS1 measures appeared to be biased significantly by interviewer style. Participants tested in the 'abrupt' condition gained higher scores for Shift and Total Suggestibility than those in the 'friendly' condition. These results are consistent with the view that the GSS1 provides measures of two different types of suggestibility. However, this finding may also mean that whilst initial responses to leading questions are mediated by more stable cognitive factors that are relatively unaffected by interviewer demeanour, post-feedback scores may be more sensitive to the social aspects of suggestibility. Implications of the results for the objectivity and administration of the Gudjonsson Suggestibility Scales are discussed.

2.2. INTRODUCTION

As noted in the previous chapter, the administration of the negative feedback is an important aspect in the administration of the Gudjonsson Suggestibility Scales. It is assumed that the negative feedback applies a certain level of interrogative pressure and that variations in style should be avoided. Gudjonsson (1984a) raised concern over the consistency with which negative feedback is administered. If, for example, an interviewee has made no errors it may be awkward or embarrassing for the interviewer to administer the negative feedback and this may affect scoring of Shift. Haraldsson (1985) found that interviewer embarrassment when administering the negative feedback reduced Shift, although the effect was not significant. Gudjonsson & Lister (1984) noted a non-significant tendency for one of their experimenters to gain higher Shift scores than the other.

Responses to the GSS procedure may be further affected by compliance. Compliance will occur, for example, when interviewees give in to what they perceive is required of them in an attempt to appease interviewers and avoid confrontation, so that they yield to suggestions and change their responses during the procedure, even if they know privately that their answers are wrong. A tendency to compliance may also forestall memory search and retrieval processes. Some compliant interviewees may not be aware of any contradiction between what they say and the truth because they attend to situational demands rather than searching memory. (c.f. Baxter & Boon, 2000). It is at this point that compliance and suggestibility overlap (see Gudjonsson, 1992a; 1997 for further analysis of the relationship between interrogative suggestibility and compliance).

If, as the research by Baxter and Boon (2000) indicates, the manner in which negative feedback is administered is important then there may be more general problems associated with experimenter effect in the administration of the scales. It may be that a particular style of interviewing results in higher suggestibility scores even where firmness of negative feedback is held constant. Gudjonsson & Lister (1984) examined the role of self-concept and locus of control in the extent to which individuals are susceptible to suggestion. In this study all participants were placed under the same interrogative pressure. The major finding was that perception of distance between the participant and the experimenter was highly correlated with suggestibility. Gudjonsson & Lister identified the variables of perceived lack of confidence and control in coping with the interrogation as being most clearly related to suggestibility. Feelings of anxiety and powerlessness were also identified as important variables. Psychological distance between an interviewee and the interrogator may create a certain pressure that makes the interviewee more susceptible to suggestion (cf. Gudjonsson & MacKeith, 1982; Irving, 1980).

These results suggest that certain interrogation techniques could be used to increase psychological distance in the interrogative context. By manipulating an individual's level of self-esteem and perception of power and control such techniques could perhaps make individuals more susceptible to suggestion than they would otherwise be if such techniques were not used. Baxter & Boon (2000) manipulated interviewer demeanour only during the presentation of negative feedback and found that firmer negative feedback resulted in higher suggestibility scores. The primary aim of the present study was to test the hypothesis that the greater the psychological distance

created between the interviewer and the interviewee by a general demeanour adopted throughout the interview, the higher GSS1 scores will be. It was predicted that a generally abrupt demeanour would produce greater psychological distance, and hence higher GSS1 scores, than a friendly demeanour. The second aim of the present study is to investigate any possible relationship between personality type and susceptibility to suggestion. Specifically, the hypotheses are as follows:

1. There will be significant differences in suggestibility scores as measured by the GSS 1 as a function of interviewer behaviour. Those tested in the "Abrupt" condition are expected to gain higher suggestibility scores than those tested in the "Friendly" condition.

2. There will be a significant effect for personality as measured by the Eysenck Personality Questionnaire (Eyesenck & Eysenck, 1991): introverts are expected to be more suggestible than extraverts; high scorers on trait anxiety (neuroticism) are expected to be more suggestible than low scorers; any scorers high on trait psychoticism are expected to gain low suggestibility scores.

2.3. METHOD

2.3.1. Design

The study had a single factor between participants design. The independent variable was interviewer behaviour and personality was treated as a co-variate included in the analysis. There were two conditions: "Abrupt" and "Friendly" interviewer behaviour.

2.3.2. Participants

Participants were in the main drawn from an undergraduate student population. Others were university administrative staff. The mean age was 25.18 years with a standard deviation of 13.57. The age range was from 17 to 74. Twenty nine females and twenty six males took part in the study. All participants were told on recruitment that they were taking part in memory research. There were twenty nine participants in the friendly condition and twenty six in the abrupt condition. Participants were randomly assigned to a condition, but numbers of males and females were approximately even in each condition.

2.3.3. Materials

2.3.3.1. The Gudjonsson Suggestibility Scale

The Gudjonsson Suggestibility Scale (GSS1) measures the extent to which individuals yield to various types of suggestive questions referring to a tape-recorded narrative of a mugging. It also measures the extent to which individuals will shift their responses in response to critical feedback on their initial performance. The scale comprises twenty questions that are based on the content of the narrative. Fifteen of these questions are suggestive and five, are straightforward or "true".

2.3.3.2. The Eysenck Personality Questionnaire

The Eysenck Personality Questionnaire-Revised (EPQ-R, Eysenck & Eysenck, 1991) Short Scale is a forty-eight item questionnaire and represents a shorter version of the original EPQ-R. Like the EPQ-R, the Short Scale comprises four independent scales measuring psychoticism (P), extraversion (E), neuroticism (N) and social desirability or lie scale (L). There are an equal twelve questions for each of the four scales.

2.3.3.3. Interviewer Rating Form

The interviewer rating form consists of eighteen words, each of which is rated on a five point Likert scale where 1 = Not at all, and 5 = Very. Examples of the words included on the form are "friendly", "firm", "warm" and "stern". A complete copy of this form can be found in Appendix 1.

2.3.3.4. Filler Task

A filler task was produced for the purposes of the experiment. The task is a multiple choice exercise consisting of four hundred and forty key words, each of which has four other words listed below it. Participants have to choose, from a, b, c, or d, the word they feel is closest in meaning to the key word and then mark their responses on a separate answer sheet. A copy of the filler task can be found in Appendix 2.

2.3.3.5. Equipment

An audio tape recorder was used to present the tape recorded narrative to participants. The same tape recorder, fitted with an external microphone, was used to record participants' recall and answers to the twenty questions onto audio cassettes.

2.3.4. Procedure

2.3.4.1. Interviewer Behaviour Ratings

In order to provide some objectivity and standardisation to the experimenter's behaviour in each condition, a video was made of the experimenter administering the GSS1. Four video clips in total were produced, each differing either in interviewer behaviour or body position in relation to the participant. The four interviewing styles were as follows:

(i) abrupt behaviour, as described below, and leaning back;

(ii) abrupt behaviour and leaning forward;

(iii) friendly behaviour, as described below, and leaning back;

(iv) friendly behaviour and leaning forward.

These video clips were rated by five independent raters prior to the testing of any participants, using the interviewer rating form to be used in the experiment. Means and standard deviations for each of the eighteen words rated for the four video clips were calculated and can be found below in Table 1.

Table 1: Means and standard deviations according to interview style for the each of the eighteen words included on the interviewer rating form.

	Abrupt, Leaning Back		Abrupt, Leaning Forward		Friendly, Leaning Back		Friendly, Leaning Forward	
	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
Nervous	1.40	0.89	2.20	1.30	1.80	0.84	2.20	1.10
Severe	2.60	1.14	4.40	0.89	1.20	0.45	1.00	0.00
Friendly	2.00	1.00	1.20	0.45	4.40	0.55	4.80	0.45
Understanding	2.00	0.71	1.20	0.45	4.20	0.45	4.40	0.55
Assertive	4.20	0.45	4.60	0.89	2.80	0.84	2.00	0.00
Confident	4.20	0.84	4.20	0.84	3.20	0.45	3.20	0.45
Professional	4.20	0.84	3.80	1.10	4.20	0.45	3.40	0.55
Firm	4.20	0.45	4.60	0.89	2.40	0.55	2.60	1.14
Respectful	3.40	1.14	2.00	1.41	4.00	0.71	4.20	0.84
Positive	3.20	1.48	2.20	1.64	4.00	0.71	4.00	1.00
Formal	3.60	1.14	4.60	0.55	2.80	0.45	2.80	0.84
Warm	2.20	1.30	1.40	0.55	4.20	0.84	4.40	0.55
Stern	3.20	1.48	4.40	0.89	1.60	0.89	1.20	0.45
Organised	4.40	0.89	4.40	0.55	4.20	0.45	4.20	0.84
Effective	4.20	0.45	3.20	0.84	4.20	0.84	3.60	0.55
Authoritative	3.40	1.52	4.40	0.89	1.60	0.55	1.60	0.89
Competent	4.40	0.55	4.20	0.84	4.40	0.55	4.20	1.00
Negative	2.40	1.14	4.40	0.55	1.40	0.55	1.20	0.45

Analysis of these results confirmed that the interviewer's behaviour was rated significantly different for the two demeanours of friendly and abrupt. Significant results are as follows: severe ($F(3,12) = 22.769$, $p = 0.000$); friendly ($F(3,12) =$

34.182, p = 0.000); understanding (F(3,12) = 138.727, p = 0.000); assertive (F(3,12) = 13.538, p = 0.000); confident (F(3,12) = 3.636, p = 0.045); firm (F(3,12) = 17.667, p = 0.000); respectful (F(3,12) = 6.103, p = 0.009); positive (F(3,12) = 3.561, p = 0.047); formal (F(3,12) = 9.125, p = 0.002); warm (F(3,12) = 15.880, p = 0.000); stern (F(3,12) = 15.080, p = 0.000); authoritative (F(3,12) = 17.029, p = 0.000); negative (F(3,12) = 31.366, p = 0.000). Follow up paired samples t-tests on the above results showed direction of leaning to be significant for ratings on understanding (t(4) = 4.000, p = 0.016), respectful (t(4) = 5.715, p = 0.005) and negative (t(4) = 3.651, p = 0.022). A body position of leaning forward was associated with lower ratings for understanding and respectful, and a higher rating for negative. Body position affected these ratings in the abrupt condition only. On the basis of this it was decided that the experimenter would adopt a forward leaning position in the abrupt condition and a leaning back position in the friendly condition.

2.3.4.2. Interviewer Behaviour: Abrupt and Friendly Conditions

The GSS1 was administered under two different conditions of interviewer behaviour: abrupt and friendly. In the abrupt condition no attempt was made to build rapport or be friendly when the participant entered the office. The experimenter gave minimal responses to any attempts at conversation from the participant and limited speaking to issuing instructions in an abrupt manner. The experimenter did not smile or make any facial response to anything the participant said. Instead an expression of mild annoyance was maintained throughout the experiment. In conjunction to this, the experimenter adopted a body position of leaning forward across the table towards the participant. Eye contact was maintained by the experimenter throughout the period of testing, except when it was necessary to consult the scoring sheet. In the friendly

condition the experimenter initiated being friendly when the participant entered the office by smiling and thanking then for taking part. The experimenter responded in a friendly manner to any conversation initiated by the participant prior to testing, and the instructions during testing were explained in a friendly manner rather than issued abruptly. The experimenter frequently initiated smiling and responded in a similar manner to any smiling initiated by the participant. A body position of leaning back, away from the table and the participant was adopted for the entire period of the experiment. Again, as with the abrupt condition, eye contact was maintained throughout the testing, except when consulting the scoring sheet. Thirty participants were tested under each of these two conditions of interviewer behaviour.

2.3.4.3. Administering the GSS1

The GSS1 was administered according to instructions provided by Gudjonsson (1997). All participants were tested in the same office. The office contained one large desk and two chairs positioned either side of the desk. The experimenter sat behind the desk and when participants entered the room they were invited to sit down in the chair opposite. Before testing began the experimenter collected the following information on each participant: name, age, sex and occupation.

Before the narrative was played to participants they were given the following instructions:

> *I want you to listen to a short story. Listen carefully because when it is finished I want you to tell me everything you remember.*

A tape recording of the narrative was then played so as to standardise the presentation of the information. The tape containing the narrative was then removed from the tape

recorder and replaced with a blank tape to allow the experimenter to record the participants' responses. The participants were then told the following:

Now tell me everything you remember about the story.

This allowed for the collection of immediate free recall. Participants were then given a copy of the EPQ-R Short Scale and the filler task, which was presented as a word recognition task. Participants were asked to complete the EPQ before moving on to the other task, and were told that they would be given a period of fifty minutes in which to complete as much of the task as possible.

Following the fifty minute delay, participants were told:

Now tell me again everything you can remember about the story.

This allowed for the collection of delayed recall, which was also recorded onto tape.

Participants were then told:

I have a number of questions to ask you about the story. Try to be as accurate as you can be.

The twenty questions were then asked and the responses recorded on the GSS1 scoring sheet. After all twenty questions were asked participants were firmly told:

You have made a number of errors. It is therefore necessary to go through the questions once more, and this time try to be more accurate.

The twenty questions were then repeated, and again the responses were recorded on the GSS1 scoring sheet. Following the end of questioning, participants were asked to fill out the interviewer rating form. Before leaving the room participants in the abrupt condition were debriefed to the extent that they were told the interviewer's behaviour was a necessary part of the experiment.

2.3.4.4 Scoring the GSS1

Scoring of the GSS1 was done in accordance with the guidelines provided by Gudjonsson (1997) as described below.

2.3.4.4.1 Memory Recall

Both immediate and delayed recall are scored for each correct idea recalled. The wording of each idea does not have to be precisely the same as the narrative. Ideas are scored as correct if the meaning is the same as the original item in the narrative. Each correct idea earns one point, with the maximum possible score being forty as there are forty distinct items in the narrative. The scoring of memory recall is not included in the scoring of suggestibility.

2.3.4.4.2. Suggestibility

The scale provides four scores:

(i) Yield1. Every suggestive question that is answered affirmatively, or in the case of false alternatives, where one alternative is chosen, in the first period of questioning is scored as one yield point. The range of possible scores is 0 to 15.

(ii) Yield2. This measure is scored in the same manner as Yield1 following the administration of the negative feedback. Again, the possible range of scores is 0 to 15.

(iii) Shift. Any distinct change in response to all twenty questions in the second period of questioning is scored as a shift. Thus, possible shift scores range from 0 to 20. Examples of shifts in responses are as follows: *Yes* to *No* and vice versa; *Yes* to *Don't Know* and vice versa; *Fist* to *Handbag* and vice versa; *White* to *Neither* and vice versa. Shifts in responses where the meaning is similar are not scored, for example: *No* to *Not Sure*; *Don't Know* to *No*; *Don't Know* to *Not Mentioned*.

(iv) Total Suggestibility. Total Suggestibility is the sum of Yield1 and Shift. Therefore, the range of scores for Total Suggestibility is 0 to 35.

2.4. RESULTS

2.4.1. Interviewer Behaviour.

2.4.1.1. The Gudjonsson Suggestibility Scale.

The first hypothesis predicted that there would be a significant difference in suggestibility scores as a function of interviewer behaviour. Means and standard deviations (S.D.) were first calculated for Yield 1, Yield 2, Shift and Total Suggestibility (T.S.) for each of the two conditions. The results of these calculations can be found below in Table 2.

Table 2: Mean suggestibility scores X condition and GSS 1 norms

	CONDITION				GSS 1 NORMS	
	FRIENDLY		ABRUPT			
	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
YIELD 1	4.14	2.67	4.88	2.41	4.6	3.0
YIELD 2	5.45	3.26	5.96	3.10	5.6	3.8
SHIFT	2.52	1.45	4.04	2.90	2.9	2.5
T.S.	6.62	3.14	8.92	4.83	7.5	4.6

Note: Norms derived from Gudjonsson (1997).

A oneway ANOVA analysis of these data revealed no significant differences for Yield 1 or Yield 2 between the two conditions: Yield 1 ($F(1,54) = 1.177$, $p = 0.283$), Yield 2 ($F(1, 54) = 0.356$, $p = 0.553$). However, significant differences for Shift and Total Suggestibility were found between the two conditions: Shift ($F(1,54) = 6.223$, $p = 0.016$), Total Suggestibility ($F(1,54) = 4.475$, $p = 0.039$). These results support the hypothesis that suggestibility scores measured by the Gudjonsson Suggestibility Scale

(GSS) can be affected by interviewer behaviour, with participants in the abrupt condition scoring significantly higher for Shift and Total Suggestibility than those in the friendly condition.

Means and standard deviations were also calculated for the memory recall element of the scale. Memory recall comprises Immediate Recall and Delayed Recall. Distortions, Fabrications and Total Confabulations are also included in the scoring of both Immediate and Delayed Recall. The means and standard deviations for Immediate Recall as a function of interviewer behaviour can be found below in Table 3, and the means and standard deviations for Delayed Recall can be found below in Table 4.

Table 3: Mean Immediate Recall scores X condition

	CONDITION				GSS 1 NORMS	
	FRIENDLY		ABRUPT			
	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
RECALL	23.67	5.50	24.15	5.84	21.3	7.1
DISTORT.	1.55	1.02	2.39	1.47	*	*
FABRICAT.	0.07	0.26	0.19	0.40	*	*
T.CONFAB.	1.62	1.02	2.58	1.58	*	*

Notes: Norms derived from Gudjonsson (1997).
* no norms are available for Distortions, Fabrications or Total Confabulations in the general population.

Table 4: Mean Delayed Recall scores X condition

	CONDITION				GSS 1 NORMS	
	FRIENDLY		ABRUPT			
	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
RECALL	21.21	5.92	21.75	6.80	19.5	7.5
DISTORT.	1.72	1.77	2.27	1.49	*	*
FABRICAT.	0.10	0.31	0.15	0.37	*	*
T.CONFAB.	1.83	1.83	2.42	1.58	*	*

Notes: Norms derived from Gudjonsson (1997).
* no norms are available for Distortions, Fabrications or Total Confabulations in the general population.

A oneway ANOVA on the above data for Immediate and Delayed Recall revealed six non-significant results and two significant differences between the two conditions. The non-significant results are as follows: Immediate Recall ($F(1,54) = 0.099$, $p = 0.754$), Immediate Fabrications ($F(1,54) = 1.873$, $p = 0.177$), Delayed Recall ($F(1,54) = 0.100$, $p = 0.753$), Delayed Distortions ($F(1,54) = 1.511$, $p = 0.224$), Delayed Fabrications ($F(1,54) = 0.304$, $p = 0.584$), Delayed Total Confabulations ($F(1,54) = 1.647$, $p = 0.205$). The two significant results are: Immediate Distortions ($F(1,54) = 6.049$, $p = 0.017$); Immediate Total Confabulations ($F(1,54) = 7.287$, $p = 0.009$). These results show that participants in the abrupt condition produce more Distortions and Total Confabulations on the content of the GSS 1 narrative than those participants in the friendly condition. Therefore, these results further support the hypothesis that interviewer behaviour can alter participants' responses on the GSS.

2.4.1.2. Ratings of Interviewer Behaviour.

Given that the first hypothesis was concerned with differences in suggestibility as a function of interviewer behaviour, it is important to confirm that there were differences between the two conditions in the participants' perceptions of the interviewer's behaviour. Therefore, means and standard deviations were initially calculated for the rating forms completed by each participant in the two different conditions. The results of these calculations can be found below in Table 5.

Table 5: Means and standard deviations from the interviewer rating form for participants X condition

	CONDITION			
	FRIENDLY		ABRUPT	
	MEAN	S.D.	MEAN	S.D.
NERVOUS	1.34	0.61	1.46	0.71
SEVERE	0.67	0.12	2.42	1.03
FRIENDLY	4.34	0.86	2.62	0.98
UNDERSTANDING	4.10	0.98	2.35	0.80
ASSERTIVE	3.52	1.06	4.15	0.92
CONFIDENT	4.21	0.82	4.15	1.08
PROFESSIONAL	4.34	0.94	4.38	0.98
FIRM	3.00	1.28	4.19	0.94
RESPECTFUL	4.34	0.72	3.42	1.06
POSITIVE	4.28	0.84	3.38	1.13
FORMAL	3.00	1.20	4.19	1.02
WARM	3.86	0.92	2.15	0.92
STERN	1.41	0.87	3.31	1.12
ORGANISED	4.55	0.91	4.50	0.99
EFFECTIVE	4.21	0.98	4.23	1.03
AUTHORITATIVE	2.52	1.12	3.96	1.04
COMPETENT	4.41	0.82	4.42	0.90
NEGATIVE	1.21	0.77	1.81	0.94

A oneway ANOVA on these data yielded significant differences between the two conditions for participants' ratings on twelve of the words included on the form. The significant results are as follows: severe ($F(1,54) = 21.717$, $p = 0.000$), friendly ($F(1,54) = 48.611$, $p = 0.000$), understanding ($F(1,54) = 52.702$, $p = 0.000$), assertive ($F(1,54) = 5.595$, $p = 0.022$), firm ($F(1,54) = 15.181$, $p = 0.000$), respectful ($F(1,54) = 14.390$, $p = 0.000$), positive ($F(1,54) = 11.110$, $p = 0.0020$, formal ($F(1,54) = 15.641$, $p = 0.000$), warm ($F(1,54) = 47.291$, $p = 0.000$), stern ($F(1,54) = 49.572$, $p = 0.000$), authoritative ($F(1,54) = 24.366$, $p = 0.000$), negative ($F(1,54) = 6.760$, $p = 0.012$). The non-significant results of the analysis are as follows: nervous ($F(1,54) = 0.430$, $p = 0.5150$, confident ($F(1,54) = 0.042$, $p = 0.838$), professional ($F(1,54) = 0.024$, $p = 0.878$), organised ($F(1,54) = 0.041$, $p = 0.841$), effective ($F(1,54) = 0.008$, $p = 0.930$), competent ($F(1,54) = 0.002$, $p = 0.968$). These results show that there were significant differences in perceptions of the interviewer between the two conditions.

2.4.2. The Eysenck Personality Questionnaire.

The second hypothesis was concerned with personality. It was hypothesised that there may be significant differences in suggestibility scores as a function of personality type measured by the EPQ. Analysis was concerned with three of the four dimensions measured by the EPQ: extroversion/introversion, psychoticism and neuroticism. Of the fifty five participants there was a complete set of missing values for one participant, and a missing value for neuroticism for one other participant. Means and standard deviations were calculated for each personality dimension. These data can be found below in Table 6. This analysis showed that all of the means were within one

standard deviation of the means provided by Eysenck for a normal population. Thus the sample was considered to be representative of the normal population.

Table 6: Range, minimum, maximum and mean score for each personality dimension.

	N	RANGE	MIN.	MAX.	MEAN	S.D.
EXTRO	**54**	**10**	**1**	**11**	**7.46**	**2.89**
PSYCHO	**54**	**9**	**0**	**9**	**2.72**	**2.32**
NEURO	**53**	**12**	**0**	**12**	**6.77**	**3.32**

To check for any relationship between personality and suggestibility the scores for the three personality dimensions were correlated with Yield 1, Yield 2, Shift and Total Suggestibility. The results of this analysis revealed no significant correlations. Therefore, no support was found for the hypothesis that suggestibility may be affected by the personality dimensions of extroversion/introversion, psychoticism or neuroticism. These data can be found below in Table 7.

Table 7: Pearson correlation coefficients for personality X GSS 1 scores.

	YIELD 1	YIELD 2	SHIFT	T.S.
EXTROVERSION	**0.230**	**0.007**	**-0.023**	**0.122**
PSYCHOTICISM	**0.037**	**0.019**	**0.073**	**0.062**
NEUROTICISM	**0.020**	**-0.028**	**-0.076**	**-0.038**

Memory recall was also correlated with the three personality dimensions. The results of this analysis revealed no significant correlations between immediate or delayed recall and personality. Therefore, personality was not found to affect recall of the GSS 1 narrative. These data can be found below in Table 8.

Table 8: Pearson correlation coefficients for personality X memory recall.

	IMMEDIATE RECALL	DELAYED RECALL
EXTROVERSION	**-0.120**	**-0.043**
PSYCHOTICISM	**-0.006**	**0.042**
NEUROTICISM	**0.132**	**-0.003**

In sum, the results indicate that interviewer behaviour had a significant effect on participants scores on the GSS1. This effect operated on Shift and Total Suggestibility scores only. No effect of variations in interviewer behaviour was found on Yield 1 or Yield 2 scores. No effect was found for personality as measured by the EPQ.

2.5. DISCUSSION

The specific aims of the study were to investigate the effects of interviewer behaviour and participant personality type on the measurement of interrogative suggestibility. That the attempt to vary interviewer behaviour was successful seems broadly confirmed by the results obtained from the interviewer rating forms. In the 'Friendly' condition the interviewer tended to be rated as friendly, understanding, respectful, positive and warm. In the 'Abrupt' condition the interviewer tended to be rated as severe, assertive, firm, formal, stern, authoritative and negative. The scores for memory recall did not vary as a function of experimental condition and were closely comparable to norms for the general population, suggesting that each group had comparable memories for the GSS 1 narrative against which to compare conflicting information contained in the questions.

Significant differences between the experimental conditions were found for Shift and Total Suggestibility scores with participants in the 'Abrupt' condition gaining higher scores on these measures than those in the 'Friendly' condition. The Yield 1 scores indicate that the difference in Total Suggestibility was due primarily to the difference in the Shift component of this measure between the conditions. Shift is assumed to measure the effects of interrogative pressure on an individual (Gudjonsson, 1983), pressure which is applied overtly by administering negative feedback and implicitly by re-questioning in the standard GSS procedure. These procedures did not differ, however, between the conditions in the present study: negative feedback was administered 'firmly' in both conditions and all participants were questioned twice. The tendency of participants in the 'Abrupt' condition to be more likely to change

their responses at re-questioning seems most likely to be due, therefore, to the generally negative manner of the interviewer in that condition.

The Yield 1 and Yield 2 scores did not differ significantly between the conditions, although both tended to be higher in the 'Abrupt' condition. These scores departed only slightly from the general population norms for the scales. It does not seem, therefore, that interviewer manner as manipulated in the present study significantly affected either the capacity to detect misleading information or a tendency to comply with the demands of leading questions. One reason for this may be that an overall interviewer manner which interviewees have no reason to link to their own behaviour communicates no particular expectancy but increases interviewee uncertainty above the levels created by negative feedback alone in the standard GSS procedure. That this additional pressure operated primarily on Shift rather than Yield 2 of the two post-feedback scores may indicate that its effect is to increase the likelihood that interviewees will examine what was 'wrong' with their previous answers in an attempt to identify what can be changed. That Yield 2 was not found to be significantly different between conditions may be because Yield 2 provides a specific measure of the effect of negative feedback and the valence of negative feedback was held constant between conditions (cf. Baxter & Boon, 2000; Gudjonsson, 1983, 1992a, 1997).

Shift is assumed to measure the overall effects of interrogative pressure on an individual (Gudjonsson, 1983) and primary sources of interrogative pressure in the standard GSS procedure are negative feedback and the further negative feedback implicit in re-questioning. However, the present results have identified a further factor

which can contribute to Shift. Interviewees can evidently be pressured to shift their responses more frequently if an interrogator has an abrupt manner than will be the case if an interrogator is friendly but nonetheless delivers 'firm' negative feedback. One reason for this, which further work might assess specifically, may be that a generally negative interviewer manner does not necessarily bias interviewees' responses by causing them to attend to external cues at the expense of internal cues, as the standard GSS negative feedback procedure is assumed to do (Gudjonsson, 1992a). Interviewees may continue to attend to internal cues but may devalue them. A further possibility is that participants may have attempted to appease the severe interviewer by simply complying with her perceived demands, knowingly shifting their initial responses while still believing them to have been correct. A limitation of the present study is that it cannot identify the relative contributions which devaluation of internal cues, compliance, and other influences may have made to the levels of interrogative suggestibility found: these and other influences may have operated in isolation or interactively to various degrees between and within interviewees throughout the procedure or at different stages of the procedure. (cf. Baxter & Boon, 2000; Gudjonsson & Clark, 1986; Gudjonsson, 1992a, 1997).

As was noted in Chapter 1 of this thesis, socially demanding situations may result in an individual experiencing temporary disengagement from higher levels of cognition such as those associated with critical thought processes (Schumaker, 1991; Bowers, 1992). Such cognitive dissociation may help explain the present results. In the Abrupt condition, interpersonal demands may have been such that dissociation from higher-level cognitions occurred to the extent that interviewees suppressed or ignored their conscious monitoring processes or critical awareness. Rhue and Lynne (1991) view

dissociation from such processes as goal directed to the extent that it functions as a form of coping mechanism in the control of internal experiences. From this point of view, cognitive dissociation may have occurred as a means of reducing the negative affect caused by the abrupt behaviour of the interviewer. A lack of critical thinking may explain the higher Shift and Total Suggestibility scores found in the 'Abrupt' condition. With decreased critical awareness, participants may have been more likely to accept misleading information provided by the interviewer, or to accept the negative feedback and assume that more of their answers were wrong and therefore making more shifts in their responses than those participants tested in the 'Friendly' condition.

Directly related to this is the role that focus of attention may have played in the present results. If, as has been suggested, the abrupt behaviour of the interviewer created a more socially demanding situation than the 'Friendly' condition, then it can be assumed that an external focus of attention would be more likely in the 'Abrupt' condition. Externally focussed attention results in behaviour becoming more responsive to external cues (Gibbons & McCoy, 1991). As such, an external focus of attention may facilitate compliant responding. As suggested above, those participants whose attention was focussed on external cues may have been more likely to have experienced a temporary disengagement of critical thinking processes which may have lead to a compliant response. In this case, misleading information would not have been internalised. Future research should assess the extent to which participants internalise the misleading details from the questions in the GSS procedure, and therefore address the question of whether such social pressure results in true cognitive change or a temporary compliant response.

The present findings are consistent with Gudjonsson's argument that interrogative suggestibility consists of two distinct types of suggestibility (cf. Gudjonsson, 1984a, 1992a, 1997). Yield 1 assesses the effect of leading questions or suggestive stimuli on accuracy of testimony and the present results indicate that this factor was not affected by interpersonal factors although Shift and Total Suggestibility were found to be. This finding may mean that initial responses to leading questions are mediated by more stable cognitive factors, perhaps involving a capacity for source monitoring or discrepancy detection, that are relatively unaffected by the manner of the interrogator, whereas the post-feedback GSS measures may be more sensitive to social aspects of suggestibility.

Note that, although the Shift and Total Suggestibility differences found in the present study were statistically significant, they were relatively modest and all scores obtained in the present study fell within one standard deviation of general population norms. It should also be remembered that most participants were undergraduates and the interrogative suggestibility of a student sample may not be representative of the general population, even though, as noted above, pre-feedback and recall scores obtained in the present study were comparable to general population norms for the scale used (cf. Gudjonsson, 1997). More vulnerable interviewees may be more sensitive to variations in interviewer manner and future research might usefully assess this possibility.

The second hypothesis was concerned with the effects of personality type on the suggestibility scores of the GSS1. It was predicted that there would be a significant

effect for the personality types of extraversion/introversion, neuroticism and psychoticism on suggestibility scores. Specifically, it was proposed that introverts would be more suggestible than extraverts, high scorers on neuroticism would be more suggestible than low scorers, and any high scorers on psychoticism were expected to gain low suggestibility scores. The results of the correlations between personality and suggestibility scores showed that personality had no effect on suggestibility in this case. There were no significant relationships between the extraversion/introversion dimension, neuroticism or psychoticism and any of the suggestibility scores obtained from the GSS1. The correlations between memory recall on the GSS1 and personality type where also found to be non-significant.

The difference between extraversion and introversion has been conceptualised as being related to level of cortical arousal (Eysenck, 1967) and is also thought to be related to differences in effective cognitive processing (Eysenck, 1981). However, if introverts are more cognitively aroused than extraverts, no evidence that this arousal interferes with effective cognitive processing during the administration of the GSS procedure. Clifford and Scott (1978) also hypothesised that because high arousal has been found to interfere with memory retrieval (cf. Kliensmith and Kaplan, 1964) then extraverts should give more accurate recall of an event than introverts. However, Clifford and Scott found no evidence that level of arousal was related to accuracy of recall. Similarly, although Ward and Loftus (1985) found introverts to be more susceptible to suggestion than extraverts, their results did not indicate that this difference was due to levels of arousal. Instead they proposed that the introverts had lower levels of self-esteem and confidence in their ability to complete the task and it was this that made them more suggestible than the extraverts. The results of the

present study have indicated that self-esteem may have been manipulated by the interviewer and that this mediated suggestibility independent of personality type. Therefore, it may be that no relationship was found between extraversion/introversion and suggestibility in this case because the self-esteem of all the participants was affected by the interviewer's behaviour, thus masking any potential effects of personality.

Alternatively, personality may actually have no predictive potential for suggestibility. The present results clearly indicate that for Shift interpersonal factors seem to be more important than any stable cognitive or personality variables. Therefore, if personality type does affect suggestibility it would be expected that the effect would be seen in the measurement of Yield1 as this was found to be unaffected by the difference in interviewer behaviour. However, Yield1 was equally found to have no significant relationship with personality. Gudjonsson (1992a) has argued that interrogative suggestibility is affected by state rather than trait anxiety and the results of the present study seem to confirm that this is the case. Neuroticism did not correlate with suggestibility and it can be argued that the behaviour of the interviewer in the abrupt condition served to increase state anxiety and that this contributed to the higher suggestibility scores obtained in this condition. It therefore seems that no predictions can be made regarding suggestibility on the basis of personality type as measured by the EPQ.

In practical terms the present findings suggest, in line with the conclusions of Haraldsson (1985) and Baxter and Boon (2000), that prospective users of the Gudjonsson scales should be aware that variations in their demeanour may bias their

results with the consequent danger that they will fail to identify vulnerable witnesses if their demeanour is too mild, or may falsely identify acceptable witnesses as vulnerable if their demeanour is too severe. A comparison of the present findings with those of Baxter and Boon may provide profiles of two different types of problem interviewers. (That the comparability of these two studies should not be affected by the use in the present study of the GSS 1, rather than the GSS2 is evident from the norms for the scales provided by Gudjonsson, 1997).

Baxter and Boon (2000) varied the manner in which negative feedback was delivered when testing with the GSS 2 but kept interviewer demeanour 'neutral' throughout the other stages of the procedure. They reported that an interviewer whose manner was 'stern' or 'severe' rather than 'firm' when delivering negative feedback produced higher Yield 2 and Shift scores when using the GSS 2 than an interviewer whose manner was generally 'friendly' when delivering negative feedback. They found no significant differences in Total Suggestibility as a function of this manipulation. The method used in the present study essentially inverted the procedure used by Baxter and Boon: interviewer demeanour at negative feedback was 'firm' in both conditions (the closely comparable Yield 2 scores appear to confirm this) but general demeanour throughout the other stages of the GSS procedure was varied. This may mean that interviewers who misinterpret Gudjonsson's (1992a, 1997) instruction to be 'firm' in delivering negative feedback, such that they are either too severe or too familiar, will tend to produce Yield 2 and Shift scores which are artificially too high or too low respectively. Their Total Suggestibility scores, however, may be less seriously affected by such variability. By contrast, interviewers who deliver negative feedback correctly but whose demeanour is generally too severe or too familiar will produce

normal Yield 2 scores and Shift and Total Suggestibility scores which are artificially too high or too low respectively.

Taken together these two sets of findings suggest a further function of the Gudjonsson Suggestibility Scales. If Yield 1 is indeed relatively independent of interviewer manner then GSS results which show normal Yield 1 scores but lowered or raised post-feedback scores may identify interviewees who are suggestible because they are particularly vulnerable to interpersonal pressure. However, such a pattern of scores may also identify interviewers whose manner is either especially informal or especially overbearing. It would seem therefore that anybody intending to use these scales for research, clinical, or forensic purposes should first establish in practice sessions that their standard technique produces results closely comparable to the established norms for the scales (cf. Baxter & Boon, 2000).

One advantage of the Gudjonsson Suggestibility Scales is that they represent standardised tests with easily quantifiable results. The scales have well-established norms (see Gudjonsson, 1997) against which comparisons can be made, and therefore they may represent a useful tool for the training and monitoring of forensic interviewers. The present results indicate that levels of interrogative suggestibility can be raised or lowered depending on differences in interviewer behaviour. This finding has important practical implications and suggests the need for standardisation of interview technique. Interviewers ought to be made aware of the extent to which their own behaviour may bias the outcome of an interview and the means by which they can minimise their own influence over the interviewee. The GSS 1 and 2 may represent a means of achieving this through training and continuous monitoring of

interview technique. Such training may be of particular importance for those involved in the interviewing of more vulnerable populations such as children or those with special needs. As was previously noted, such vulnerable populations may be even more sensitive to variations in interviewer manner. It is this possibility that Study 2 aims to investigate.

CHAPTER 3: STUDY 2

3.1. ABSTRACT

Interrogative suggestibility has been found to vary as a function of interviewer behaviour. The present study assessed the effects of two interviewer styles on measures obtained on the GSS 1 using a sample of adolescents aged 15-16. It was hypothesised that an interviewer adopting an abrupt demeanour would produce greater psychological distance, and therefore increase suggestibility scores than those participants tested under friendly conditions. The study had a single factor between participants design. Participants were tested by an interviewer who adopted either an "Abrupt" or "Friendly" demeanour. One female interviewer conducted all of the interviews. A total of 54 participants took part in the study. All participants were recruited from local secondary schools. Results did not support the hypotheses. All suggestibility scores were lower in the Abrupt condition, but this difference was only significant for Yield 2. Results also showed there to be a significant difference between males and females on Shift and Total Suggestibility across conditions, with females scoring higher on both these measures.

3.2. INTRODUCTION

As outlined in the previous chapter, the findings from Study 1 are consistent with Gudjonsson's argument that interrogative suggestibility consists of two distinct types of suggestibility (Gudjonsson, 1984a; 1992a; 1997). Taken in conjunction with the findings of Baxter and Boon (2000), it would seem that initial responses to leading questions are mediated by relatively stable cognitive factors that are seemingly unaffected by interviewer manner, whereas the post-feedback GSS measures may be more sensitive to variations in the social aspects of suggestibility. Whilst Study 1 found differences in GSS 1 scores as a result of differences in interviewer demeanour, all scores obtained fell within one standard deviation of the norms for the general population. It may be the case that more vulnerable interviewees, for instance children or special needs individuals, would demonstrate heightened sensitivity to variations in interviewer manner.

As was discussed in Chapter 1, problems related to child witnesses and suggestibility are well documented (see Baxter, 1990; Ceci & Bruck, 1993 for reviews). Historically, children have been viewed as inaccurate and highly suggestible witnesses compared with adults (e.g. Stern, 1910), and more recent studies generally support this view (e.g. Candel, Merckelbach & Muris, 2000; Robinson & Briggs, 1997). The results of these studies indicate that even though children can be found to be no more susceptible to the effects of leading questions than adults (e.g. Flin, Boon, Knox & Bull, 1992), they do seem to be more sensitive than adults to the social aspects of suggestibility. Children appear to be more sensitive than adults to the expectations and instructions of those people they perceive to be in authority (Zaragoza, 1987), which

therefore may make them more sensitive than adults to differences in interviewer manner.

There have been very few studies involving the GSS scores of children. An exception is the study by Danielsdottir, Sigurgeirsdottir, Einarsdottir and Haraldsson (1993). In this study the GSS was administered to 160 children representing four different age groups: 6, 8, 10, and 12 year olds. Results showed that over all the children had significantly higher suggestibility scores than adults. Analysis between the four age groups revealed that the scores on measures of Total Suggestibility and Yield 1 decreased with age. Therefore, in line with previous research on child suggestibility (e.g. Candel, Merckelbach & Muris, 2000; Robinson & Briggs, 1997), children seem more susceptible to both the leading questions and interrogative pressure aspects of the GSS.

Adolescents have also been found to be more suggestible than adults on the GSS (Gudjonsson & Singh, 1984; Singh & Gudjonsson, 1992; Richardson, Gudjonsson, & Kelly, 1995). Singh and Gudjonsson (1992) administered that GSS to forty adolescent males ranging in age from 11 – 16 years old. Participants gained higher scores on all measures of the GSS than the established norms for an adult population. However, the difference was only significant for Shift and Total Suggestibility. Richardson, Gudjonsson and Kelly (1995) also tested 65 adolescent males on the GSS. Again ages ranged from 11 – 16 years. As was predicted, participants gained significantly higher Shift scores than the adult norms. As with Singh and Gudjonsson, the Yield scores were not found to be significantly higher. Both these studies demonstrate that, unlike children, adolescents do not significantly differ from adults in their responses to

leading questions, however their tendency to shift and therefore their sensitivity to interrogative pressure is greater than for adults.

One reason for the higher Shift scores found for this age group may be lower levels of self-esteem. The Gudjonsson and Clark (1986) model predicts a negative relationship between self-esteem and suggestibility, and such a relationship has been demonstrated in several studies (Gudjonsson and Singh, 1984; Singh and Gudjonsson, 1984; Gudjonsson and Lister, 1984; Baxter, Jackson & Bain, under review). Research with adolescents (e.g. Aligood-Merten & Stockard, 1991; Pryor, 1994; Bryne, 2000) has demonstrated that this age group experience low levels of self-esteem. Therefore, in line with the Gudjonsson and Clark model, one would expect adolescents to demonstrate heightened sensitivity to interrogative pressure.

In a study replicating the Abrupt and Friendly conditions in Study 1 of this thesis, Baxter, Jackson and Bain (under review) demonstrated that participants with higher levels of self-esteem gained lower GSS scores. They found a highly significant interaction between interviewer behaviour and self-esteem in the Abrupt condition of their study. Participants in this condition, who had high levels of self-esteem gained lower Yield 2 and Shift scores than those with low self-esteem. Thus, those participants with higher levels of self-esteem were less influenced by the Abrupt behaviour of the interviewer than those with lower levels of self-esteem. This study supports the results of study 1 of this thesis and other research (Baxter & Boon, 2000; Howard, Hong & Tzy, under review), which demonstrates that interviewer demeanour and psychological distance can significantly affect suggestibility scores gained on the

GSS, with more abrupt demeanour and greater psychological distance being associated with higher levels of suggestibility.

On the basis of the evidence demonstrating a negative relationship between self-esteem and suggestibility, and because adolescents experience lower levels of self-esteem, an adolescent population was used for the present study. The aim was to assess the effect of varying interviewer behaviour, and therefore psychological distance, on scores obtained on the GSS1 for this more vulnerable population. It was predicted that a generally abrupt demeanour would produce greater psychological distance, and therefore higher GSS 1 scores, than a friendly demeanour and that this difference would be more marked than that found for a normal adult population. Potential differences between males and females were also investigated.

3.3. METHOD

3.3.1. Design

The study had a two-factor mixed design. The between participants variables were interviewer behaviour and gender. Interviewer behaviour was varied so that there were two conditions: "Abrupt" and "Friendly". Data from Yield 1 and 2 were treated as a within participants test order variable.

3.3.2. Participants

All participants were pupils recruited from local secondary schools. The mean age of the sample was 15.78 years (S.D. = 0.42, range = 15 - 16 years). In total 27 females and 28 males took part in the study, of these 26 were tested in the friendly condition and 29 in the abrupt condition. Participants were assigned at random to conditions and numbers of males and females were approximately even between conditions.

3.3.3. Procedure

The GSS 1 was administered in accordance with those recommendations made by Gudjonsson (1997) under one of two conditions of interviewer behaviour: "Abrupt" and "Friendly". In both conditions it was the same female experimenter who conducted all interviews. Participants were instructed to listen carefully to a narrative, as they would be asked for free recall following the end of the narrative. Following free recall, participants were told that they would be asked a series of questions about the narrative and that they should try to be as accurate as possible. Once all twenty questions had been asked, participants were told that they had made a number of

errors, that the questions would have to be repeated and that they should try to be more accurate. The questions were then repeated.

As in study 1, in the 'Friendly' condition the experimenter smiled when participants entered the test room, thanking them for taking part. The experimenter responded in a friendly manner to any conversation initiated by the participant prior to testing, and maintained this manner when explaining the procedure. The experimenter smiled frequently and always smiled back in response participants. A body position of leaning back, away from the table and the participant was adopted for the entire period of the experiment. Eye contact was maintained throughout testing, except when consulting the scoring sheet.

Again, as with Study 1, in the 'Abrupt' condition no attempt was made to build rapport or be friendly when the participant entered the test room. Minimal responses were made to any attempts at conversation by the participant. Speaking was limited to issuing instructions in an abrupt manner. The experimenter did not smile or make any facial responses to anything the participant said. Instead an expression intended to convey mild annoyance was maintained throughout the procedure. The experimenter adopted a body position of leaning forward across the table towards the participant. Again, eye contact was maintained by the experimenter throughout the period of testing, except when it was necessary to consult the scoring sheet.

As well as interviewer demeanour, there were two other departures from the standard GSS testing procedure. Firstly, the narrative was presented to participants on audiotape in an attempt to standardize conditions at the time of encoding. Secondly, in

order to keep disruption to the school day to a minimum, no 50-minute delay was included (Gudjonsson, 1997), so only immediate recall was recorded.

On completion of GSS 1 testing participants completed a questionnaire, which asked for five point (1-5) Likert scale ratings on 18 aspects of the interviewer's manner. These aspects were: nervous, severe, friendly, understanding, assertive, confident, professional, firm, respectful, positive, formal, warm, stern, organised, effective, authoritative, competent, and negative, with a high score being more nervous, etc. A copy of this questionnaire can be found in Appendix 1.

3.3.3.1. Scoring the GSS 1

Scoring of the GSS 1 was done in accordance to the guidelines provided by Gudjonsson (1997). Refer to Study 1 in Chapter 2 of this thesis.

3.4. RESULTS

3.4.1. The GSS 1

It was predicted that there would be significant differences between participants as a function of interviewer behaviour. Participants tested in the Abrupt condition were expected to gain higher suggestibility scores than those participants tested in the Friendly condition. Scores from Yield 1 and 2 were treated as a test order variable in the analysis. A 2 X 2 (between participants condition and gender variables) X 2 (within participants test order variable) split-plot ANOVA was performed on the Yield (Yield 1 / Yield 2) data. The analysis revealed a significant difference between Yield 1 and Yield 2 performance ($F(1,51) = 24.26$, $p<0.001$), a significant main effect for condition ($F(1,51) = 7.15$, $p = 0.01$), no significant main effect for gender ($F(1,51) = 1.55$, $p = 0.22$), and no significant interactions between condition and the test order variable ($F(1,51) = 2.47$, $p = 0.12$), gender and test order variable ($F(1,51) = 0.27$, $p = 0.61$) or the main effects of condition and gender ($F(1,51) = 1.49$, $p = 0.23$). Associated descriptive statistics can be found below in Table 9 and Table 10.

A two-way ANOVA was performed on the Shift and Total Suggestibility scores. These analyses revealed a significant main effect for gender: Shift - $F(1,51) = 6.12$, $p = 0.017$, Total Suggestibility - $F(1,51) = 4.88$, $p = 0.032$; no main effect of condition: Shift – $F(1,51) = 0.51$, $p = 0.477$, Total Suggestibility – $F(1,51) = 2.06$, $p = 0.158$; and no significant interaction between gender and condition: Shift – $F(1,51) = 0.21$, $p = 0.649$, Total Suggestibility – $F(1,51) = 0.23$, $p = 0.631$. Associated descriptives can be found below in Table 9 and Table 10.

Table 9: Mean suggestibility scores X condition and GSS 1 norms

	CONDITION				GSS 1 NORMS	
	FRIENDLY		ABRUPT			
	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
YIELD 1	5.23	2.21	4.17	2.23	5.5	3.2
YIELD 2	7.27	2.65	5.24	2.69	7.1	3.6
SHIFT	5.00	2.68	4.45	2.95	4.9	2.7
T.S.	10.23	3.19	8.72	4.46	10.4	4.4

Note: Norms derived from Singh & Gudjonsson (1992).

Table 10: Mean suggestibility scores for males and females

	FEMALES		MALES	
	MEAN	S.D.	MEAN	S.D.
YIELD 1	4.96	2.31	4.39	2.23
YIELD 2	6.63	2.99	5.79	2.67
SHIFT	5.63	2.80	3.82	2.57
T.S.	10.59	3.97	8.32	3.66

Means and standard deviations were calculated for the memory recall aspect of the GSS 1. These descriptives can be found below in Table 11. A one-way ANOVA on these data showed no other significant differences between conditions: Total Memory Recall ($F(1,54) = 3.837$, $p = 0.056$); Distortions - ($F(1,54) = 0.003$, $p = 0.954$); Fabrications - ($F(1,54) = 0.013$, $p = 0.910$) and Total Confabulations ($F(1,54) = 0.001$,

p = 0.981). However, it should be noted that the Memory Recall data is approaching significance.

Table 11: Mean recall scores X condition and GSS norms

	CONDITION					
	FRIENDLY		ABRUPT		GSS NORMS	
	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
RECALL	16.67	6.43	20.00	6.05	15.8*	5.5*
DISTORT.	1.65	1.41	1.68	1.68	0.9**	0.9**
FABRICAT.	0.19	0.40	0.18	0.48	0.8**	0.9**
T.CONFAB.	1.85	1.43	1.86	1.92	1.7**	1.2**

Notes: *Norms derived from Singh & Gudjonsson (1992).

**Norms derived from Gudjonsson and Sigurdsson (1996).

3.4.2. Ratings of Interviewer Behaviour

As with study 1 it was important to confirm that there were significant differences between the conditions in participants' perceptions' of the interviewer's behaviour. Thirty-four of the participants completed interviewer rater forms. Means and standard deviations were calculated and can be found below in Table 12. A one-way ANOVA on the data from the interviewer rater forms revealed significant differences between the conditions for participants' ratings on eight of the words used on the form. The significant results were: friendly ($F(1,33) = 7.403$, $p = 0.010$); understanding ($F(1,33) = 5.357$, $p = 0.027$); assertive ($F(1,33) = 5.240$, $p = 0.029$); professional ($F(1,33) = 7.129$, $p = 0.012$); respectful ($F(1,33) = 9.779$, $p = 0.004$); positive ($F(1,33) = 6.122$, $p = 0.019$); warm ($F(1,33) = 6.171$, $p = 0.018$); negative ($F(1,33) = 7.321$, $p = 0.011$).

The non-significant results were as follows: nervous ($F(1,33) = 0.075$, $p = 0.786$); severe ($F(1,33) = 3.251$, $p = 0.081$); confident ($F(1,33) = 1.817$, $p = 0.187$); firm ($F(1,33) = 1.026$, $p = 0.319$); formal ($F(1,33) = 1.595$, $p = 0.216$); stern ($F(1,33) = 2.515$, $p = 0.123$); organised ($F(1,33) = 0.895$, $p = 0.351$); effective ($F(1,33) = 3.354$, $p = 0.076$); authoritative ($F(1,33) = 0.125$, $p = 0.725$); competent ($F(1,33) = 1.589$, $p = 0.217$). These results confirm that there were significant differences in participant's perceptions of the interviewer between the two conditions and that perceptions were in line with the intended manipulation.

Table 12: Interviewer behaviour ratings X condition

	CONDITION			
	FRIENDLY		ABRUPT	
	MEAN	S.D.	MEAN	S.D.
NERVOUS	1.13	0.50	1.17	0.38
SEVERE	1.56	0.73	2.17	1.15
FRIENDLY	4.25	0.77	3.28	1.23
UNDERSTANDING	3.88	0.96	3.11	0.96
ASSERTIVE	4.13	0.81	3.38	1.04
CONFIDENT	4.69	0.48	4.28	1.13
PROFESSIONAL	4.94	0.25	4.28	0.96
FIRM	3.38	1.31	3.78	1.00
RESPECTFUL	4.31	0.60	3.56	0.78
POSITIVE	4.13	0.81	3.33	1.03
FORMAL	3.75	0.77	4.17	1.10
WARM	3.56	1.03	2.78	0.81
STERN	2.19	1.22	2.78	0.94
ORGANISED	4.69	0.60	4.44	0.86
EFFECTIVE	4.50	0.73	3.94	1.00
AUTHORITATIVE	3.50	1.41	3.67	1.33
COMPETENT	4.44	0.81	4.01	0.94
NEGATIVE	1.19	0.40	1.89	0.96

In summary, the results did not support the hypothesis. Overall, scores were lower in the Abrupt condition than they were in the Friendly condition, although this difference was only significant for the Yield data. Additionally, the results revealed significant differences between males and females for the scores of Shift and Total Suggestibility, with females scoring higher on both of these measures. However, there were no significant interactions between sex and condition.

3.5. DISCUSSION

The aim of the study was to investigate the effects of interviewer behaviour on interrogative suggestibility when interviewing a vulnerable population. The population tested was a sample of 15-16 year old adolescents. Singh and Gudjonsson (1992a) have demonstrated that adolescent boys show greater susceptibility to the suggestiveness of the GSS 1 than do normal adults. Adolescents may therefore be more vulnerable to interrogative suggestibility and interrogative pressure. It was hypothesised that a vulnerable population would demonstrate a heightened sensitivity to variations in interviewer manner, with those tested in the Abrupt condition gaining higher scores than those tested in the Friendly condition, and the difference being more marked than the difference found for a normal adult population in Study 1 of this thesis. However, results did not support this hypothesis. Overall, lower scores were obtained in the Abrupt than were obtained in the Friendly condition. However, this difference was only significant for the Yield data. The within participants analysis showed that Yield 2 scores were significantly higher than Yield 1 scores. The results also showed differences between males and females, irrespective of condition, on Shift and Total Suggestibility, with females scoring significantly higher than males on these measures. However, because there was no interaction effect, it can be concluded that overall males and females displayed the same pattern of results.

The results of the interviewer rater forms indicate that there were significant differences between the two conditions in participants' perceptions of the interviewer, and that these differences were in line with the desired manipulation. The following adjectives were found to have significantly different ratings between the two

conditions: friendly, understanding, assertive, professional, respectful, positive, warm, and negative. It is therefore clear that the attempt to vary interviewer behaviour was successful, and as a result, participants' perceptions of the interviewer were different between the two conditions. Despite this, the results did not support the hypothesis.

Participants in the Abrupt condition scored lower on all of the GSS 1 subscales than did those tested in the Friendly condition, although analysis showed that this difference was only statistically significant for Yield. This result is in direct contrast to that of Study 1, which found that participants tested by an interviewer maintaining an overall abrupt demeanour gained higher scores than those tested by the same interviewer maintaining an overall friendly demeanour. In this case, with a normal adult population, Shift and Total Suggestibility were found to differ significantly between the two conditions. In the present study, all interviews were again conducted by the same interviewer who also conducted the interviews for Study 1. Therefore, it would seem likely that the difference in the findings of the two studies was not a result of a different interpretation on the part of the interviewer of the Abrupt and Friendly demeanour.

It was argued in Chapter 2 that because Yield 1 & 2 did not differ between conditions, the behavioural manipulation of Abrupt and Friendly interviewer demeanour did not significantly affect either the ability to detect misleading information or the tendency to yield to the demands of leading questions. It was suggested that the overall Abrupt demeanour of the interviewer, which participants have no reason to relate to their own behaviour, does not communicate any particular expectancy, but instead increases uncertainty beyond the usual levels created by the negative feedback component in the

standard GSS procedure. It was also suggested that because this additional pressure operated on Shift and not Yield 2, it may be that Yield 2 provides a more specific measure of the effect of negative feedback, which was delivered "firmly" in both conditions (cf. Baxter & Boon, 2000; Gudjonsson, 1983; 1992a; 1997). However, in the present study, Yield was the only measure found to be significantly affected by interviewer demeanour despite the fact that again negative feedback was administered "firmly" in both conditions. Yield 1 & 2 were treated as a within participants test order variable in the analysis, and overall Yield was significantly different between conditions. However, examination of the means suggests that this difference is largely due to the Yield 2 component. The difference between conditions is much greater for Yield 2 than for Yield 1, with scores being reduced in the Abrupt condition. It may be then that either Yield 2 is not specific only to the effects of negative feedback or that in this case the negative feedback did communicate a particular expectancy to the participants. Given that scores were lower in the Abrupt condition, it may be that the behaviour of the interviewer served to communicate to participants the need to make sure their answers were "right" and as such operated as a challenge to improve their performance. That the behavioural manipulation should affect adolescents in this way may be related to situational influences at the time of testing. All participants were tested during their normal school hours. They left their lessons in order to participate and were told nothing about what they were taking part in. As such they may have felt that their participation was more about an assessment of their abilities than was the case for the adult sample used in Study 1. This may explain why they responded to the abruptness of the interviewer by becoming more accurate and less suggestible.

The present finding is also in contrast to that of Baxter and Boon (2000), who found that Yield 2 and Shift scores increased as interviewer demeanour changed from "friendly" to "stern" when administering the negative feedback component of the GSS 2. In line with Gudjonsson (1983), they argued that Yield 1 may primarily be related to cognitive factors on the part of the participant, whereas Yield 2 scores may better represent the effect of interpersonal influences that are present at negative feedback. In this case the "stern" demeanour of the interviewer in administering negative feedback caused participants to yield to more post-feedback leading questions and to make more shifts in their responses than was the case with the "friendly" demeanour at negative feedback. However, in the present study the overall abrupt demeanour of the interviewer caused participants to yield to fewer of the post feedback leading questions than was the case in the Friendly condition. If Yield 2 is in some way a measure of interpersonal influences present at the time of negative feedback, then it is clear that in the present study these influences were different to those experienced by participants in the studies by Baxter and Boon, and Study 1 of this thesis.

It seems that in the case of the present study, the negative feedback may have been construed as a challenge to improve performance rather than increasing pressure to comply with the demands of leading questions or change initial responses. Why this should be the case with an adolescent population and not an adult population is unclear. However, as was argued above, it may be that the conditions of testing in the present study affected the motivations of the participants, with the result that they felt a strong motivation to perform as well as possible. However, it should also be noted that Total Memory Recall was greater for those participants in the Abrupt condition than it was for those in the Friendly condition. Poor memory recall is associated with

higher levels of suggestibility (Gudjonsson, 1987b, 1988b) and so although the difference between conditions is only approaching significance, the increased recall in the Abrupt condition may account to some extent for the lower levels of suggestibility found in this condition.

As was previously noted, the Gudjonsson and Clark (1986) model of interrogative suggestibility would predict that adolescents should be more susceptible to interrogative pressure than adults due to lower levels of self-esteem (cf. Gudjonsson and Singh, 1984; Singh and Gudjonsson, 1984; Gudjonsson and Lister, 1984; Baxter, Jackson & Bain, under review). Several studies support this hypothesis and show that adolescents score significantly higher on the GSS measure of Shift (Gudjonsson & Singh, 1984; Singh & Gudjonsson, 1992; Richardson, Gudjonsson, & Kelly, 1995). Baxter, Jackson and Bain (under review) found that high self-esteem individuals were less influenced by abrupt behaviour on the part of the interviewer than were those individuals with low levels of self-esteem. However, in contrast to previous literature (e.g. Aligood-Merten & Stockard, 1991; Pryor, 1994; Bryne, 2000), the present results suggest that adolescents actually have higher levels of self-esteem than adults as their suggestibility scores were reduced in the Abrupt condition.

The present findings are therefore difficult to account for in relation to previous literature. Study 1 of this thesis found that psychological distance from the interviewer increased suggestibility and this effect is supported by other research (e.g. Gudjonsson & Lister, 1984; Baxter & Boon, 2000, Howard, Hong & Tzy, under review). However, in the present study the attempt to increase psychological distance resulted in a reduction of suggestibility scores. Possible reasons for this outcome relating to

motivations and situational influences present at the time of testing have been outlined above. However, a limitation of the present study is that the relative contribution of self-esteem cannot be assessed. If self-esteem was a contributory factor in the present results then on the basis of previous literature (e.g. Gudjonsson and Singh, 1984; Singh and Gudjonsson, 1984; Gudjonsson and Lister, 1984; Baxter, Jackson & Bain, under review) it can only be concluded that the sample represented a particularly confident group of adolescents with high levels of self-esteem. However, it should be noted that research on suggestibility with this age group has not been extensive and the norms for a normal adolescent group are based on only one study (Singh & Gudjonsson, 1992) which assessed GSS scores in adolescent males. Future research should concentrate on establishing the relationship between self-esteem and suggestibility in adolescents, and on demonstrating that these norms are reliable and representative of females as well as males.

In conclusion, the present results did not support the hypothesis. It was predicted that abrupt interviewer behaviour would increase psychological distance and that this would lead to an increase in suggestibility scores under these conditions. Whilst the results of the interviewer rater forms seem to confirm that participants tested in the Abrupt condition did experience increased psychological distance, suggestibility scores were in fact lowered in this condition, and significantly so for Yield. These results are in direct contrast to those of Study 1 of this thesis. However, one of the more general ways in which the results of the present study may fit in with the general conclusions from Study 1 is that they provide further evidence that scores gained on the GSS may be affected by factors out with the experimenter's control and are

therefore not readily predictable. Results such as these raise further questions about the robustness of these scales and their practical applications out-with research.

CHAPTER 4: STUDY 3

4.1. ABSTRACT

The aim of the present study was to investigate possible indicators of malingering or "faking bad" on the Gudjonsson Suggestibility Scales. It was hypothesised that participants, who were issued with a set of instructions that primed them to appear gullible and susceptible to pressure, would exhibit a unique pattern of scores on the scales that would differentiate them from both normal adults and genuinely vulnerable populations. The study had a single factor between participants design. Participants were tested in either one of two conditions: standard or faking. Forty-two participants took part in the study. Participants were a mix of undergraduate, postgraduate students, and professionals. Only Yield 1 scores were found to be significantly different between the two conditions. Participants in the faking condition gained higher scores on this measure on both the GSS 1 and GSS 2. Results indicate that whilst fakers may identify the need to yield to leading questions as a strategy for faking interrogative suggestibility, they do not identify the need to make shifts in their responses. An elevated Yield 1 score in the absence of any other raised scores on the scales may therefore be indicative of faking bad on the Gudjonsson Suggestibility Scales.

4.2. INTRODUCTION

Clinical and forensic psychologists are often asked to evaluate individuals who have strong external motivations to present themselves in a false manner. It may be the case that the convincing presentation of himself or herself in a particular light will result in a reward or the avoidance of punishment. For example, poor performance during psychological evaluation may help an individual avoid a prison sentence, and could therefore motivate an attempt to perform at a level below actual ability. This type of factitious responding to psychological evaluation is referred to as malingering and is recognised as presenting a significant problem to psychologists working in clinical and forensic settings (Simon, 1994). Malingering refers to a conscious and intentional attempt to fake poor performance on tests and often such individuals are motivated by a specific gain (Franzen, Iverson & McCracken, 1990). The problem for psychologists lies in how these individuals can be identified, and their responses differentiated from a genuine poor test performance.

It is not uncommon for psychometric tests to incorporate scales designed to test for fake responses. For example, the Eysenck Personality Questionnaire (Eysenck & Eysenck, 1991) includes a Lie or "social desirability" Scale designed to identify those responders attempting to "fake good" by presenting themselves in the best possible light. The Minnesota Multiphasic Personality Inventory (Hathaway & McKinley, 1989), an instrument commonly used in clinical and forensic settings, is designed to assess adult psychopathology and incorporates what are referred to as "validity" scales. These scales are designed to detect both "fake good" and "fake bad" responses. In a forensic setting, where feigning insanity is not uncommon (Fauteck, 1995), the

MMPI-2 has been found to be a useful tool for helping to identify malingerers (Shores & Carstairs, 1998).

As well as pleas of insanity, psychologists are also involved in the evaluation of individuals who claim vulnerability to interrogative pressure. As previously noted, in such a case the GSS 1 or GSS 2 (Gudjonsson, 1984, 1987c) may be used as a tool for identifying individuals who may require extra care during interview or in cases where a confession has been retracted (Gudjonsson, 1992a, 1997). In the latter case, such an individual has a clear external motivation to perform poorly on the test and may "fake bad" because they are brought under pressure to do so by unscrupulous defence lawyers, or in an attempt to evade punishment. A method for distinguishing people with a genuine psychological difficulty from malingerers may not be a part of psychological test applied to detect the difficulty. However, clearly, in the case of the GSS it is desirable that there may be some means of distinguishing malingerers from genuinely vulnerable individuals. Despite this, the Gudjonsson Suggestibility Scales do not include a test of malingering, and, with one exception, there has been no research to address this issue.

Smith and Gudjonsson (1986) conducted a study to compare the performance on the GSS1 of a group of fakers with a group of participants of slightly below average IQ who acted as controls. It was expected that fakers would be distinguishable from non-fakers on the basis of consistency. Due to an absence of knowledge about the test, fakers were expected to perform in an inconsistent manner where consistency would be expected (Smith & Gudjonsson, 1986). This issue of consistency as a means of detecting malingering is also highlighted by clinicians (Williams, 1998). Smith and

Gudjonsson expected inconsistencies between aspects of the GSS 1 where different types of responses were required. They highlighted the difference in response required for the memory recall part of the scale and the rest of the scale measuring interrogative suggestibility, and suggested that an inconsistency between these two aspects could be indicative of malingering. They argued that the task of memory recall is immediately obvious to interviewees in its requirements and can therefore be easily faked, whereas the same is not true for the suggestibility measures on the scale. Gudjonsson has found in a number of studies that memory recall correlates negatively with suggestibility; the poorer an individual's memory is for events, the more suggestible they are regarding those events (Gudjonsson, 1992a). Therefore, inconsistency on the scales with regards to measures of memory recall and suggestibility may involve both low memory recall scores and low suggestibility scores, and vice versa.

Smith and Gudjonsson (1986) found that the group of fakers gained significantly lower scores than the non-fakers on the memory recall aspect of the GSS 1. However, analysis of the suggestibility scores revealed no significant differences between the groups. Smith and Gudjonsson conclude that due to a lack of knowledge about the scale, participants were able to fake low memory recall score, but were not able to fake suggestibility. They argued that this is due to the subtle nature of the suggestibility scale: naive participants are not able to fake suggestibility because they are unaware that this is what is being tested.

A possible methodological flaw with the Smith and Gudjonsson (1986) study lies in the instructions given to the group of fakers. Participants were instructed to fake a bad performance on the test, to try and pretend that they were not functioning at their

normal level, and to do this as convincingly as possible. These instructions do not provide participants with any context for their bad performance. The study therefore gives no clue about the likely performance of a witness or suspect who regrets, or is made to regret, a statement or confession which they have made, and who realises, or is told, that their best hope of having their previous testimony discounted is now to appear gullible and easily pressured. It may have been more effective to ask participants to behave in a gullible manner, or to try and appear susceptible to pressure. Instructions that go beyond asking for a bad performance may be more likely to result in responses that reflect real-world strategies for faking, and can therefore be better generalised to real-life investigations. Simply asking for a bad performance leaves too much ambiguity for the participant and does not induce any specific motivation.

The present study aims to investigate the issue of malingering on the GSS. Both scales will be administered so that any emerging patterns can be checked for consistency between scales. Participants will be primed to "fake bad" in a manner that provides them with a specific context for their bad performance, and thus induces a specific motivation. It is hypothesised that participants issued with the faking instructions will exhibit a unique pattern of scores on the GSS 1 and the GSS 2, which differentiates them from both normal adults and genuinely vulnerable populations.

4.3. METHOD

4.3.1. Design

The study had a single factor between participants design. The independent variable had two levels: faking and standard conditions of testing.

4.3.2. Participants

The sample consisted of a mix of undergraduate, postgraduate students, and professionals. The mean age for the group was 28.93 (SD = 11.02, range = 18-57). A total of 42 participants took part in the study. Of these 22 were male and 20 were female. Equal numbers of participants were tested in each condition, with 11 males and 10 females randomly assigned to each of the two conditions.

4.3.3. Procedure

All participants were tested on both the GSS1 and the GSS2. The scales were administered in accordance with those recommendations made by Gudjonsson (1997). See Chapter 2 for a description of the standard procedure for the GSS 1. The same procedure also applies to the GSS 2. The two scales were administered in the same sitting one immediately after the other, and were counterbalanced between participants.

Prior to testing, participants in the faking condition were given the following set of instructions:

The interviewer is going to interview you about the content of two stories you'll hear. What I'd like you to do is to role-play being a suspect in a criminal investigation who may get off the hook if they can convince the interviewer that they are very gullible or very susceptible to pressure, that they are likely to accept whatever is said to them uncritically, and are therefore an unreliable witness. However, please do not go in for amateur dramatics or answer wildly. Try to concentrate on appearing gullible - but not stupid - by giving the interviewer whatever she seems to want.

The interviewer doesn't know who is being given this information and who isn't, so it's important that you don't let her know what I've said to you.

All participants were initially greeted by a confederate of the interviewer who either primed participants for faking or did not. At the point of testing the interviewer was unaware of which participants were primed and which were not.

4.3.3.1. Scoring the GSS

Scoring of the GSS 1 and 2 was done in accordance to the guidelines provided by Gudjonsson (1997). See Chapter 2 for details.

4.4. RESULTS

A one-way ANOVA on the data showed significant differences between the two conditions for Yield 1 on both the GSS 1 (F (1,41) = 5.564, p = 0.023) and the GSS 2 (F (1,41) = 4.1, p = 0.05), with participants in the faking condition gaining higher scores than those in the standard condition. The other measures of Yield 2, Shift and Total Suggestibility were not significantly different between the conditions. Associated descriptive statistics can be found below in Tables 13 and 14.

Table 13: Mean suggestibility scores for GSS 1 X condition and GSS 1 norms

	CONDITION				GSS 1 NORMS	
	STANDARD		FAKING			
	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
YIELD 1	3.6	3.2	6.5	4.5	4.6	3.0
YIELD 2	5.4	4.2	7.1	4.7	5.6	3.8
SHIFT	2.9	2.4	3.0	2.6	2.9	2.5
T.S.	6.5	4.7	9.5	5.5	7.5	4.6

Note: Norms derived from Gudjonsson (1997).

Table 14: Mean suggestibility scores for GSS 2 X condition and GSS 2 norms

	CONDITION				GSS 2 NORMS	
	STANDARD		FAKING			
	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
YIELD 1	3.2	3.8	5.7	4.1	4.5	3.6
YIELD 2	4.3	6.3	6.3	4.4	5.5	4.0
SHIFT	2.2	2.6	3.0	2.1	3.0	3.0
T.S.	5.4	5.5	8.7	5.4	7.5	5.3

Note: Norms derived from Gudjonsson (1997).

A one-way ANOVA on the data for memory recall revealed no significant differences between conditions for either over-all Memory Recall score or Total Confabulation score. These means and standard deviations can be found below in Table 15 and Table 16.

Table 15: Memory recall scores for the GSS 1 X condition and the GSS 1 immediate recall norms.

	CONDITION				GSS 1 NORMS	
	STANDARD		FAKING			
	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
RECALL	19.0	6.5	17.0	6.3	21.3	7.1
T.C.	1.0	1.1	0.8	0.8	*	*

Notes: Norms derived from Gudjonsson (1997).
* no norm is available for Total Confabulations in the general population

Table 16: Memory recall scores for the GSS 2 X condition and the GSS 2 immediate recall norms.

	CONDITION				GSS 1 NORMS	
	STANDARD		FAKING			
	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
RECALL	**17.5**	**7.8**	**15.9**	**4.6**	**19.7**	**6.1**
T.C.	**2.3**	**6.8**	**0.7**	**0.9**	*	*

Notes: Norms derived from Gudjonsson (1997).
* no norm is available for Total Confabulations in the general population

A comparison of the average of the mean scores obtained on both scales by participants in the faking condition with the average of the norms (Gudjonsson, 1997) for the scales (see Tables 13 & 14), revealed a significant difference for Yield 1 ($t(160) = 2.401$, $p<0.02$). None of the other means were significantly different from the norms.

In sum, the results indicate that participants in the faking condition exhibited a unique pattern of scores. Participants in this condition scored significantly higher than the established norms for the GSS on Yield 1, a score which was also significantly than those participants in the standard condition. The other scores of Yield 2, Shift, and Total Suggestibility were not elevated in the faking condition, and did not differ significantly from the norms for the scales.

4.5. DISCUSSION

The aim of the present study was to investigate possible indicators of faking suggestibility on the Gudjonsson Suggestibility Scales (1984a, 1987c). It was hypothesised that participants instructed to fake suggestibility would demonstrate a unique pattern of scores, which would set them apart from the pattern of scoring expected of normal adults or genuinely vulnerable populations. Results obtained supported this hypothesis with participants in the faking condition gaining high Yield 1 scores on both scales. As shown in Tables 13 and 14, Yield 1 was the only measure on the scales found to be significantly different between the 'standard' and 'faking' conditions.

Anyone intent on faking a poor performance on the GSS must decide on a strategy. The results of the present study suggest that such a strategy may involve yielding to more leading questions than an honest 'normal' person would, but without necessarily yielding to all the questions. By contrast, people who are genuinely vulnerable to interrogative pressure may show elevated Yield 1 scores, but they would also be expected to show elevated Shift scores (cf. Gudjonsson, 1992a; Bain & Baxter, 2000). The results of the present study seem to indicate that whilst it may be relatively simple to identify leading questions and yield to them, it may be much more difficult to fake vulnerability to interrogative pressure: fakers may identify the need to yield to leading questions as a strategy for faking interrogative suggestibility but will fail to shift their responses an appear vulnerable to interrogative pressure unless, presumably, they have some knowledge of how the scales work. There is no reason to suppose that the participants in the present study had any such knowledge. This would suggest that the

'Shift' component of the scale is more sensitive to genuine vulnerability in interrogations than is the Yield 1 component (cf. Smith & Gudjonsson, 1986).

Smith and Gudjonsson (1986) compared performance on the GSS 1 of a group of fakers with that of a group categorised as less intelligent. The average IQ score for the non-fakers was 90, compared with 120.9 for the group of fakers. The results of their study showed no significant differences in suggestibility scores between the two conditions. However, memory recall scores for the group of fakers was found to be significantly lower than memory recall scores for non-fakers. Smith and Gudjonsson concluded that a lack of knowledge about the nature of the scale had rendered participants unable to fake higher levels of suggestibility.

However, in the present study, participants in the faking condition were encouraged to think of a way to "get off the hook" by appearing vulnerable to pressure, with the results described above. In the case of forensic evaluations, it is more likely that individuals would be motivated by such a goal rather than the more ambiguous "fake bad" instructions given in the Smith and Gudjonsson study. In practical terms, the present findings suggest that no simple conclusions based on GSS scores may be possible in the case of a witness or suspect who produces a high Yield 1 score with a normal Shift score.

Inconsistency in responding has been highlighted as a possible mechanism for identifying malingerers in clinical and forensic contexts (Williams, 1998; Smith & Gudjonsson, 1986). The results of the present study support this idea. Smith and Gudjonsson (1986) highlighted the difference in responses required for the memory

recall and suggestibility measures on the GSS 1 and suggested that inconsistency in responding between these two measures would be indicative of malingering. They argued that tasks requiring similar responses that are readily identifiable would result in consistent responses, but that tasks requiring different types of responses would lead to inconsistent responding amongst fakers. Smith and Gudjonsson argued that their results supported this hypothesis; participants in the faking condition got significantly lower memory recall scores but did not differ from the standard group on suggestibility measures. Tables 15 and 16 show that memory recall scores did not significantly differ between conditions in the present study. The present results indicate that when participants are motivated by a specific goal (i.e. "getting off the hook") they are able to fake susceptibility to leading questions but do not identify the need to fake vulnerability to interrogative pressure. These two aspects of the scale represent the two principal types of suggestive influence thought to underlie interrogative suggestibility: leading questions and interrogative pressure (Gudjonsson, 1983). Whilst responses required for leading questions may be identifiable to someone motivated to 'fake-bad', it would seem that the same is not true for responses to interrogative pressure.

CHAPTER 5: GENERAL DISCUSSION

5.1. Experimental Aims

The specific aims of this thesis were twofold: firstly to investigate the effects that interviewer behaviour may have on the measurement of interrogative suggestibility using the Gudjonsson Suggestibility Scales; and secondly to look for possible indicators of attempts to fake suggestibility scores on the scales. The Gudjonsson Suggestibility Scales (Gudjonsson, 1984a, 1987c) represent an attempt to objectively measure the possible effects of leading questions and interrogative pressure on the accuracy of an individual's testimony during a police interrogation. It is intended that the scales be used as clinical or forensic tools to identify those witnesses who may be particularly susceptible to suggestion and therefore should be treated with extra care, or whose testimony should be considered questionable (Gudjonsson, 1992a). Therefore one of the assumptions on which Gudjonsson's concept of interrogative suggestibility is based, is that interrogative suggestibility is a relatively stable characteristic of an individual's response to interrogation (Gudjonsson, 1983), and that individual differences can be reliably measured giving a prediction of the effects of police interrogation on an individual (Gudjonsson, 1992a). The general aims of the studies in this thesis were to investigate issues of robustness associated with the administration of these scales.

5.2. The Hypotheses & the Results

5.2.1. Interviewer Behaviour & the Gudjonsson Suggestibility Scales

The first two studies were concerned with the effects of interviewer behaviour on suggestibility scores obtained on the GSS 1. For the first study it was predicted that

there would be significant differences in suggestibility scores as a function of interviewer behaviour. Specifically, it was argued that those participants who were tested by an interviewer adopting an abrupt manner for the entire duration of the interview would be under greater interrogative pressure, would experience greater psychological distance from the interviewer and would as a result gain higher suggestibility scores on the GSS 1 than those participants who were tested by an interviewer adopting a friendly manner where interrogative pressure is less. The results obtained generally supported this hypothesis. No significant differences were found for Yield 1 or Yield 2 between the two conditions of Friendly or Abrupt. However, significant differences were found for Shift and Total Suggestibility between the two conditions. The results therefore indicated that interviewer behaviour can significantly influence the scores obtained for the measure of interrogative pressure of Shift, which also significantly affects the Total Suggestibility score.

The hypothesis for the second study was that a more vulnerable population would be more sensitive to variations in interviewer behaviour and this heightened sensitivity would result in a greater disparity in the scores obtained between the conditions of Friendly and Abrupt interviewer behaviour. Again, due to greater psychological distance, it was expected that those participants tested in the Abrupt condition would gain higher suggestibility scores than those tested in the Friendly condition. The results of this study were somewhat unexpected and did not support the hypothesis. Overall, lower scores were obtained in the Abrupt condition than were obtained in the Friendly condition. This was despite those participants in the Abrupt condition reporting greater psychological distance from the interviewer. It was suggested that possible reasons for this may have been related to the demand characteristics of the

testing situation. The group tested were 15 – 16 year olds and all testing was done during school hours. Thus, it was suggested that participants may have seen the experiment more of a test on their ability and perhaps felt a strong motivation to perform as well as possible. It seems to have been the case that the abrupt behaviour of the interviewer served as a challenge to improve performance and as such increased their resistance to suggestions.

5.2.2. Faking Suggestibility on the Gudjonsson Scales

The final study was concerned with the identification of possible indicators of faking suggestibility on the Gudjonsson scales. It was hypothesised that participants issued with the faking instructions would exhibit a unique pattern of scores on the scales, which would differentiate them from both normal adults and genuinely vulnerable populations. Results obtained supported this hypothesis with participants in the faking condition gaining high Yield 1 scores on both the GSS 1 and GSS 2. Yield 1 was the only measure of suggestibility on the scales found to be significantly different between the 'standard' and 'faking' conditions. It was concluded that whilst fakers could identify the need to fake responses to leading questions, a general lack of knowledge about the scales prevented them from identifying the need to shift answers in response to interrogative pressure. It was therefore concluded that an elevated Yield 1 score in the absence of any of the other scores being raised may be indicative of faking suggestibility on the GSS 1 or GSS 2.

5.3. Implications

The results of all three studies have implications regarding issues of robustness and the Gudjonsson scales. As was noted in Chapter 1 of this thesis, the GSS 1 and GSS 2

have both been shown to have robust factor structures and have inter-scorer reliability. However, it was also suggested that other issues of robustness, which had not previously been attended to, included the extent to which compliance and other social mechanisms may affect scores obtained on the scales, and the extent to which truly suggestible responses can be differentiated from other types of affirmative responses that are not due to suggestibility effects or to social mechanisms, such as intentionally faked responses.

Several implications can be drawn from the results of the first two studies. Firstly, it would seem that social mechanisms may contribute more to what has been termed interrogative suggestibility effects than has previously been acknowledged (cf. Bain & Baxter, 2000; Baxter & Boon, 2000; Gudjonsson, 1992a). In particular, compliance may play more of a role in interviewees shifting responses following implicit or explicit negative feedback. As was noted in Chapter 1 of this thesis, the theoretical distinction between compliance and suggestibility relies on the issue of private acceptance. Suggestibility necessarily involves private acceptance of the communicated idea, where as compliance only involves public acceptance that is likely to last only as long as the social interaction lasts. Based on Gudjonsson and Clark's (1986) definition of suggestibility, it is difficult to see how one may distinguish compliance from suggestibility. Suggestibility is defined by Gudjonsson and Clark as:

> *"the extent to which, within a closed social interaction, people come to accept messages communicated during formal questioning as a result of which their subsequent behavioural response is affected"*(p. 84).

The problem with this definition is that the "subsequent behavioural response" may be due to compliance, rather than suggestibility. This definition and the theoretical model based on it, relies on the idea of an observable behavioural response and has no way of accounting for level of private acceptance. Therefore it is impossible to tell whether the Gudjonsson scales are measuring suggestibility effects or compliance. Indeed it may be the case that what is measured and defined as suggestibility with one participant under certain social conditions, may well be compliance with a different participant under different social conditions.

Apart from the theoretical implications of the distinction between suggestibility and compliance, there are also important practical implications. As noted, suggestibility involves private acceptance of communicated ideas and it is assumed that such acceptance of suggestions leads to distortions of the original report. Suggestions are thought to be incorporated into the cognitive representation of the event resulting in permanent changes in the report of that event. However, if distortions in report are due to compliance, then there is no private acceptance and whilst an interviewee may yield to suggestions at the time of the interaction, this influence is not thought to last for long, if at all, beyond that interaction. Whilst both processes involve a lack of critical thought, in the case of compliance, this may only be a temporary state. During the interaction the interviewee may be unaware of being influenced, but may later become aware of the contradiction between what they reported and the truth because they are removed from the situation and the demand characteristics associated with it. It follows from this that if distortions in testimony are the result of suggestibility effects, an accurate account of the original event may be lost forever. However, if

distortions in testimony are due to social compliance then, with careful re-questioning, the original event may still be accurately recalled. This clearly has important implications for forensic interviewing procedure.

If a component of what has been referred to as interrogative suggestibility is actually due to social factors that affect the interaction (Gudjonsson, 1992a; Bain & Baxter, 2000; Baxter & Boon, 2000; Boon & Baxter, 2000), there are clear implications for forensic interviewing procedure. To the extent that a component of interrogative suggestibility is the result of social dynamics, this aspect of suggestibility could be brought under the control of the interviewer, and the influence minimised (Boon & Baxter, 2000). Police officers and others involved in forensic interviews (e.g. social workers or lawyers) should be aware of the extent to which their own manner, wittingly or not, may bias the outcome of an interview by putting pressure on an interviewee. As was mentioned in Chapter 2 of this thesis the Gudjonsson scales may provide a means by which forensic interviewers can learn to monitor and measure the extent to which their manner may put pressure on an interviewee. As such the GSS 1 and GSS 2 may represent a useful training tool for police officers and further research should address this issue. It may be the case that with training and feedback sessions using the Gudjonsson scales, interviewers may be able to keep the extent to which they influence the interview to a minimum, and any significant disparity in interviewing manner between interviewers may be ameliorated. In light of the pressures on police officers for fairness and accuracy, this would be a highly desirable outcome. This seems especially pertinent given the fact that through the use of video and tape recording, interviews are readily accessible to defence counsel which could result in the identification of inappropriate levels of pressure. With proper training

interviewers should be able to keep the extent to which they may affect testimony to a minimum, and therefore reduce the risk that evidence is later challenged or dismissed because of the way in which it was obtained.

5.4. Conclusions

Overall the evidence from the studies presented in this thesis highlights problems with regard to the robustness of the Gudjonsson Suggestibility Scales and their administration. It has been shown that interviewer behaviour can significantly affect the post-feedback scores obtained on the scales; a result that is of particular concern given the fact that the Total Suggestibility score gained from the scales was also significantly affected. This result indicates that the explicit negative feedback is not the only source of Shift scores, and that the particular manner of the interrogator throughout the administration of the GSS can significantly affect the extent to which participants will alter their initial responses to leading questions.

The theoretical implication of this evidence is clear: to what extent do the social dynamics of the situation account for what has previously been referred to as suggestibility effects? In particular this brings into question how much of what is measured by the Gudjonsson scales is due to compliance effects and how much is true suggestibility. This is an area that will need further research. The practical implications are also clear. If some component of what has been termed interrogative suggestibility is under the control of social dynamics, then it is seemingly possible that such influences can be identified and brought under the control of the interviewer, thereby minimising the affect that the interviewer themselves has on the interview outcome. In conjunction with this, it would seem that the current research has

highlighted an additional use of the Gudjonsson scales. It may be that the scales can be used as a tool for training police officers or others involved in forensic interviews. The Gudjonsson scales have well-established norms and as such provide a method of both comparing performance to these norms and quantifying the extent to which an interviewer's manner may bias results obtained. Again this is an area that warrants further research.

In conclusion the evidence presented in this thesis has drawn attention to potential problems related to the robustness of the Gudjonsson Suggestibility Scales, and the definition and theoretical model of interrogative suggestibility on which these scales are based. Future research may usefully address the relative contribution that social mechanisms such as compliance make to interrogative suggestibility effects with a view towards further development of the Gudjonsson and Clark (1986) theoretical model, and the usefulness of the Gudjonsson scales as a training tool for forensic interviewers.

REFERENCES

Ackill, J. K. & Zaragoza, M. (1995). Developmental differences in eyewitness suggestibility and memory for source. *Journal of Experimental Child Psychology,* 60, 57-83.

Aligood-Merten, B., & Stockard, J. (1991). Sex role identity and self-esteem: A comparison of children and adolescents. *Sex Roles,* 25, 129-139.

Anderson, R. C., & Pichert, J. W. (1978). Recall of previously unrecallable information following a shift in perspective. *Journal of Verbal Learning and Verbal Behaviour*, 17, 1-12.

Asch, S. E. (1951). Effects of group pressure upon the modification and distortion of judgements. In H. Guetzkow (Ed.), *Groups, leadership, and Men.* Pittsburgh: Carnegie Press.

Asch, S. E. (1952). *Social Psychology*. New York: Prentice Hall.

Avtgis, Ť. A. (1998). Locus of control and persuasion, social influence, and conformity: A meta-analytic review. *Psychological Reports,* 83(3), 899-903.

Bain, S. A. & Baxter, J. S. (2000). Interrogative suggestibility: The role of interviewer behaviour. *Legal and Criminological psychology,* 5, 123-133.

Baddeley, A. D. (1999). *Essentials of Human Memory*. Hove, England: Psychology Press.

Baldwin, J. (1992a). *Videotaping Police Interviews with Suspects - an Evaluation.* Police Research Series: No. 1. London: Home Office.

Baldwin, J. (1992b). "Preparing Records of Taped Interview". *The Conduct of Police Investigations: Records of Interview, the Defence Lawyer's Role and Standards of Supervision.* The Royal Commission on Criminal Justice Research Studies No. 2, 3 and 4. London: HMSO.

Baldwin, J. & Bedward, J. (1991). Summarising tape recordings of police interviews. *Criminal Law Review*, 671-679.

Bartol, C. R. (1983). *Psychology and American Law.* Belmont. California: Wadsworth Publishing Co..

Baxter, J. S. (1990). The suggestibility of child witnesses: A review. *Applied Cognitive Psychology*, 4, 393-407.

Baxter, J. S., & Boon, J. C. W. (2000). Interrogative suggestibility: the importance of being earnest. *Personality and Individual Differences,* 28, 753-762.

Baxter, J. S., Jackson, M., & Bain, S. A. (under review). Interrogative suggestibility: Interactions between interviewees' self-esteem and interviewer style.

Bateson, G. (1972). *Steps to an Ecology of Mind.* New York: Ballantine.

Belli, R. F., Lindsay, D. S., Gales, M. S., & McCarthy, T. T. (1994). Memory impairment and source misattribution in postevent misinformation experiments with short retention intervals. *Memory and Cognition*, 22, (1), 40-54.

Berkerian, D. A., & Bowers, J. M. (1983). Eyewitness testimony: Were we misled? *Journal of Experimental Psychology: Learning, Memory, and Cognition,* 9(1), 139-145.

Bernhiem, H. (1910). *Hypnotisme et Suggestion.* Dion & Fills, Paris.

Betz, A. L., Skowronski, J. J., & Ostrom, T. M. (1996). Shared realities: Social influence and stimulus memory. *Social Cognition,* 14, 113-140.

Binet, A. (1900). *La Suggestibilité.* Dion & Fills, Paris.

Biondo, J., & MacDonald, A. P. (1971). Internal-external locus of control and response to influence attempt. *Journal of Personality*, 39, 407-419.

Boon, J. C. W., & Baxter, J. S. (2000). Minimizing interrogative suggestibility. *Legal and Criminological Psychology,* 5(2), 273-284.

Boon, J. C. W., & Noon, E. (1994). Changing perspectives in cognitive interviewing. *Psychology, Crime and Law.* 1(1), 59-69.

Bowers, K. S. (1992). Imagination and dissociation in hypnotic responding. *International Journal of Clinical and Experimental Hypnosis*. 40(4), 253-275.

Brainerd, C. J. & Reyna, V. F. (1998). Fuzzy-trace theory and children's false memory. *Journal of Experimental and Child Psychology,* 71, 81-129.

Brenner, I. (1994). The dissociative character – a reconsideration of multiple personality disorder. *Journal of the American Psychoanalytic Association,* 42(3), 819-846.

Brigham, J. C., & Barkowitz, P. (1978). Do they look alike? The effects of race, sex, experience and attitudes on the ability to recognise faces. *Journal of Applied Social Psychology*, 8, 306-316.

Brooks, F. R., & Johnson, R. W. (1979). Self-descriptive adjectives associated with a Jungian personality inventory. *Psychological Reports*, 44, 747-750.

Bruck, M., & Ceci, S. (1999). The suggestibility of children's memory. *Annual Review of Psychology,* 50, 419-439.

Buckhout, R. (1974). Eyewitness testimony. *Scientific American*, 321, 23-31.

Burtt, H. E. (1948). *Applied Psychology*. Prentice-Hall: New York.

Butler, P. V. (1998). Destructive obedience in 1924: Landis' "Studies of emotional reactions" as a prototype of the Milgram paradigm. *Irish Journal of Psychology,* 19, 236-247.

Byrne, B. (2000). Relationships between anxiety, fear, self-esteem, and coping strategies in adolescence. *Adolescence,* 35(137), 201-215.

Candel, I., Merckelbach, H., & Muris, P. (2000). Measuring interrogative suggestibility in children: Reliability and validity of the Bonn Test of Statement Suggestibility. *Psychology, Crime and Law,* 6, 61-70.

Cardeña. E., & Spiegel, D. (1991). Suggestibility, absorbtion, and dissociation: An integrative model of hypnosis. In J. F. Schumaker (Ed.), *Human Suggestibility: Advances in Theory, Research, and Application.* London: Routledge.

Carver, C. S., & Scheier, M. F. (1981). The self-attention-induced feedback loop and social facilitation. *Journal of Experimental Social Psychology*, 17(6), 545-568.

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56, 267-283.

Ceci, S. J. & Bruck, M. (1993). Suggestibility of the child witness: A hystorical review and synthesis. *Psychological Bulletin*, 113, 403-439.

Ceci, S. J., Ross, D., & Toglia, M. (1987). Age differences in suggestibility: Psycholegal implications. *Journal of Experimental psychology: General,* 117, 38-49.

Christianson, S. A. & Loftus, E. F. (1991). Remembering emotional events: the fate of detailed information. *Cognition and Emotion*, 5, 81-108.

Clare, I. C. H., & Gudjonsson, G. H. (1995). The vulnerability of suspects with intellectual disabilities during police interviews: A review and experimental study of decision making. *Mental Handicap Research,* 8(2), 110-128.

Clare, I. C. H., Gudjonsson, G. H., Rutter, S. C., & Cross, P. (1994). The inter-rater reliability of the Gudjonsson Suggestibility Scale (Form 2). *British Journal of Clinical Psychology,* 33, 357-365.

Clifford, B. R., & Scott, J. (1978). Individual and situational factors in eyewitness testimony. *Journal of Applied Psychology,* 63, 352-359.

Cohen, R. L. & Harnick, M. A. (1980). The susceptibility of child witnesses to suggestion: An empirical study. *Law and Human Behavior,* 4, 201-210.

Coffin, T. E. (1941). Some conditions of suggestion and suggestibility: A study of certain attitudinal and situational factors influencing the process of suggestion. *Psychology Monographs*, 53, 1-121.

CPTU (1992a). *A guide to interviewing.* Central Planning and Training Unit. Harrogate: Home Office.

CPTU (1992b). *The interviewer's rule book.* Central Planning and Training Unit. Harrogate: Home Office.

Danielsdottir, G., Sigurgeirsdottir, S., Einarsdottir, H. R., & Haraldson, E. (1993). Interrogative suggestibility in children and its relationship with memory and vocabulary. *Personality and Individual Differences,* 14(3), 499-502.

Davies, G., Ellis, H., & Shepherd, J. (Eds.) (1981). *Perceiving and Remembering Faces.* New York: Academic Press.

Davies, G., Flin, R., & Baxter, J. (1986). The child witness. *Howard Journal*, 25, 81-99.

Dennett, D. (2001). Are we explaining consciousness yet? *Cognition,* 79, 221-237.

Deutsch, M., &Gerard, H. B. (1955). A study of normative and informational influences upon individual judgement. *Journal of Abnormal and Social Psychology,* 51, 629-636.

Dodd, D. H., & Bradshaw, J. M. (1980). Leading questions and memory: pragmatic constraints. *Journal of Verbal Learning and Verbal Behaviour*, 19, 695-704.

Duval, S., & Wicklund, R. A. (1972). *Atheory of objective seolf-awareness.* New York: Academis Press.

Ellis, H. D., Davies, G. M., & Shepherd, J. W. (1977). Experimental studies of face recognition. *National Journal of Criminal Defense*, 3, 219-234.

Ellis, H. D., Shepherd, J. W., & Davies, G. M. (1980). The deterioration of verbal descriptions of faces over different delay intervals. *Journal of Police Science and Administration*, 8, 101-106.

Evans, F. J. (1967). Suggestibility in the normal waking state. *Psychological Bulletin*, 67, 114-129.

Evans, F. J. (2000). The domain of hypnosis: A multifactorial model. *American Journal of Clinical Hypnosis*, 43(1), 1-16.

Eysenck, H. J. (1943). Suggestibility and hysteria. *Journal of Neurological Psychiatry*, 6, 22-31.

Eysenck, H. J. (1947). *Dimensions of Personality.* Routledge & Kegan Paul, London.

Eysenck, H. J. (1967). *The Biological Basis of Personality.* Springfield, Ill.: Charles C. Thomas.

Eysenck, H. J. (Ed.) (1981). *A Model for Personality.* New York: Springer-Verlag.

Eysenck H. J., & Eysenck, S. B. G. (1991). *The Eysenck Personality Questionnaire - Revised Short Scale.* London: Hodder & Stoughton.

Eysenck, H. J. & Furneaux, W. D. (1945). Primary and secondary suggestibility: An experimental and statistical study. *Journal of Experimental Psychology*, 35, 485-503.

Fauteck, P. K. (1995). Detecting the malingering of psychosis in offenders - no easy solutions. *Criminal Justice and Behavior, 22 (1)*, 3-18.

Ferguson, S. A., Hashtrudie, S., & Johnson, M. K., (1992). Age differences in using source relevant cues. *Psychology and Aging*, 7, 443-452.

Festinger, L. (1954). A theory of social comparison processes. *Human Relations,* 7, 117-140.

Fisher, R. P. & Geiselman, R. E. (1992). *Memory-enhancing techniques for investigative interviewing: The cognitive interview*. Springfield, IL: Charles Thomas.

Fisher, R. P., Geiselman, R. E., & Amador, M. (1989). Field test of the cognitive interview: Enhancing the recollection of actual victims and witness of crime. *Journal of Applied Psychology,* 74, 722-727.

Fisher, R. P., Geiselman, R. E. & Raymond, D. S. (1987). Critical analysis of police interview techniques. *Journal of Police Science and Administration,* vol. 15, no. 3, 177-185.

Fisher, R. P., & Price-Roush, J. (1986). Question order and eyewitness memory. Unpublished manuscript.

Flin, R., Boon, J., Knox, A., & Bull, R. (1992). Children's memories following a five-month delay. *British Journal of Psychology*, 83, 323-336.

Forester, L. M., McMahon, M., & Greenwood, K. M. (2001). The relationship between coping strategies and interrogative suggestibility. *Psychiatry, Psychology and Law*, 8(1), 23-37.

Franzen, M. D., Iverson, G. L., & McCracken, L. M. (1990). The detection of malingering in neuropsychological assessment. *Neuropsychology review, 1 (3),* 247 - 279.

Fruzzetti, A. E., Tolland, K., Teller, S. A., & Loftus, E. F. (1992). Memory and eyewitness testimony. In M. M. Gruneberg & P. E. Morris (Eds.), *Aspects of Memory: The Practical Aspects* (pp. 18-50). London: Academic Press.

Garvey, C. (1984). *Children's talk.* Cambridge, MA: Harvard University Press.

Geiselman, R. E. & Callot, R. (1990). Reverse versus forward order recall of script-based texts. *Applied Cognitive Psychology,* 4, 141-144.

Geiselman, R. E. & Fisher, R. P. (1985). Interviewing victims and witnesses of crime. *National Institute of Justice: Research in Brief* (NJC-99062).

Geiselman, R. E., Fisher, R. P., MacKinnon, D. P., & Holland, H. L. (1985). Eyewitness memory enhancement in the police interview: Cognitive retrieval mnemonics versus hypnosis. *Journal of Applied Psychology,* 70, 401-412.

Geiselman, R. E., Fisher, R. P., MacKinnon, D. P., & Holland, H. L. (1986). Enhancement of eyewitness memory with the cognitive interview. *American Journal of Psychology*, 99, 385-401.

Gheorghiu, V. A. (1972). On suggestion and suggestibility. *Scienta*, 16, 811-860.

Gheorghiu, V. A. (1989). The difficulty in explaining suggestion: Some conceivable solutions. In V. A. Gheorgiu, P. Netter, H. J. Eysenck, & R. Rosenthal (Eds.), Suggestion and Suggestibility: Theory and Research. New York: Springer-Verlag.

Gibbons, F. X. (1990). The impact of focus of attention and affect on social behaviour. In W. R. Crozier (Ed.), *Shyness and Embarassment: Perspectives from Social Psychology*. New York: Cambridge University Press.

Gibbons, F. X., Carver, C. S., Scheier, M. F., & Hormuth, S. E. (1979). Self-focused attention and the placebo effect: Fooling some of the people some of the time. *Journal of Experimental Social Psychology*, 15(3), 263-274.

Gibbons, F. X., & McCoy, S. B. (1991). Self-perception and self-deception: The role of attention in suggestibility processes. . In J. F. Schumaker (Ed.), *Human Suggestibility: Advances in Theory, Research, and Application.* London: Routledge.

Goodman, G. (1984). Children's testimony in historical perspective. *Journal of Social Issues*, 40, 9-31.

Goodman, G. S., Rudy, L., Bottoms, B., & Aman, C. (1990). Children's concerns and memory: Issues of ecological validity in the study of eyewitness testimony. In R. Fivush & J. Hudson (Eds.), *Knowing and remembering in young children.* New York: Cambridge University Press.

Gorden, R. (1975). *Interviewing: Strategy, Techniques and tactics.* Dorsey: Homewood III.

Greenstock, J. & Pipe, M. E. (1996). Interviewing children about past events: The influence of peer support and misleading questions. *Child Abuse and Neglect*, 20, 69-80.

Gudjonsson, G. H. (1983). Suggestibility, intelligence, memory recall and personality: an experimental study. *British Journal of Psychiatry*, 142, 35-37.

Gudjonsson, G. H. (1984a). A new scale of interrogative suggestibility. *Personality and Individual Differences*, 5, 303-314.

Gudjonsson, G. H. (1984b). Interrogative suggestibility: comparison between "false confessors" and "deniers" in criminal trials. *Medicine, Science and Law*, 24, 56-60.

Gudjonsson, G. H. (1986). The relationship between interrogative suggestibility and acquiescence: empirical findings and theoretical implications. *Personality and Individual Differences*, 7, 195-199.

Gudjonsson, G. H. (1987a). Historical background to suggestibility: How interrogative suggestibility differs from other types of suggestibility. *Personality and Individual Differences,* 8, 3, 347-355.

Gudjonsson, G. H. (1987b). The relationship between memory and suggestibility. *Social Behaviour*, 2, 29-33.

Gudjonsson, G. H. (1987c). A parallel form of the Gudjonsson Suggestibility Scale. *British Journal of Clinical Psychology,* 26, 215-221.

Gudjonsson, G. H. (1988a). Interrogative suggestibility: its relationship with assertiveness, social evaluative anxiety, state anxiety and method of coping. *British Journal of Clinical Psychology*, 27, 159-166.

Gudjonsson, G. H. (1988b). The relationship of intelligence and memory to interrogative suggestibility: the importance of range effects. *British Journal of Clinical Psychology*, 27, 185-187.

Gudjonsson, G. H. (1989a). Compliance in an interrogation situation: a new scale. *Personality and Individual Differences*, 10, 535-540.

Gudjonsson, G. H. (1989b). The effects of suspiciousness and anger on suggestibility. *Medicine Science and Law*, 29, 229-232.

Gudjonsson, G. H. (1992a). *The Psychology of Interrogations, Confessions and Testimony.* Chichester, UK: Wiley.

Gudjonsson, G. H. (1992b). Interrogative suggestibility: Factor analysis of the Gudjonsson Suggestibility Scale (GSS2). *Personality and Individual Differences*, 13, 479-481.

Gudjonsson, G. H. (1995). "I'll help you boys as much as I can": how eagerness to please can result in a false confession. *Journal of Forensic Psychiatry*, 6, 333-342.

Gudjonsson, G. H. (1997). *The Gudjonsson Suggestibility Scales Manual.* Hove: Psychology Press.

Gudjonsson, G. H. & Clark, N. K. (1986). Suggestibility in police interrogation: a social psychological model. *Social Behaviour*, 1, 83-104.

Gudjonsson, G. H. & Gunn, J. (1982). The competence and reliability of a witness in a criminal court: a case report. *British Journal of Psychiatry*, 142, 35-37.

Gudjonsson, G. H., & Lister, S. (1984). Interrogative suggestibility and its relationship with perceptions of self-concept and control. *Journal of the Forensic Science Society*, 24, 99-110.

Gudjonsson, G. H., & MacKeith, J. A. C. (1982). False confessions, psychological effects of interrogation. A discussion paper. In A. Trankell (Ed.), *Reconstructing the Past: The role of Psychologists in Criminal Trials.* Kluwer: Deventer, Holland.

Gudjonsson, G. H., Rutter, S. C., & Clare, I. C. H. (1995). The relationship between suggestibility and anxiety among suspects detained at police stations. *Psychological Medicine,* 25(4), 875-878.

Gudjonsson, G. H., & Singh, K. K. (1984). Interrogative suggestibility and delinquent boys: an empirical validation study. *Personality and Individual Differences*, 5, 425-430.

Haraldsson, E. (1985). Interrogative suggestibility and its relationship with personality, perceptual defensiveness and extraordinary beliefs. *Personality and Individual Differences*, 6, 765-767.

Hashtroudi, S., Johnson, M. K., & Chrosniak, L. (1989). Aging and source monitoring. *Psychology and Aging*, 4, 106-112.

Hathaway, S. R., & McKinley, J. C. (1989). *Minnesota Multiphasic Personality Inventory, 2nd. Edition.* University of Minnesota Press.

Hersch, P. D., & Scheibe, K. E. (1967). Reliability of internal-external control as a personality dimension. *Journal of Consultant Psychology*, 31, 609-613.

Hertel, P. T., Cosden, M., & Johnson, P. J. (1980). Passage recall: schema change and cognitive flexibility. *Journal of Educational Psychology*, 72, 133-140.

Hilgard, E. R. (1986). *Divided consciousness: Multiple controls in human thought and action*. New York: Wiley.

Hodges, K. (1995). *An evaluation of non-verbal communication and its implications for effective investigative interviewing by police officers*. Unpublished M.Ed. dissertation, University of Hull.

Hoffman, H. G., Granhag, P. A., Kwong See, S., & Loftus, E. F. (2001). Social influences on reality-monitoring decisions. *Memory and Cognition,* 29(3), 394-404.

Hogg, M. A., & Vaughan, G. M. (1995). *Social Psychology.* London: Prentice Hall.

Hollin, C. R. (1989). Criminological and legal psychology. In A. M. Colman & J. G. Beaumont (Eds.), *Psychological Survey: Vol. 7* (pp. 146-174). Leicester, UK: British Psychological Society.

Home Office (1978). *Judges Rules and Administrative Directions to the Police.* Circular No. 89/1978.

Home Office (1985). *Police and Criminal Evidence Act 1984.* London: HMSO.

Hooke, A., & Knox, J. (1995). Preparing records of taped interviews. *Home Office Research and Statistics Department Research Findings: No. 22.* London: Home Office Research and Planning Unit.

Howard, R., Hong, N. S., & Tzy, K. Y. (under review). The effects of coping style and social distance on interrogative suggestibility.

Howells, T. H. (1938). A study of the ability to recognise faces. *Journal of Abnormal Social Psychology*, 123, 173-174.

Hughes, M. & Grieve, R. (1980). On asking children bizarre questions. *First Language,* 1, 149-160.

Hull, C. L. (1933). *Hypnosis and Suggestibility.* Appleton-Century-Crofts, New York.

Humphreys, M. S., & Revelle, W. (1984). Personality, motivation, and performance: A theory of the relationship between individual differences and information processing. *Psychological Review,* 91, 153-184.

Inbau, F. E., Reid, J. E., & Buckley, J. P. (1986). *Criminal Interrogations and Confessions* (3rd. Edition). Williams & Wilkinson: Baltimore.

Irving, B. (1980). *Police Interrogation. A Case Study of Current Practice.* Research Studies No. 2. HMSO: London.

Janet, P. (1889). *L'automatisme Psychologique.* Paris: Felix Alcan.

Johnson, M. K., Nolde, S. F., De Leonardis, D. M. (1996). Emotional focus and source monitoring. *Journal of Memory and Language*, 35, 135-156.

Kebbell, M. R., & Wagstaff, G. F. (1997). Why do police interview eyewitnesses? Interview objectives and the evaluation of eyewitness performance. *The Journal of Psychology,* 131 (6), 595-601.

Kelley, H. H. (1952). Two functions of reference groups. In G. E. Swansom, T. M. Newcomb, E. L. Hartley (Eds.), *Readings in Social Psychology.* New York: Holt, Rinehart & Winston.

King, M. & Yuille, J. (1987). Suggestibility and the child witness. In S. J. Ceci, M. Toglia, & D. Ross, (Eds.), *Children's eyewitness memory.* New York: Springer-Verlag.

Kleinsmith, L., & Kaplan, S. (1964). Interaction of arousal and recall interval in nonsense syllable paired-associate learning. *Journal of Experimental Psychology*, 67, 124-126.

Köhnken, G., Milne, R., Memon, A., & Bull, R, (1999). The cognitive interview: A meta-analysis. *Psychology, Crime and Law,* 5, 3-28.

Lewicki, P., Hill, T., & Czyzewska, M. (1992). Nonconscious acquisition of information. *American Psychologist,* 47, 796-801.

Lindsay, D. S., & Johnson, M. K. (1989). The eyewitness suggestibility effect and memory for source. *Memory and Cognition,* 17(3), 349-358.

Lipmann, O. (1911). Pedagogical psychology of report. *Journal of Educational Psychology,* 2, 253-261.

Lipton, J. P. (1977). On the Psychology of Eyewitness Testimony. *Journal of Applied Psychology*, 62, 90-95.

Loftus, E. F. (1975). Leading questions and eyewitness report. *Cognitive Psychology,* 7, 560-572.

Loftus, E. F. (1979a). *Eyewitness Testimony.* Cambridge MA: Harvard University Press.

Loftus, E. F. (1979b). Reactions to blatantly contradictory information. *Memory and Cognition*, 7, 368-374.

Loftus, E. F. (1981). Mental morphosis: alterations in memory produced by mental bonding of new information to old. In J. Long & A. Bladdeley (Eds.), *Attention and Performance*, vol. IX, pp. 417-434. Erlbaum, Hillsdale, N. J.

Loftus, E. F. (1983). Silence is not golden. *American Psychologist*, 38, 564-572.

Loftus, E. F., Greene, E. L., & Doyle, J. M. (1990). The psychology of eyewitness testimony. In D. C. Raskin (Ed.), *Psychological Methods in Criminal investigations and Evidence*. Springer: New York.

Loftus, E. F. & Hoffman, H. G. (1989). Misinformation and memory: The creation of new memories. *Journal of Experimental Psychology: General*, 118(1), 100-104.

Loftus, E. F., & Ketcham, K. (1991). *Witness for the defence: The accused, the eyewitness, and the expert who puts memory on trial.* New York: St. Martin's Press.

Loftus, E. F., Miller, D. G., & Burns, H. J. (1978). Semantic integration of verbal information into visual memory. *Journal of Experimental Psychology: Human Learning and Memory*, 4, 19-31.

Loftus, E. F., & Palmer J. P. (1974). Reconstruction of automobile destruction: An example of the interaction between language and memory. *Journal of Verbal Learning and Verbal Behavior*, 13, 585-589.

Malpass, R. S., & Devine, P. G. (1981). Realism and eyewitness identification research. *Law and Human Behaviour,* 4, 347-358.

McCloskey, M., & Egeth, H. E. (1983). A time to speak, or a time to keep silence? *American Psychologist*, 38, 573-575.

McCloskey, M., & Zaragoza, M. (1985). Misleading post-event information and memory for events: Argumets and evidence against memory impairment hypotheses. *Journal of Experimental Psychology: General*, 114, 1-16.

McDougall, W. (1908). *An Introduction to Social Psychology.* Methuen, London.

McGurk, B. J., Carr, M. J., & McGurk, D. (1993). *Investigative Interviewing Courses for Police Officers: An Evaluation.* Police Research Series, Paper 4.

Mello, E. & Fisher, R. P. (1996). Enhancing older adult eyewitness memory with the cognitive interview. *Applied Cognitive Psychology*, 10, 403-417.

Memon, A. & Bull, R. (1991). The cognitive interview: Its origins, empirical support, evaluation and practical implications. *Journal of Community and Applied Social Psychology,* 1, 291-307.

Milgram, S. (1963). Behaviour study of obedience. *Journal of Abnormal and Social Psychology,* 67, 371-378

Milne, R. & Bull, R. (1999). *Investigative Interviewing: Psychology and Practice.* Chichester: Wiley.

Milne, R., Clare, I. C. H., & Bull, R. (1999). Interviewing adults with learning disability with the cognitive interview. *Psychology, Crime and Law,* 5, 81-100.

Moos, R., & Billings, A. G. (1982). Conceptualising and measuring coping strategies and processes. In L. Goldberger & S. Brenznite (Eds.), *Handbook of Stress: Theoretical and Clinical Aspects*. Free Press: New York.

Morris, P. (1980). *Police Interrogations: Review of the Literature.* Royal Commissions on Criminal Procedure, Research Study 3. HMSO: London.

Moston, S., Stephenson, G. M., & Williamson, T. M. (1990). *Police Interrogation Styles and Suspect Behaviour.* Report to the Police Requirements Support Unit.

Musterberg, H. (1908). *On the Witness Stand: Essays in Psychology and Crime.* New York: Clark, Boardman.

Myers, I. B. (1962). *The Myers-Briggs Type Indicator.* Palo Alto: Consulting Psychologists Press.

NCF (1996). *Investigative interviewing: A practical guide.* Bramshill: National Crime Faculty and National Police Training.

O'Brien, G., & Opie, J. (1998). The disunity of consciousness. *Australasian Jourrnal of Philosophy,* 76, 378-395.

Ornstein, P. A., Ceci, S. J., & Loftus, E. F. (1996). Adult recollections of childhood sexual abuse: Cognitive and developmental perspectives. In J. A. Alpert, L. S. Brown, S. J. Ceci, C. A. Courtois, E. F. Loftus, & P. A. Ornstein (Eds.), *Working group on investigation of memories of childhood sexual abuse: Final report.* Washington, D. C.: American Psychological Association.

Pear, T. H. & Wyatt, S. (1914). The testimony of normal and defective children. *British Journal of Psychology*, 3, 388-419.

Police and Criminal Evidence Act (1984). *Codes of Practice,* Revised edn, effective 1 April 1991. London: HMSO.

Poole, D. A. & Lamb, M. E. (1998). *Investigative interviews of children: A guide for helping professionals.* Washington DC: American Psychological Association.

Poole, D. & White, L. (1991). Effects of question repetition on the eyewitness testimony of children and adults. *Developmental Psychology,* 27, 975-986.

Pope, K. S. (1996). Memory, abuse, and science: Quetioning the claims about the false memory syndrome epidemic. *American Psychologist,* 51 (9), 957- 974.

Powers, P. A., Andriks, J. L., & Loftus, E. F. (1979). Eyewitness account of females and males. *Journal of Applied Psychology*, 64, 339-347.

Pryer, J. (1994). Self-esteem and attitudes toward gender roles; Contributing factors to adolescence. *Australian Journal of Psychology,* 46(1), 48-52.

Rhue, J. W., & Lynn, S. J. (1991). Fantasy proneness, hypnotisability, and multiple personality. . In J. F. Schumaker (Ed.), *Human Suggestibility: Advances in Theory, Research, and Application.* London: Routledge.

Richardson, S. A., Doherenwend, B. S., & Klein, D. (1965). *Interviewing: Its Forms and Functions.* Basic Books: London.

Richardson, G., Gudjonsson, G. H., & Kelly, T. P. (1995). Interrogative suggestibility in an adolescent forensic population. *Journal of Adolescence,* 18(2), 211-216.

Richardson, G., & Smith, P. (1993). The inter-rater reliability of the Gudjonsson Suggestibility Scale. *Personality and Individual Differences,* 14, 251-253.

Robinson, J. & Briggs, P. (1997). Age trends in eye-witness suggestibility and compliance. *Psychology, Crime and Law*, 3, 187-202.

Roebers, C. M. & Schneider, W. (2000). The impact of leading questions on eyewitness memory in children and adults. *Applied Cognitive Psychology,* 14, 509-526.

Romaine, S. (1984). *The language of children and adolescents.* Cambridge, MA: Basil Blackwell.

Saywitz, K. J., Geiselman, R. E., & Bronstein, G. K. (1992). Effects of cognitive interviewing and practice on children's recall performance. *Journal od Applied Psychology,* 77, 744-756.

Schachter, S., & Singer, J. E. (1962). Cognitive, social, and physiological determinants of emotional state. *Psychological Review*, 69, 379-399.

Schooler, J. W., & Loftus, E. F. (1986). Individual differences and experimentation: complementary approaches to interrogative suggestibility. *Social Behaviour*, 1, 105-112.

Schumaker, J. F. (1991). *Human suggestibility: Advances in theory, research, and application.* New York: Routledge.

Shaffer, J., Brown, L. L., & McWhirter, J. J. (1998). Survivors of child sexual abuse and dissociative coping: Relearning in a group context. *Journal for Specialists in Group Work*, 23(1), 74-94.

Shaughnessy, J. J. & Mand, J. L. (1982). How permanent are memories of real-life events? *American Journal of Psychology,* 95, 51-63.

Sheldon, D. H., & MacLeod, M. D. (1991). From normative to positive data: expert psychological evidence re-examined. *The Criminal Law Review*, 811-820.

Shepherd, E. (1991). Ethical interviewing. *Policing,* 7, 42-60.

Sherif, M. (1936). *The Psychology of Social Norms*. Harper & Brothers, New York.

Shores, E. A., & Carstairs, J. R. (1998). Accuracy of the MMPI-2 computerized Minnesota report in identifying fake-good and fake-bad response sets. *Clinical Neuropsychologist, 12 (1),* 101 - 106.

Siegal, M., Waters, L., & Dinwiddy, L. (1988). Misleading children: causal attributions for inconsistency under repeated questioning. *Journal of Experimental Child Psychology*, 45, 438-456.

Sigelman, C. K., Budd, E. C., Spanhel, C. L., & Schoenrock, C. J. (1981). When in doubt say yes: acquiescence in interviews with mentally retarded persons. *Mental Retardation*, 9, 53-58.

Simon, M. J. (1994). The use of the Rey Memory Test to assess malingering in criminal defendants. *Journal of Clinical Psychology, 50 (6),* 913 - 917.

Singh, K. K., & Gudjonsson, G. H. (1984). Interrogative suggestibility, delayed memory and self-concept. *Personality and Individual Differences*, 5, 203-209.

Singh, K. K., & Gudjonsson, G. H . (1992). Interrogative suggestibility among adolescent boys and its relationship with intelligence, memory, and cognitive set. *Journal of Adolescence,* 15(2), 155-161.

Smith, K., & Gudjonsson, G. H. (1986). Investigation of the responses of "fakers" and "non-fakers" on the Gudjonsson Suggestibility Scale (GSS). *Medicine, Science and the Law,* 26 (1), 66-71.

Snyder, M., & Uranowitz, S. W. (1978). Reconstructing the past: Some cognitive consequences of person perception. *Journal of Personality and Social Psychology,* 36, 940-951.

Spielberger, C. D. (1969). *The State-Trait Anxiety Inventory.* Consulting Psychologists Press: Palo Alto, CA.

Stern, W. (1910). Abstracts of lectures on the psychology of testimony and the study of individuality. *American Journal of Psychology*, 21, 270-282.

Stern, W. (1938). *General Psychology: From the Personalistic Stand Point.* Macmillan, New York.

Stockdale, J. (1993). *Management and Supervision of Police Interviews.* Police Research Series, Paper 5.

Stone, A. R., & DeLuca, S. M. (1980). *Investigating Crimes.* Boston: Houghton Mifflin Co..

Stukat, K. G. (1958). *Suggestibility: A Factorial and Experimental Analysis.* Almqvist & Wiksell, Stockholm.

Toglia, M. (1991). Commentary: Memory impairment - It is more common than you think. In J. L. Doris (Ed.), *The suggestibility of children's recollections.* Washington, DC: American Psychological Association.

Toland, K., Hoffman, H., & Loftus, E. (1991). How suggestion plays tricks with memory. In J. F. Schumaker, *Human Suggestibility; Advances in Theory, Research and Application.* Routledge: New York.

Trankell, A. (1972). *Reliability of Evidence.* Beckmans: Stockholm.

R. v. Turner (1974). *Criminal Appeal Reports*, 60: 80.

Underwood, J., & Pezdek, K. (1998). Memory suggestibility as an example of the sleeper effect. *Psychonomic Bulletin and Review,* 5(3), 449-453.

Varendonck, J. (1911). Les temoignages d'enfants dans un proces retentissant. *Archives de Psychologie*, 11, 129-171.

Walkley, J. (1987). *Police Interrogation. A Handbook for Investigators.* London: Police Review Publishing.

Ward, R. A., & Loftus, E. F. (1985). Eyewitness performance in different psychological types. *The Journal of General Psychology,* 112, 191-200.

Warren, A. R. & McGough, L. S. (1996). Research on children's suggestibility: Implications for the investigative interview. In B. L. Bottoms & G. S. Goodman (Eds.), *Child victims, child witnesses*. New York: Guilford Press.

Waterman, A. H., Blades, M., & Spencer, C. (2001). Interviewing children and adults: Th effect of question format on the tendency to speculate. *Applied Cognitive Psychology,* 15(5), 521-531.

Watzlawick, P., Beavin, J., & Jackson, D. (1967). *Pragmatics of Human Communication.* New York: Norton.

Wells, G. L. (1978). Applied eyewitness testimony research: system variables and estimator variables. *Journal of Personality and Social Psychology*, 36, 1546-1557.

Wells, G. L., & Loftus, E. F. (Eds.) (1984). *Eyewitness Testimony: Psychological Perspectives.* New York: Cambridge University Press.

Whipple, G. M. (1909). The observer as reporter: A survey of the "psychology of testimony". *Psychological Bulletin,* 6, 153-170.

Whipple, G. M. (1911). The psychology of testimony and report. *Psychological Bulletin*, 8, 307-309.

Whipple, G. M. (1912). The psychology of testimony and report. *Psychological Bulletin*, 9, 264-269.

Whipple, G. M. (1913). The psychology of testimony and report. *Psychological Bulletin*, 10, 264-269.

Whitmont, C. (1978). *The Symbolic Quest.* Princeton: Princeton University Press.

Williams, J. M. (1998). The Malingering of Memory Disorder. In C. R. Reynolds (Ed.), *Detection of Malingering During Head Injury Litigation.* Plenum Publishing Corporation.

Yarmey, A. D. (1986). Verbal, visual and voice identification of a rape suspect under different levels of illumination. *Journal of Applied Psychology,* 71, 363-370.

Zaragoza, M. (1987). Memory, suggestibility and eyewitness testimony in children and adults. In S. J. Ceci, M. P. Toglia, & Ross, D. F. (Eds.), *Children's Eyewitness Memory.* New York: Springer-Verlag.

Zaragoza, M. (1991). Preschool children's susceptibility to memory impairment. In J. L. Doris (Ed.), *The suggestibility of children's recollections.* Washington, DC: American Psychological Association.

Zaragoza, M. & Koshmider, J. W. (1989). Misled subjects may know more than their performance implies. *Journal of Experimental Psychology: Learning, Memory and Cognition,* 15, 246-255.

Zaragoza, M. & Lane, S. M. (1994). Source misattributions and and the suggestibility of eyewitness memory. *Journal of Experimental Psychology: Learning, Memory, and Cognition,* 20, 934-945.

Zykowski, T., & Singg, S. (1999). Effects of verb and delay on recall of an accident. *Perceptual and Motor Skills,* 88(3), 1231-1234.

APPENDICES

Appendix 1

Please judge the behaviour of the interviewer using the terms listed below. Do this by giving each term a number according to how appropriate a description of the interviewer's behaviour you consider it to be. Thus, if you think the interviewer was very nervous score 5 for nervousness; averagely nervous score 3; not at all nervous score 1, and so on.

	Not at all				Very
nervous	1	2	3	4	5
severe	1	2	3	4	5
friendly	1	2	3	4	5
understanding	1	2	3	4	5
assertive	1	2	3	4	5
confident	1	2	3	4	5
professional	1	2	3	4	5
firm	1	2	3	4	5
respectful	1	2	3	4	5
positive	1	2	3	4	5
formal	1	2	3	4	5
warm	1	2	3	4	5
stern	1	2	3	4	5
organised	1	2	3	4	5
effective	1	2	3	4	5
authoritative	1	2	3	4	5
competent	1	2	3	4	5
negative	1	2	3	4	5

Please give responses on the attached form. Indicate the word or phrase you think is *nearest in meaning* to the key word.

1. **taut**
a. tough
b. tight
c. skimpy and revealing
d. believable

2. **churn**
a. to stir violently
b. refill
c. twist and turn
d. go in circles

3. **mesh**
a. to throw together carelessly
b. to separate out
c. co-ordinate
d. involve

4. **boot (with computers)**
a. to shut down
b. eliminate software
c. change programs
d. start up

5. **squib**
a. young bird
b. small sea animal
c. sudden gush
d. short satirical item

6. **brood**
a. to worry about
b. treasure or cherish
c. cover or spread
d. exact revenge

7. **grist**
a. dust
b. grief
c. essence
d. grain

8. **thrum**
a. to play a stringed instrument
b. scan
c. rock back and forth
d. smooth over

9. **rasp**
a. silk cloth
b. cold blast
c. feather
d. harsh sound

10. **bleak**
a. harassed
b. plain and simple
c. dreary
d. quiet and demure

11. **wane**
a. to grow
b. decrease
c. minimise
d. vanish

12. **quail**
a. to ease
b. flinch
c. be humble
d. hide

13. **zeal**
a. delight
b. frenzy
c. fervour
d. stamina

14. **base**
a. reliable
b. dark
c. cheerful
d. despicable

15. **gig**
a. joke
b. mistake
c. lie
d. job

16. **rime**
a. frost
b. edge
c. salt
d. groove

17. **schema**
a. forecast
b. stage curtain
c. inventory
d. diagram

18. **pugnacious**
a. plain
b. stubborn
c. quarrelsome
d. conciliatory

19. **consolation**
a. expectation
b. comfort
c. prolonged discussion
d. well-being

20. **farrago**
a. old-fashioned game
b. worthless object
c. mixture
d. foolishness

21. **boggle**
a. to hesitate
b. coax
c. sink into
d. reassure

22. **intrusive**
a. instinctive
b. frustrating
c. patronising
d. interfering

23. **lineaments**
a. characteristics
b. boundaries
c. sports equipment
d. medicinal products

24. **staunch**
a. cantankerous
b. virile
c. trustworthy
d. indecisive

a. to rebuild
b. repel
c. restrain
d. attack

26. **preen**
a. to elaborate
b. masquerade as
c. dress up
d. lament

27. **cairn**
a. ornate vase
b. ghostly presence
c. castle tower
d. mound of stones

28. **fell**
a. fierce
b. extensive
c. slippery
d. heavy

29. **garrison**
a. military post
b. stable
c. execution by choking
d. square tower

30. **inadmissible**
a. unbelievable
b. false
c. unacceptable
d. inarticulate

31. **reprise**
a. vengeance
b. repetition
c. breathing spell
d. cancellation

32. **deputation**
a. expulsion from a country
b. delegation
c. formal argument
d. statement made under oath

33. **irresolute**
a. undecided
b. careless
c. fully determined
d. scattered

ocateur
a. agitator
b. competitor
c. negotiation
d. philosopher

35. **filibuster**
a. to obstruct legalisation
b. speak off the record
c. lobby an MP
d. cheat in voting

36. **luminary**
a. floodlight
b. peaceful scene
c. celebrity
d. clairvoyant person

37. **determinate**
a. goal-oriented
b. vague
c. critical
d. distinct

38. **intuit**
a. to theorise
b. suggest
c. go into a trance
d. know by hunch

39. **veracity**
a. speed
b. anger
c. energy
d. truthfulness

40. **cavalcade**
a. waterfall
b. procession
c. avalanche
d. sumptuous banquet

41. **martial** - characteristic of:
a. a war
b. marriage
c. a large group
d. a wetland

42. **encode**
a. to transmit
b. pull back
c. put into cipher
d. intercept

43. **communiqué**
a. propaganda
b. translation
c. announcement
d. intimation

44. **legacy**
a. gift from a will
b. epic tale
c. business contract
d. judge's ruling

45. **minion**
a. oblivion
b. servant
c. minor character
d. young person

46. **propound**
a. to talk at length
b. perplex
c. propose
d. argue

47. **burnish**
a. to scorch
b. roughen
c. stain
d. polish

48. **portable** - capable of being:
a. drunk safely
b. floatable
c. flexible
d. carried

49. **sleazy**
a. slippery
b. shiftless
c. shoddy
d. foolish

50. **moil**
a. procedure
b. hard work
c. environment
d. something central

51. **disrupt**
a. to throw into disorder
b. anger
c. unwrap
d. toss out

52. **ignoble**
a. foolish
b. dishonourable
c. laughable
d. proud

53. **implausible**
a. inflexible
b. slipshod
c. unflappable
d. unlikely

54. **reticular**
a. angular
b. circular
c. bowl-shaped
d. net-like

55. **antipathy**
a. sadness
b. aversion
c. doubt
d. curiosity

56. **neophyte**
a. a follower of fashion
b. adventurer
c. social outcast
d. novice

57. **audible**
a. praiseworthy
b. hearable
c. daring
d. bland

58. **rubric**
a. set of instructions
b. declaration
c. baffling puzzle
d. prototype

59. **tetchy**
a. vulgar
b. twisted
c. irritable
d. untidy

60. **restitution**
a. revenge
b. self-control
c. interval
d. giving back

61. **inception**
a. idea
b. interruption
c. beginning
d. social function

62. **addendum**
a. something added
b. calculator
c. order of business
d. large drum

63. **felicitous**
a. sentimental
b. appropriate
c. lucky
d. scatterbrained

64. **quell**
a. to satisfy
b. retreat
c. suppress
d. accumulate

65. **circumvent**
a. to evade
b. convert
c. impose restrictions
d. deceive

66. **lacerate**
a. to follow
b. entangle
c. tear
d. secure

67. **gratuitous**
a. appreciative
b. unjustified
c. indulgent
d. balanced

68. **beseech**
a. to ask earnestly
b. overwhelm
c. give freely
d. promise

69. **congruous**
a. suitable
b. touching
c. friendly
d. effective

70. **omniscient**
a. all-powerful
b. present everywhere
c. knowing everything
d. extremely popular

71. **giddy**
a. dizzy
b. distracted
c. unreasonable
d. infatuated

72. **exiguous**
a. precise
b. easy
c. near-by
d. scanty

73. **envisage**
a. to visualise
b. inspect
c. surround
d. idealise

74. **tremulous**
a. domineering
b. frantic
c. inadequate
d. trembling

75. **whorl**
a. excitement
b. rare gem
c. spiral arrangement
d. focal point

76. **inexpedient**
a. shrewd
b. trivial
c. ambiguous
d. inadvisable

77. **temper**
a. trial
b. mood
c. synchronisation
d. moderation

78. **stigma**
a. summary
b. disgrace
c. obstruction
d. honour

79. **innuendo**
a. boredom
b. cross-examination
c. sincerity
d. sly implication

80. **passive**
a. submissive
b. outmoded
c. imitative
d. emotional

81. **narrate**
a. to challenge
b. tell
c. betray
d. evaluate

82. **vocation**
a. appeal
b. pledge
c. calling
d. speech

83. **odious**
a. poetic
b. hateful
c. foul-smelling
d. eccentric

84. **palpitate**
a. to throb
b. grow weak
c. applaud
d. become excited

85. **covert**
a. jealous
b. concealed
c. fearful
d. sinister

86. **physiognomy**
a. physical features
b. vigorous exercise
c. natural science
d. spinal manipulation

87. **manslaughter**
a. massacre
b. attempted murder
c. retribution
d. unplanned killing

88. **apprehend**
a. to permit
b. improve
c. seize
d. condemn

89. **bogus**
a. threatening
b. fake
c. boastful
d. remote

90. **collude**
a. to conspire
b. disagree
c. persist
d. hide

91. **forensic** - relating to:
a. international police work
b. courts of law
c. victim support
d. crime prevention

92. **incarcerate**
a. to instruct
b. disable
c. imprison
d. provoke

93. **summary**
a. harsh
b. eminent
c. comfortable
d. brief

94. **corroborate**
a. to recollect
b. confirm
c. intimidate
d. postpone

95. **recidivist**
a. dealer in stolen goods
b. prison visitor
c. persistent criminal
d. informer

96. **allege**
a. to assert
b. co-operate
c. link
d. simulate

97. **surmount**
a. to overcome
b. influence
c. flourish
d. estimate

98. **incognito** - state of being:
a. unaware
b. exceptional
c. anonymous
d. foreign

99. **facade**
a. level embankment
b. cosmetic
c. building front
d. long arcade

100. **foretaste**
a. bitterness
b. anticipation
c. strength
d. sweetness

101. **savannah**
a. grassland
b. harbour
c. garment
d. amt

102. **fecund**
a. fruitful
b. changeable
c. decayed
d. strong

103. **impregnable**
a. vulnerable
b. full
c. unconquerable
d. stern

104. **dross**
a. drudgery
b. thread
c. shine
d. impurity

105. **balm** - something that:
a. soothes
b. covers
c. irritates
d. blesses

106. **homicidal**
a. fanatical
b. in despair
c. sympathetic
d. murderous

107. **remand**
a. to blame
b. send back
c. withdraw
d. express regret

108. **circumstantial**
a. fabricated
b. trivial
c. indirect
d. long-winded

109. **duress**
a. pressure
b. insolence
c. cruelty
d. isolation

110. **nefarious**
a. uncommon
b. absent-minded
c. agitated
d. wicked

111. **purloin**
a. to corrupt
b. discover
c. steal
d. infiltrate

112. **deposition**
a. statement
b. hardship
c. departure
d. payment

113. **indict**
a. to point out
b. charge
c. tolerate
d. protest

114. **delinquent**
a. fragile
b. hysterical
c. inexperienced
d. offending

115. **memento**
a. suggestion
b. report
c. announcement
d. souvenir

116. **sampler**
a. silverware
b. doll's dress
c. quilt
d. piece of needle work

117. **cay**
a. shallow bay
b. swamp
c. low reef or bank
d. harbour

118. **centennial**
a. famous European train
b. royal reception
c. something that happens every 100 years
d. an era's end

119. **sampan**
a. small boat
b. temporary covering
c. shallow cooking utensil
d. incense holder

120. **pampas**
a. travel nappies
b. grassy plains
c. satchels
d. soldiers

121. **spa**
a. sports arena
b. sun deck
c. health resort
d. island hideaway

122. **table d'hôte** (in a restaurant)
a. menu items priced separately
b. special reservations
c. pavement table
d. complete meal

123. **basilica**
a. ornate altar
b. ancient church building
c. arched passageway
d. small turret

124. **centrifugal**
a. in the exact centre
b. rapid
c. moving away from a centre
d. consolidated

125. **expunge**
a. to drain
b. lie
c. distort
d. obliterate

126. **copse**
a. thicket
b. box
c. stone hut
d. cloud

127. **insouciance**
a. impertinence
b. unconcern
c. cleverness
d. humour

128. **punctual**
a. apt
b. on time
c. loyal
d. attentive

129. **imperial** - pertaining to:
a. history
b. an empire
c. tyranny
d. an urgency

130. **punctilious**
a. sloppy
b. attentive to detail
c. always on time
d. argumentative or demanding

131. **empirical**
a. having delusions of grandeur
b. arrogant and egotistical
c. based on observation
d. dependent on theory

132. **opposite** - situated:
a. unfavourably
b. in the way
c. on the other side
d. side by side

133. **contraband**
a. deceitful
b. warning
c. denial
d. smuggled goods

134. **fakir**
a. liar
b. magic rope
c. hoiy man
d. teacher

135. **siesta**
a. nap
b. harvest
c. summer rain
d. festival

136. **funicular**
a. long, deep-sounding horn
b. alpine hat
c. mountain railway
d. short tunnel

137. **dacha**
a. oriental temple
b. country house
c. bulbous tower
d. ancient manuscript

138. **patisserie**
a. arbour
b. jewel
c. pasta factory
d. pastry shop

139. **catacomb**
a. lion's cage in ancient Rome
b. underground cemetery
c. object to arrange hair
d. Greek ruins

140. **bistro**
a. type of drink
b. small restaurant
c. prison
d. balcony

141. **eldorado**
a. spectacular view
b. weather phenomenon
c. place of wealth
d. national glory

142. **portmanteau**
a. suitcase
b. overcoat
c. carriage
d. portable desk

143. **paddy**
a. pub
b. enclosed pasture
c. rice field
d. innkeeper

144. **quirky**
a. uninhibited
b. foolish
c. humorous
d. unusual

145. **profane**
a. sincere
b. bullying
c. crude
d. ignorant

146. **monitor**
a. to criticise
b. pay back
c. observe
d. firm up

147. **prerogative**
a. hunch or feeling
b. privilege or right
c. high-handedness
d. prestige

148. **machination**
a. orderly procedure
b. disappointment
c. plot
d. huge undertaking

149. **affiliate**
a. associate
b. overall programme
c. deed to property
d. limitation

150. **virtuoso**
a. truthful
b. temperamental
c. well-rounded
d. highly skilled

151. **apposite**
a. contrary
b. appropriate
c. bitter
d. subtly misleading

152. **sanguine**
a. hopeful
b. gloomy
c. impulsive
d. ruthless

153. **sanguinary**
a. motherly
b. enthusiastic
c. listless
d. bloodthirsty

154. **epitaph**
a. short, witty saying
b. inscription on a tomb
c. slogan
d. end of a book

155. **epithet**
a. monument inscription
b. closing section
c. word expressing attribute
d. general truth or rule of conduct

156. **bathos**
a. fawning compliments
b. tearful response
c. whatever evokes tender emotions
d. anticlimax

157. **pathos**
a. melodrama
b. sadness
c. solemnity
d. fervent devotion

158. **obtuse**
a. difficult
b. idiotic
c. slow of perception
d. rounded off

159. **abstruse**
a. strangely different
b. obvious
c. hard to understand
d. artistic

160. **hawk**
a. to sell
b. to complain
c. challenge
d. to intimidate

161. **egregious**
a. extraordinarily gifted
b. outstandingly bad
c. selfish
d. friendly

162. **castigate**
a. to scorn
b. punish
c. tease
d. pursue

163. **acolyte**
a. follower
b. mystic
c. dilettante
d. arrogant individual

164. **curry favour**
a. to overlook a wrong
b. confuse
c. refuse bribes
d. ingratiate oneself

165. **semblance**
a. agreement
b. optical illusion
c. likeness
d. clarity

166. **encumbrance**
a. enclosure
b. impediment
c. influence
d. contradiction

167. **habitué** - one who:
a. is an addict
b. is obsessed
c. enjoys good living
d. visits a place frequently

168. **sleaze** - person who is;
a. dishonest
b. funny
c. boastful
d. cocky

169. **instigate**
a. to anger
b. discover
c. bring about
d. sense or feel

170. **encroachment**
a. theft
b. gradual intrusion
c. accusation
d. breakdown or collapse

171. **titan**
a. important person
b. award
c. revelation
d. huge wave

172. **lacklustre**
a. vague
b. careless
c. irregular
d. dull

173. **stigma**
a. blemish
b. obstacle
c. punishment
d. ignorance

174. **bravura**
a. boastfulness
b. treachery
c. dedication
d. brilliance

175. **fauna**
a. country-dweller
b. social blunder
c. animal life
d. plant life

176. **armada**
a. helmet
b. storehouse
c. battery
d. fleet

177. **melodrama**
a. over-dramatic behaviour
b. great sadness
c. high praise
d. eloquent speech

178. **duplicity**
a. double dealing
b. repetition
c. wit
d. quality of being artificial

179. **duplication**
a. replica
b. deception
c. stupidity
d. counterfeit

180. **hypocritical**
a. insincere
b. mistrustful
c. overly concerned with health
d. fault finding

181. **hypercritical**
a. nervous
b. keenly aware
c. excessively critical
d. seriously ill

183. **sanctimonious**
a. wise
b. pleasant and gracious
c. making show of piety
d. dignified

184. **pious**
a. meek
b. devout
c. sweet
d. deceitful

185. **consolidate**
a. to hand over
b. combine
c. accept
d. accomplish

186. **arrears**
a. line of credit
b. monthly outing
c. transfer of rights
d. unpaid debts

187. **blue-chip** - pertaining to stock that
a. has a good record
b. is guaranteed
c. is overpriced
d. is authorised

188. **gratuitous**
a. uncalled for
b. easy
c. friendly
d. thankful

189. **riviera**
a. small river
b. promenade
c. island
d. coastal district

190. **enigma**
a. hostility
b. prank
c. tangle
d. riddle

191. **vendetta**
a. reward
b. feud
c. bargain
d. risk

192. **gala**
a. festivity
b. porch
c. flag
d. prize

193. **plethora**
a. claim
b. opinion
c. excess
d. promise

194. **lacuna**
a. refreshment
b. gap
c. shelter
d. maze

195. **inamorata**
a. enemy
b. servant
c. convict
d. lover

196. **media**
a. conciliation service
b. random assortment
c. communication channels
d. religious group

197. **quota**
a. allocation
b. statement
c. formula
d. competition

198. **trivia**
a. achievements
b. petty details
c. rituals
d. falsehoods

199. **miasma**
a. unpleasant atmosphere
b. disturbing noise
c. optical illusion
d. foolish pretence

200. **Diaspora**
a. foreign language
b. criminal fraternity
c. architectural drawing
d. dispersed people

201. **arcana**
a. maze
b. secrets
c. group of islands
d. registry

202. **extravaganza**
a. generous gift
b. fantasy
c. lavish display
d. high spirits

203. **profess**
a. to prove
b. declare openly
c. suggest
d. teach

204. **spur**
a. to practice
b. sharpen
c. urge on
d. refuse or reject

205. **mutant**
a. silent person
b. agreement
c. new type of organism
d. rebel

206. **hostile take-over**
a. directors revolt
b. aggressive marketing
c. unfriendly acquisition
d. downsizing policy

207. **debenture**
a. health insurance
b. debt certificate
c. official report
d. old coin

208. **commodities**
a. junk bonds
b. agricultural and mining products
c. short term investment
d. penny shares

209. **bear**
a. puzzle
b. unregistered security
c. liability
d. pessimist

210. **dun**
a. to overcharge
b. keep secret
c. remove
d. pursue payment

211. **stipend**
a. wage
b. contractual agreement
c. petty cash
d. backhander

212. **prime rate**
a. high charges
b. agreed settlement
c. low interest rate
d. loan

213. **capital gains**
a. rising markets
b. bonuses
c. profits
d. special claims

214. **conglomerate**
a. fraudulent stockbrokers
b. group of companies
c. regulatory body
d. team of advisors

215. **saga**
a. tragedy
b. story
c. judgement
d. wisdom

216. **repertoire**
a. duplicate
b. collection
c. connection
d. sequence of action

217. **genre**
a. format
b. style
c. scenery
d. interpretation

218. **proliferate**
a. to increase
b. puncture
c. remove
d. explain fully

219. **rivet**
a. to soothe
b. hold one's attention
c. search out
d. pull apart

220. **echelon**
a. trademark
b. open space
c. rank
d. index

221. **imperative**
a. leadership
b. boldness
c. high-handedness
d. urgency

222. **epistolary** - pertaining to:
a. letters
b. education
c. opinion
d. religion

223. **aspire**
a. to breathe deeply
b. encourage
c. strive for
d. challenge

224. **primal**
a. primitive
b. extraordinary
c. fussy
d. extreme

225. **savvy**
a. insincerity
b. shrewdness
c. deception
d. sophistication

226. **insouciant**
a. sassy
b. brave
c. carefree
d. slipshod

227. **diatribe**
a. pudding
b. invective
c. nausea
d. shovel

228. **depict**
a. to alter
b. describe
c. expire
d. single out

229. **monologue**
a. single-storey
b. engraving
c. speech
d. offspring

230. **estrange**
a. to alienate
b. intimidate
c. obscure
d. require

231. **exoteric**
a. needing attention
b. easily understood
c. secret
d. foreign

232. **chronicle**
a. to expose
b. record
c. survey
d. study

233. **audit**
a. to sue
b. give support
c. examine records
d. sell assets

234. **warranty**
a. guarantee
b. illegal tactic
c. purchase plan
d. price adjustment

235. **annuity**
a. company review
b. rolling contract
c. stockbroker's report
d. yearly payment

236. **surtax**
a. additional tax
b. partial payment
c. progressive tax
d. price index

237. **liquid assets** - assets that are:
a. vulnerable to market forces
b. unpredictable
c. unusable
d. convertible into cash

238. **assessment**
a. commitment
b. outline
c. compromise
d. evaluation

239. **proprietary**
a. exclusively owned
b. cautious
c. well-timed
d. world-wide

240. **dividend** - payment given to:
a. shareholders
b. the clergy
c. the unemployed
d. charity

241. **encroach**
a. to trespass
b. dominate
c. weaken
d. parallel

242. **concede**
a. to leave to chance
b. acknowledge as true
c. think over carefully
d. approve

243. **solicitude**
a. payment
b. peacefulness
c. concern
d. piety

244. **appertain**
a. to seize
b. understand
c. prepare
d. relate to

245. **diffuse**
a. to confuse
b. spread
c. calm down
d. eliminate

246. **appellation**
a. name
b. proposal
c. established principle
d. formal request

247. **efficacy**
a. integrity
b. helplessness
c. effectiveness
d. ease

248. **infraction**
a. small portion
b. stubbornness
c. hostility
d. violation

249. **acquiescence**
a. collective opinion
b. passive consent
c. lacking interest
d. control

250. **enjoin**
a. to command
b. claim
c. precede
d. put together

251. **concerted**
a. melodic
b. pulled apart
c. done co-operatively
d. misinterpreted

252. **rank**
a. hostile
b. complete
c. supportive
d. tall

253. **raddle**
a. interweave
b. to accumulate
c. to siphon off
d. to skim in a furnace

254. **inveterate**
a. irresistible
b. shameless
c. habitual
d. in retirement

255. **infer**
a. to conclude
b. suggest
c. investigate carefully
d. presuppose

256. **enormity**
a. wickedness
b. severe simplicity
c. grandeur
d. exaggeration

257. **delineate**
a. to enclose
b. portray
c. spread through
d. do away with

258. **inducement**
a. force
b. decoy
c. incentive
d. desire

259. **salutary**
a. courteous
b. introductory
c. given freely
d. beneficial

260. **palladium**
a. broad stretch
b. safeguard
c. private dwelling
d. crown

261. **heartfelt**
a. sincere
b. foolish
c. energetic
d. sad

262. **gingerly**
a. casually
b. cautiously
c. sedentarily
d. sharply

263. **valour**
a. stubbornness
b. strength
c. great courage
d. pride

264. **pre-eminent**
a. early
b. excessive
c. out of date
d. outstanding

265. **levy**
a. to keep within limits
b. knock down
c. impose
d. balance

266. **synergy**
a. state of equilibrium
b. effect of evil
c. combined action of separate compon
d. individual effort

267. **apparition**
a. ghost
b. opening
c. intuition
d. uncertainty

268. **effusive**
a. messy
b. fussy
c. over-emotional
d. easily offended

296. **inquest**
a. deposition
b. accusation
c. investigation
d. arrest

297. **quench**
a. extinguish
b. search
c. kindle
d. saturate

298. **tether**
a. a handle
b. rope or chain
c. leather ball
d. musical instrument

299. **cadge**
a. to enclose
b. track
c. trick
d. beg

300. **nodule**
a. lump
b. soporific
c. unit
d. cave

301. **craven**
a. greedy
b. diabolical
c. cowardly
d. crafty

302. **crystallise**
a. to become squishy
b. take over
c. link
d. firm up

303. **reflex**
a. repetition
b. rebirth
c. planned action
d. sudden movement

304. **opportunist** - person who:
a. takes advantage
b. is carefree
c. enjoys company
d. is impetuous

305. **perfunctory**
a. suspicious
b. informal
c. routine
d. meditative

306. **grizzled**
a. stiff and coarse
b. rugged
c. bad-tempered
d. grey

307. **pandemonium**
a. wild disorder
b. enchanted land
c. plague
d. misfortune

308. **conflagration**
a. combination
b. contradiction
c. destructive fire
d. a seizure

309. **android**
a. star cluster
b. throat mucus
c. hormone
d. robot

310. **tenebrous**
a. fragile
b. gruesome
c. nervous
d. dark

311. **approbation**
a. gift
b. money
c. approval
d. disgrace

312. **ruddy**
a. strong
b. good-humoured
c. impulsive
d. reddish

313. **emaciated**
a. freed
b. thin
c. crazed
d. drunk

314. **impassive**
a. unwilling to wait
b. open-minded
c. showing no feeling
d. mean or petty

315. **Achilles heel**
a. poisonous fruit
b. vulnerable point
c. dishonourable person
d. blister

316. **hulking**
a. massive
b. shadowy
c. threatening
d. over-hanging

317. **necrologist**
a. cemetery caretaker
b. dirge singer
c. compiler of deaths
d. practitioner of black magic

318. **teeter**
a. to giggle
b. wobble
c. slip away
d. swarm

319. **aversion**
a. rendition
b. dislike
c. fright
d. defiance

320. **insignia**
a. badge or emblem
b. unimportant detail
c. a subtlety
d. cunning tendency

321. **insipid**
a. lacking in spirit
b. irritating
c. cheekyl
d. inherent

322. **linchpin**
a. problem
b. wheel's axle component
c. emergency switch
d. cash card

323. **infuriating**
a. maddening
b. burning
c. embittering
d. numbing

324. **suffuse**
a. to silence
b. carry on
c. spread over
d. fill up

325. **belie**
a. to apologise profusely
b. study carefully
c. explain
d. give a false impression

326. **circuitous**
a. unsuitable
b. sceptical
c. repetitive
d. indirect

327. **contemptuous**
a. scornful
b. disobedient
c. ironic
d. vindictive

328. **apolitical**
a. politically active
b. conservative
c. radical
d. non-political

329. **immunity**
a. separation
b. temporary
c. exemption
d. obstinacy

330. **render**
a. to provide
b. accept
c. renew
d. steal

331. **symbiotic**
a. ruthless
b. mutually beneficial
c. contrasting
d. mutually exclusive

332. **portfolio**
a. textbook
b. investments
c. balance sheet
d. secret accounts

333. **complicity** - involvement in:
a. wrongdoing
b. complex research
c. sharing power
d. a computer link up

334. **prosaic**
a. dull
b. practical
c. literal
d. pithy

335. **malaise**
a. discouragement
b. irritability
c. uneasiness
d. indifference

336. **penurious**
a. corrupt
b. lazy
c. poor
d. sickly

337. **de facto**
a. according to law
b. in fact
c. important
d. for example

338. **credulous**
a. surprised
b. respectable
c. careful
d. gullible

339. **putative**
a. insulting
b. vengeful
c. supposed
d. easy

340. **foible**
a. subtle deception
b. minor fault
c. blunder
d. witty report

341. **cassoulet**
a. a fry up
b. stew
c. nut roast
d. cream

342. **marinade**
a. meringue
b. jelly
c. liquid
d. baked meat

343. **pulse**
a. wild mushroom
b. tropical fruit
c. edible seed
d. shell fish

344. **basting**
a. covering with pastry
b. beating
c. shaping
d. moistening

345. **emulsion**
a. decoration
b. coating
c. batter
d. mixture

346. **couscous**
a. spicy filling
b. Greek sweet
c. salad
d. semolina

347. **blanch**
a. scald
b. chill
c. shred
d. top and tail

348. **salsa**
a. fragrant herb
b. sauce
c. preservative
d. savoury cracker

349. **croutons**
a. chocolate curls
b. leftovers
c. bread
d. tongs

350. **coulis**
a. pulp
b. ice cream
c. custard
d. soft icing

351. **dice**
a. to crumble
b. mince
c. chop
d. whisk

352. **chowder**
a. curry
b. soup
c. flour and stock
d. hot pepper sauce

353. **florets**
a. flowering stems
b. parsley
c. fancy cakes
d. sugar decorations

354. **noodles**
a. round biscuits
b. cocktail snacks
c. pasta
d. pancake slices

355. **drizzle**
a. rub in
b. sieve
c. mix thoroughly
d. pour

356. **polenta**
a. Hungarian cheese
b. porridge
c. gravy granules
d. powdered potato

357. **flambeed**
a. served in a syrup
b. alight
c. chilled
d. set solid

358. **coriander**
a. citrus peel
b. deep-sea fish
c. aromatic herb
d. variety of pear

359. **risotto**
a. broth
b. type of rice
c. frozen dessert
d. rissole

360. **ramekin**
a. small dish
b. cut of meat
c. roasting tin
d. measure of beer

361. **galyak**
a. ship's mast
b. glossy pelt
c. constellation
d. below ship's deck

362. **jejune**
a. naive or unsophisticated
b. young
c. a flower
d. a cereal

363. **majolica**
a. larger
b. great dignity
c. porous potery
d. of Royalty

364. **owlish**
a. large eyed
b. young owl
c. solemn or wise
d. nocturnal habits

365. **eisegesis**
a. literary form
b. interpretation of text
c. type of belief
d. Greek temple

366. **boletus**
a. Spanish dance
b. architechtural term
c. a fungus
d. game played using boules

367. **cadmium**
a. vitamin
b. insoluble solid
c. dishonest act
d. toxic element

368. **gratulate**
a. to give thanks
b. free
c. to greet joyeously
d. harsh and rasping

369. **interligua**
a. artificial language
b. written between lines
c. white blood cell
d. archaic language

370. **geometrid**
a. rock formation
b. study of crystal
c. a moth
d. mathematical theorum

371. **chakra**
a. Hindu chant
b. insect
c. limestone
d. spiritual power

372. **ruthemium**
a. Ukranian dialect
b. tropical flower
c. brittle metal
d. to banish

373. **lacineate**
a. severed lineament
b. jagged
c. lacking vitality
d. to cut

374. **ribozyme**
a. a sugar
b. soluble vitamin
c. a fat
d. catalyst

375. **nascent**
a. of the nose
b. proud
c. starting to develop
d. church potico

376. **marigraph**
a. instument measuring tide level
b. Latin American insrument
c. graphical illustration
d. nautical engineer

377. **progeria**
a. steroid hormone
b. child of
c. premature old age
d. precursor

378. **redivivus**
a. return to life
b. scarlet colour
c. virus
d. political aggitator

379. **consociate**
a. natural community
b. give solace
c. associated or united
d. confused

380. **antinomy**
a. paradox
b. anatomical diagram
c. counter intuitive
d. opposed to marriage

381. **foliation**
a. hair growth
b. growth of leaves
c. loss of hair
d. birth of a horse

382. **noumenon**
a. Greek character
b. of intuition
c. nonsense name
d. numerical value

383. **flummery**
a. nonsense
b. ravine
c. muddle
d. gained by accident

384. **claggy**
a. pest
b. irritating noise
c. stickily clinging
d. rock face

385. **rhabdomancy**
a. divining
b. pagan ritual
c. travellers resting place
d. benign tumour

386. **escolar**
a. student
b. fish
c. edible snails
d. distinguished professor

387. **collimate**
a. to measure distance
b. to bring into line
c. to colloquialise
d. to engage in conversation

388. **hamulus**
a. tendon in the knee
b. over exaggerated
c. Arabic calligraphy
d. part of a bee's wing

389. **binnacle**
a. housing of ship's compass
b. intended for both eyes
c. mathematical expression
d. opticians instrument

390. **delecation**
a. pleasure
b. to comsume
c. formal announcement
d. to delete

391. **surreal**
a. literal
b. miraculous
c. bizarre
d. godlike

392. **patronising**
a. privileged
b. saintly
c. condescending
d. deceptive

393. **cursory**
a. hand-written
b. angry
c. hasty
d. vulgar

394. **allure**
a. to praise
b. tempt
c. hide
d. decorate

395. **lesion**
a. injury
b. fastening
c. throng
d. division

396. **teeter**
a. to move unsteadily
b. to abstain from drinking alcohol
c. to laugh
d. to pour gently

397. **hectare**
a. hectic fever
b. area measurement
c. to bully
d. public sacrifice

398. **enclitic**
a. linguistic form
b. feeling of containment
c. of a particular country
d. exciting

399. **mitigate**
a. to intercede
b. clear of blame
c. settle judicially
d. alleviate

400. **deflower**
a. to despoil of innocence
b. to disperse
c. to alter
d. to clear

401. **homogeneous**
a. similar
b. flowing
c. peaceful
d. simple

402. **ebb**
a. recede
b. lower
c. move
d. roll

403. **juxtapose**
a. disagree
b. challenge
c. side by side
d. stress

404. **allegretto**
a. briskly
b. getting louder
c. morally symbolic art
d. transformation

405. **hedonistic**
a. moral
b. self-righteous
c. indulging in pleasure
d. philosophical

406. **malign**
a. illegal
b. evil in influence
c. abnormal
d. defective

407. **inversion**
a. reversal of order
b. interrogation
c. mistakenly
d. confirmation

408. **noisome**
a. constant noise
b. offensive
c. small and round
d. characteristic

409. **obsolete**
a. out of use
b. arrogant
c. emotionally insensitive
d. naive

410. **pursuant**
a. determined
b. follower
c. seeking
d. in agreement

411. **proficient**
a. skilled
b. successful
c. reliable
d. rational

412. **rebuke**
a. refuse
b. reprimand
c. prove
d. return

413. **regicide**
a. military formation
b. renewal
c. killing of a king
d. formal list

414. **shambolic**
a. disorganised
b. unsteady
c. bashful
d. scandalous

415. **graduant**
a. slight incline
b. slow development
c. person about to graduate
d. one of a series

416. **ameliorate**
a. improve
b. co-operate
c. correct
d. suggest

417. **cambric**
a. student of Cambridge
b. linen or cotton fabric
c. freely given
d. type of calorie

418. **demarcation**
a. to remove boundaries/limits
b. diplomatic move or step
c. limit or boundary
d. conduct or bearing

419. **fervour**
a. intense feeling
b. decayed
c. perspiration
d. to fertilise

420. **impasse**
a. impassionate
b. unbelievable
c. stalemate
d. play in tennis

421. **immolate**
a. to remove hair
b. to offer as sacrifice
c. to apologise profusely
d. to state

422. **lectern**
a. one who lectures
b. reading desk esp. in church
c. passage from religious text
d. a telling off

423. **magistral**
a. majestic
b. of superstition
c. characteristic of a master
d. one who sings/tells tales

424. **microcosm**
a. universe
b. short skirt
c. type of microscope
d. miniature representation

425. **paean**
a. song of praise
b. mountain range in ancient Greece
c. a deity
d. doctor dealing primarily with chil

426. **perforce**
a. to train to perform
b. part of a show
c. to use excessive force
d. unavoidable

427. **pod**
a. seedcase
b. chubby or fat
c. type of trouser
d. chiropody

428. **prose**
a. written in ordinary language
b. poetic form
c. lying flat
d. type of faith/belief

429. **xenophobe**
a. instrument played with sticks
b. fear of strangers/foreigners
c. mythical figure
d. fear of skin

430. **formication**
a. to form or mould
b. nervous disorder
c. to chew
d. to change into formic acid

431. **ratify**
a. over-run with rodents
b. to give formal approval
c. to chastised
d. to hunt to extinction

432. **replete**
a. drive back
b. feel remorse
c. abounding in
d. recovery

433. **maul**
a. tooth
b. handle clumsily
c. handle with care
d. batter

434. **junket**
a. salted beef
b. second-hand goods
c. sweet dessert
d. vintage car

435. **jape**
a. joke
b. lower part of neck
c. hot pepper
d. mechanical instrument

436. **hiatus**
a. storm
b. dance
c. break in continuity
d. martial art

437. **skein**
a. measurement
b. alcoholic ale
c. length of yarn
d. penniless

438. **transcend**
a. to change
b. inter-changeable
c. permeate
d. go beyond

439. **woad**
a. sad or sorrowful
b. plant from which blue dye is made
c. leather thong
d. cooking pot

440. **zabaglione**
a. assault
b. open sandwich
c. form of architecture
d. whipped dessert

Legal and Criminological Psychology (2000), **5**, 123–133 *Printed in Great Britain*

Interrogative suggestibility: The role of interviewer behaviour

Stella A. Bain and **James S. Baxter***

University of Strathclyde, UK

Purpose. Interrogative suggestibility may vary as a function of interviewer behaviour. The present study assessed the effect of two interviewer styles on measures of interrogative suggestibility obtained using the first of the Gudjonsson Suggestibility Scales (GSS1). It was hypothesized that a generally abrupt demeanour adopted by the interviewer would produce greater psychological distance, and therefore higher GSS1 scores, than a friendly demeanour.

Methods. The study had a single factor between participants design. Participants were tested on the GSS1 by an interviewer whose behaviour was either 'friendly' or 'abrupt'. One female experimenter conducted all of the interviews. Fifty-five participants took part in the study. Most participants were first year undergraduate psychology students. Others were university administrative staff.

Results. Two of the GSS1 measures appeared to be biased significantly by interviewer style. Participants tested in the 'abrupt' condition gained higher scores for Shift and Total Suggestibility than those in the 'friendly' condition.

Conclusions. These results are consistent with the view that the GSS1 provides measures of two different types of suggestibility. However, this finding may also mean that whilst initial responses to leading questions are mediated by more stable cognitive factors that are relatively unaffected by interviewer demeanour, post-feedback scores may be more sensitive to the social aspects of suggestibility. Implications of the results for the objectivity and administration of the Gudjonsson Suggestibility Scales are discussed.

Much research on the reliability of eyewitnesses has focused on influences present during questioning which may distort testimony (cf. Loftus, 1979). Gudjonsson has termed susceptibility to such influences 'interrogative suggestibility' (e.g. Gudjonsson, 1984a). Gudjonsson and Clark (1986) presented a model which attempted to identify these influences and the interactions between them. According to Gudjonsson and Clark, interrogative suggestibility depends on the coping strategies witnesses use during an interrogation. All witnesses, victims and suspects enter an interrogation with a general cognitive set regarding the situation. This cognitive set is influenced by uncertainty about the subject-matter of the

*Requests for reprints should be addressed to Dr James S. Baxter, Department of Psychology, University of Strathclyde, 40 George St, Glasgow G1 1QE, UK.

interrogation, the degree of interpersonal trust witnesses feel towards the interrogator, and their expectations regarding what is about to happen. This general cognitive set can facilitate either a resistant or suggestible behavioural response to the interrogation.

Also important is any form of negative feedback communicated to, or perceived by, the witness. Usually this will be some form of disapproval or criticism of the witness and may be overt or implicit. Gudjonsson (1984a, 1984b) argued that negative feedback can have two distinct effects. First, it can make interviewees change or shift previous responses. Secondly, it can increase an individual's susceptibility to further leading questions. Negative feedback can either be accepted or rejected. If the interviewee rejects the negative feedback then there will be no major effect on further susceptibility to suggestions. Gudjonsson and Clark (1986) argued that, occasionally, negative feedback can make resistant responders even more resistant to subsequent suggestions because it makes them even more suspicious of the interrogator and the situation than they were before. Accepting negative feedback is thought to increase uncertainty, which increases susceptibility to suggestions. Accepting negative feedback is also likely to diminish an individual's self-esteem and increase anxiety, if only temporarily, making him or her more likely to attend to external cues rather than relying on his or her own internal frame of reference (Gudjonsson, 1992), making him or her more suggestible. The model does not assume that accepting negative feedback necessarily leads to an increased suggestible cognitive set, though it commonly does. For some, negative feedback may be construed as a challenge to improve, making them more critical of the situation and so less suggestible.

Responses to the GSS procedure may be further affected by compliance. Compliance occurs, for example, when interviewees give in to what they perceive is required of them in an attempt to appease interviewers and avoid confrontation, so that they yield to suggestions and change their responses during the procedure, even if they know privately that their answers are wrong. A tendency to compliance may also forestall memory search and retrieval processes. Some compliant interviewees may not be aware of any contradiction between what they say and the truth because they attend to situational demands rather than searching memory (cf. Baxter & Boon, in press). It is at this point that compliance and suggestibility overlap (see Gudjonsson, 1992, 1997 for further analysis of the relationship between interrogative suggestibility and compliance).

Gudjonsson developed two scales designed to measure an individual's level of interrogative suggestibility, known as the Gudjonsson Suggestibility Scales 1 and 2 (GSS1 and GSS2; Gudjonsson 1984a, 1987). These scales were primarily designed to be used as clinical or forensic tools to help assess the reliability of confessions that have been retracted, or to identify particularly vulnerable individuals who may require extra care during interviewing (Gudjonsson, 1992). The scales aim to measure responses to the two principal types of suggestive influence thought to underlie interrogative suggestibility: leading questions and interrogative pressure (Gudjonsson, 1983). Both types of suggestive influence may compromise the accuracy and reliability of testimony.

Each scale consists of a spoken narrative and 20 questions about the narrative. Fifteen of these questions are leading in that they suggest certain details that were not a part of the original narrative. Five are 'true' questions which do not contain misleading suggestions. The number of suggestions accepted by the interviewee provides an initial score termed 'Yield 1'. Negative feedback is then administered. This is done by telling interviewees, 'firmly', that 'You have made a number of errors. It is therefore necessary to go through the questions once again, and this time try to be more accurate'. The questions are then repeated. Three further scores are then calculated: Yield 2, Shift, and Total Suggestibility. Yield 2 is a measure of the number of suggestions that are accepted following the negative feedback. Shift is a measure of the number of responses an interviewee changes subsequent to the negative feedback and includes all 20 of the questions. Total Suggestibility is the sum of Yield 1 and Shift.

The administration of negative feedback is an important aspect of administration of the scales. It is assumed that negative feedback applies a certain level of interrogative pressure and that variations in style should be avoided. Gudjonsson (1984a) raised concern over the consistency with which negative feedback is administered. If, for example, an interviewee has made no errors it may be awkward or embarrassing for the interviewer to administer negative feedback and this may affect scoring of Shift. Haraldsson (1985) found that interviewer embarrassment when administering the negative feedback reduced Shift, although the effect was not significant. Gudjonsson and Lister (1984) noted a non-significant tendency for one of their experimenters to gain higher Shift scores than the other.

Baxter and Boon (in press) argued that one effect of being firm rather than friendly in administering negative feedback may be to maximize psychological distance, giving the interrogator a 'tactical advantage' over the interviewee (cf. Gudjonsson & Lister, 1984). Baxter and Boon argued that firm negative feedback may also have a related effect in that it precipitates compliance. They conducted a study to assess the impact of varying only the negative feedback component of the GSS2. Participants were tested under one of three conditions which varied the firmness of negative feedback. The three conditions were defined as 'friendly', 'firm' and 'stern' negative feedback demeanour. Baxter and Boon found Yield 2 and Shift scores to increase as interviewer demeanour changed from 'friendly' through to 'stern' when administering negative feedback, although Total Suggestibility scores did not differ significantly across their conditions. They argued, in support of Gudjonsson (1983), that Yield 1 is primarily related to cognitive factors of the individual, whereas Yield 2 may better represent interpersonal influences present at negative feedback. They also argued that, because Total Suggestibility is a balanced measure of pre- and post-feedback interrogative suggestibility, it may be relatively insensitive to the effects of variations in interviewer manner in delivering negative feedback.

If the manner in which negative feedback is administered is important, then there may be more general problems associated with experimenter effect in the administration of the scales. It may be that a particular style of interviewing results in higher suggestibility scores even where firmness of negative feedback is held

constant. Gudjonsson and Lister (1984) examined the role of self-concept and locus of control in the extent to which individuals are susceptible to suggestion. In this study all participants were placed under the same interrogative pressure. The major finding was that perception of distance between the participant and the experimenter was highly correlated with suggestibility. Gudjonsson and Lister identified the variables of perceived lack of confidence and control in coping with the interrogation as being most clearly related to suggestibility. Feelings of anxiety and powerlessness were also identified as important variables. Psychological distance between an interviewee and the interrogator may create a certain pressure that makes the interviewee more susceptible to suggestion (cf. Gudjonsson & MacKeith, 1982; Irving, 1980).

These results suggest that certain interrogation techniques could be used to increase psychological distance in the interrogative context. By manipulating an individual's level of self-esteem and perception of power and control, such techniques could perhaps make individuals more susceptible to suggestion than they would otherwise be if such techniques were not used. Baxter and Boon (in press) manipulated interviewer demeanour only during the presentation of negative feedback. The present study tested the hypothesis that the greater the psychological distance created between the interviewer and the interviewee by a general demeanour adopted throughout the interview, the higher GSS1 scores will be. It was predicted that a generally abrupt demeanour would produce greater psychological distance, and hence higher GSS1 scores, than a friendly demeanour.

Method

Design

The study had a single factor between participants design. The independent variable was interviewer behaviour which was varied such that there were two conditions: 'Friendly' and 'Abrupt' interviewer behaviour.

Participants

Most participants were first year undergraduate psychology students. Others were university administrative staff (mean age = 25.18 years, SD = 13.57, range 17–74). In all, 29 females and 26 males took part in the study. All participants were told on recruitment that they would take part in memory research. Of the participants, 29 were assigned to the Friendly condition and 26 to the Abrupt condition. Participants were assigned to conditions at random. Numbers of females and males were approximately equal in each condition.

Procedure

The GSS1 (see Gudjonsson, 1997 for a full description of the procedure) was administered under two different conditions of interviewer behaviour. The same female experimenter conducted all interviews in both conditions.

In the Friendly condition the experimenter smiled when participants entered the test room, thanking them for taking part. The experimenter attempted to respond in a friendly manner to any conversation initiated by the participant prior to testing, and to maintain this manner in explaining the procedure to participants. The experimenter smiled frequently and always smiled back if participants

smiled. A body position of leaning back, away from the table and the participant, was adopted for the entire period of the experiment. Eye contact was maintained throughout testing, except when consulting the scoring sheet.

In the Abrupt condition no attempt was made to build rapport or be friendly when the participant entered the office. The experimenter gave minimal responses to any attempts at conversation by the participant and limited speaking to issuing instructions in an abrupt manner. The experimenter did not smile or make any facial response to anything the participant said. Instead, an expression intended to convey mild annoyance was maintained throughout the experiment. The experimenter adopted a body position of leaning forward across the table towards the participant. Again, eye contact was maintained by the experimenter throughout the period of testing, except when it was necessary to consult the scoring sheet.

Apart from interviewer manner, the only departure from standard GSS procedure was to present the narrative on audiotape in an attempt to standardize conditions at the time of encoding. Participants completed an unrelated filler task in the 50 minutes between testing of immediate and delayed recall.

On completion of GSS1 testing participants completed a questionnaire which asked for 5-point Likert scale ratings on 18 aspects of the interviewer's manner. These aspects were: nervous, severe, friendly, understanding, assertive, confident, professional, firm, respectful, positive, formal, warm, stern, organized, effective, authoritative, competent, and negative, with a high score being more nervous, etc.

Before leaving all participants were debriefed. Those participants who had been tested under the Abrupt condition were told that the experimenter's behaviour was a necessary part of the experiment.

Scoring the GSS1

Scoring of the GSS1 was done in accordance to the guidelines provided by Gudjonsson (1997).

(i) Memory recall. Both immediate and delayed recall are scored for each correct idea recalled. Ideas are scored as correct if the meaning is the same as the original item in the narrative. Each correct idea earns one point, with the maximum score being 40. The scoring of memory recall is not included in the scoring of suggestibility.

(ii) Suggestibility. The scale provides four scores:

(1) *Yield 1.* Every suggestive question that is answered affirmatively, or in the case of false alternatives where one alternative is chosen, in the first period of questioning is scored as one yield point. The range of possible scores is 0 to 15.
(2) *Yield 2.* This measure is scored in the same manner as Yield 1 following the administration of the negative feedback. Again, possible range of scores is 0 to 15.
(3) *Shift.* Any distinct change in response to all 20 questions in the second period of testing is scored as a shift. Thus, possible shift scores range from 0 to 20.
(4) *Total Suggestibility.* Total Suggestibility is the sum of Yield 1 and Shift. Therefore, the range of scores is 0 to 35.

Results

A one-way ANOVA revealed no significant differences for Yield 1 or Yield 2 between the two conditions. Significant differences for Shift ($F(1,54) = 6.2$, $p = .016$) and Total Suggestibility ($F(1,54) = 4.5$, $p = .039$) were found between the two conditions. Participants in the Abrupt condition scored significantly higher on Shift and Total Suggestibility than those in the Friendly condition. Associated descriptive statistics are shown in Table 1.

Table 1. Mean suggestibility scores × condition and GSS1 norms

	Condition					
	Friendly		Abrupt		GSS1 norms	
	M	SD	*M*	SD	*M*	SD
Yield 1	4.1	2.7	4.9	2.4	4.6	3.0
Yield 2	5.4	3.2	5.9	3.1	5.6	3.8
Shift	2.2	1.4	4.0	2.9	2.9	2.5
Total suggestibility	6.6	3.1	8.9	4.8	7.5	4.6

Note: Norms derived from Gudjonsson (1997).

Table 2. Mean recall scores × condition and GSS1 norms

	Condition					
	Friendly		Abrupt		GSS1 norms	
	M	SD	*M*	SD	*M*	SD
Immediate recall	23.7	5.5	24.1	5.8	21.3	7.1
Delayed recall	21.2	5.9	21.7	6.8	19.5	7.5

Note: Norms derived from Gudjonsson (1997).

Two one-way ANOVAs conducted on the data for Immediate and Delayed Recall × Condition found no significant differences. Means and standard deviations for Memory Recall (Immediate and Delayed) are shown in Table 2.

A one-way ANOVA conducted on the ratings of interviewer behaviour showed significant differences between the two conditions for participants' ratings on 12 of the adjectives included on the form. The significant results were as follows: severe ($F(1,54) = 21.7$, $p < .001$); friendly ($F(1,54) = 48.6$, $p < .001$); understanding ($F(1,54) = 52.7$, $p < .001$); assertive ($F(1,54) = 5.6$, $p = .022$); firm ($F(1,54) = 15.1$, $p < .001$); respectful ($F(1,54) = 14.4$, $p < .001$); positive ($F(1,54) = 11.1$, $p = .002$); formal ($F(1,54) = 15.6$, $p < .001$); warm ($F(1,54) = 47.3$, $p < .001$); stern ($F(1,54) = 49.6$, $p < .001$); authoritative ($F(1,54) = 24.6$, $p < .001$); and negative ($F(1,54) = 6.8$, $p = .012$). Ratings for nervous, confident, professional, organized, effective and competent did not differ between the conditions. Participants rating the behaviour of the Friendly interviewer were more likely to rate the interviewer as friendly, understanding, respectful, positive and warm. Participants rating the behaviour of the Abrupt interviewer were more likely to rate the interviewer as severe, assertive, firm, formal, stern, authoritative and negative. Associated descriptive statistics are shown in Table 3.

Table 3. Interviewer behaviour ratings × condition

	Condition			
	Friendly		Abrupt	
	M	SD	*M*	SD
Nervous	1.3	0.6	1.4	0.7
Severe	1.3	0.6	2.4	1.0
Friendly	4.3	0.8	2.6	0.9
Understanding	4.1	0.9	2.3	0.8
Assertive	3.5	1.0	4.1	0.9
Confident	4.2	0.8	4.1	1.1
Professional	4.3	0.9	4.3	0.9
Firm	3.0	1.2	4.1	0.9
Respectful	4.3	0.7	3.4	1.1
Positive	4.2	0.8	3.3	1.1
Formal	3.0	1.2	4.1	1.0
Warm	3.8	0.9	2.1	0.9
Stern	1.4	0.8	3.3	1.1
Organized	4.5	0.9	4.5	0.9
Effective	4.2	0.9	4.2	1.0
Authoritative	2.5	1.1	3.9	1.0
Competent	4.4	0.8	4.4	0.9
Negative	1.2	0.7	1.8	0.9

In sum, the results indicate that interviewer behaviour had a significant effect on participants' scores on the GSS1. This effect operated on Shift and Total Suggestibility scores only. No effect of variations in interviewer behaviour was found on Yield 1 or Yield 2 scores.

Discussion

That the attempt to vary interviewer behaviour was successful seems broadly confirmed by the results obtained from the interviewer rating forms. In the Friendly condition the interviewer tended to be rated as friendly, understanding, respectful, positive and warm. In the Abrupt condition the interviewer tended to be rated as severe, assertive, firm, formal, stern, authoritative and negative (see Table 3). The scores for memory recall did not vary as a function of experimental condition and were closely comparable to norms for the general population (see Table 2), suggesting that each group had comparable memories for the GSS1 narrative against which to compare conflicting information contained in the questions.

Significant differences between the experimental conditions were found for Shift and Total Suggestibility scores with participants in the Abrupt condition gaining

higher scores on these measures than those in the Friendly condition. The Yield 1 scores shown in Table 1 indicate that the difference in Total Suggestibility was due primarily to the difference in the Shift component on this measure between the conditions. Shift is assumed to measure the effects of interrogative pressure on an individual (Gudjonsson, 1983), pressure which is applied overtly by administering negative feedback and implicitly by requestioning in the standard GSS procedure. These procedures did not differ, however, between the conditions in the present study: negative feedback was administered 'firmly' in both conditions and all participants were questioned twice. The tendency of participants in the Abrupt condition to be more likely to change their responses at requestioning seems most likely, therefore, to be because of the generally negative manner of the interviewer in that condition.

The Yield 1 and Yield 2 scores did not differ significantly between the conditions (see Table 1), although both tended to be higher in the Abrupt condition. These scores departed only slightly from the general population norms for the scales. It does not seem, therefore, that interviewer manner as manipulated in the present study significantly affected either the capacity to detect misleading information or a tendency to comply with the demands of leading questions. One reason for this may be that an overall interviewer manner which interviewees have no reason to link to their own behaviour communicates no particular expectancy, but increases interviewee uncertainty above the levels created by negative feedback alone in the standard GSS procedure. That this additional pressure operated primarily on Shift rather than Yield 2 of the two post-feedback scores may indicate that its effect is to increase the likelihood that interviewees will examine what was 'wrong' with their previous answers in an attempt to identify what can be changed. That Yield 2 was not found to be significantly different between conditions may be because Yield 2 provides a specific measure of the effect of negative feedback and the valence of negative feedback was held constant between conditions (cf. Baxter & Boon, in press; Gudjonsson, 1983, 1992, 1997).

Shift is assumed to measure the overall effects of interrogative pressure on an individual (Gudjonsson, 1983) and primary sources of interrogative pressure in the standard GSS procedure are negative feedback and the further negative feedback implicit in requestioning. However, the present results have identified a further factor which can contribute to Shift. Interviewees can evidently be pressured to shift their responses more frequently if an interrogator has an abrupt manner than will be the case if an interrogator is friendly but nonetheless delivers 'firm' negative feedback. One reason for this, which further work might assess specifically, may be that a generally negative interviewer manner does not necessarily bias interviewees' responses by causing them to attend to external cues at the expense of internal cues, as the standard GSS negative feedback procedure is assumed to do (Gudjonsson, 1992). Interviewees may continue to attend to internal cues, but may devalue them. A further possibility is that participants may have attempted to appease the severe interviewer by simply complying with her perceived demands, knowingly shifting their initial responses while still believing them to have been correct. A limitation of the present study is that it cannot identify the relative contributions which devaluation of internal cues, compliance and other influences

may have made to the levels of interrogative suggestibility found: these and other influences may have operated in isolation or interactively to various degrees between and within interviewees throughout the procedure or at different stages of the procedure (Baxter & Boon, in press; Gudjonsson, 1992, 1997; Gudjonsson & Clark, 1986).

These findings are consistent with Gudjonsson's argument that interrogative suggestibility consists of two distinct types of suggestibility (Gudjonsson, 1984a, 1992, 1997). Yield 1 assesses the effect of leading questions or suggestive stimuli on accuracy of testimony and the present results indicate that this factor was not affected by interpersonal factors, although Shift and Total Suggestibility were found to be. This finding may mean that initial responses to leading questions are mediated by more stable cognitive factors, perhaps involving a capacity for source monitoring or discrepancy detection, that are relatively unaffected by the manner of the interrogator, whereas the post-feedback GSS measures may be more sensitive to social aspects of suggestibility.

Note that, although the Shift and Total Suggestibility differences found in the present study were statistically significant, they were relatively modest and all scores obtained in the present study fell within one standard deviation of general population norms. It should also be remembered that most participants were undergraduates and the interrogative suggestibility of a student sample may not be representative of the general population, even though, as noted above, pre-feedback and recall scores obtained in the present study were comparable to general population norms for the scale used (Gudjonsson, 1997). More vulnerable interviewees may be more sensitive to variations in interviewer manner and future research might usefully assess this possibility.

In practical terms the present findings suggest, in line with the conclusions of Haraldsson (1985) and Baxter and Boon (in press), that prospective users of the Gudjonsson scales should be aware that variations in their demeanour may bias their results with the consequent danger that they will fail to identify vulnerable witnesses if their demeanour is too mild, or may falsely identify acceptable witnesses as vulnerable if their demeanour is too severe. A comparison of the present findings with those of Baxter and Boon may provide profiles of two different types of problem interviewers. (That the comparability of these two studies should not be affected by the use in the present study of the GSS1, rather than the GSS2, is evident from the norms for the scales provided by Gudjonsson, 1997.)

Baxter and Boon (in press) varied the manner in which negative feedback was delivered when testing with the GSS2, but kept interviewer demeanour 'neutral' throughout the other stages of the procedure. They reported that an interviewer whose manner was 'stern' or 'severe' rather than 'firm' when delivering negative feedback produced higher Yield 2 and Shift scores when using the GSS2 than an interviewer whose manner was generally 'friendly' when delivering negative feedback. They found no significant differences in Total Suggestibility as a function of this manipulation. The method used in the present study essentially inverted the procedure used by Baxter and Boon: interviewer demeanour at negative feedback was 'firm' in both conditions (the closely comparable Yield 2 scores

appear to confirm this), but general demeanour throughout the other stages of the GSS procedure was varied. This may mean that interviewers who misinterpret Gudjonsson's (1992, 1997) instruction to be 'firm' in delivering negative feedback, such that they are either too severe or too familiar, will tend to produce Yield 2 and Shift scores which are, on average, artificially too high or too low respectively. Their Total Suggestibility scores, however, may be less seriously affected by such variability. The present study shows, by contrast, that interviewers who deliver negative feedback correctly but whose demeanour is generally too severe or too familiar will produce normal Yield 2 scores but will also produce Shift and Total Suggestibility scores which are, on average, artificially too high or too low respectively. This may be the more serious problem than that identified by Baxter and Boon, given that it affects the key Total Suggestibility measure. Interviewers showing this constellation of scores may have a more general and less tractable difficulty than simply adopting the correct manner at negative feedback and may require careful monitoring.

Taken together, these two sets of findings suggest a further function of the Gudjonsson Suggestibility Scales. If Yield 1 is indeed relatively independent of interviewer manner, then GSS results which show normal Yield 1 scores but lowered or raised post-feedback scores may identify interviewees who are suggestible because they are particularly vulnerable to interpersonal pressure. However, such a pattern of scores may also identify interviewers whose manner is either especially informal or especially overbearing. It would seem therefore that anybody intending to use these scales for research, clinical or forensic purposes should first establish in practice sessions that their standard technique produces results closely comparable to the established norms for the scales (Baxter & Boon, in press).

References

Baxter, J. S., & Boon, J. C. W. (in press). Interrogative suggestibility: The importance of being earnest. *Personality and Individual Differences.*

Gudjonsson, G. H. (1983). Suggestibility, intelligence, memory recall and personality: An experimental study. *British Journal of Psychiatry, 142,* 35–37.

Gudjonsson, G. H. (1984a). A new scale of interrogative suggestibility. *Personality and Individual Differences, 5,* 303–314.

Gudjonsson, G. H. (1984b). Interrogative suggestibility: Comparison between 'false confessors' and 'deniers' in criminal trials. *Medicine, Science and Law, 24,* 56–60.

Gudjonsson, G. H. (1987). A parallel form of the Gudjonsson Suggestibility Scale. *British Journal of Clinical Psychology, 26,* 215–221.

Gudjonsson, G. H. (1988). Interrogative suggestibility: Its relationship with assertiveness, social evaluative anxiety, state anxiety and method of coping. *British Journal of Clinical Psychology, 27,* 159–166.

Gudjonsson, G. H. (1992). *The psychology of interrogations, confessions and testimony.* Chichester: Wiley.

Gudjonsson, G. H. (1997). *The Gudjonsson Suggestibility Scales Manual.* Hove: Psychology Press.

Gudjonsson, G. H., & Clark, N. K. (1986). Suggestibility in police interrogation: A social psychological model. *Social Behaviour, 1,* 83–104.

Gudjonsson, G. H., & Lister, S. (1984). Interrogative suggestibility and its relationship with perceptions of self-concept and control. *Journal of the Forensic Science Society, 24,* 99–110.

Gudjonsson, G. H., & MacKeith, J. A. C. (1982). False confessions, psychological effects of interrogation. A discussion paper. In A. Trankell (Ed.), *Reconstructing the past: The role of psychologists in criminal trials* (pp. 253–269). Deventer: Kluwer.

Haraldsson, E. (1985). Interrogative suggestibility and its relationship with personality, perceptual defensiveness and extraordinary beliefs. *Personality and Individual Differences, 6*, 765–767.
Irving, B. (1980). *Police interrogation. A case study of current practice. Research studies No. 2.* London: HMSO.
Loftus, E. F. (1979). *Eyewitness testimony*. Cambridge, MA: Harvard University Press.

Received 15 January 1999; revised version received 17 May 1999

FAKING INTERROGATIVE SUGGESTIBLITY: THE TRUTH MACHINE

James S. Baxter and Stella A. Bain

Department of Psychology, University of Strathclyde, 40 George St., Glasgow, G1 1QE.

To appear in *Legal and Criminological Psychology*

The authors are grateful to two anonymous reviewers for their comments on an earlier version of this paper.

Purpose. The aim of the present study was to investigate possible indicators of malingering or "faking bad" on the Gudjonsson Suggestibility Scales. It was hypothesised that participants, who were issued with a set of instructions that primed them to appear gullible and susceptible to pressure, would exhibit a unique pattern of scores on the scales that would differentiate them from both normal adults and genuinely vulnerable populations.

Methods. The study had a single factor between participants design. Participants were tested in either one of two conditions: standard or faking. Forty-two participants took part in the study. Participants were a mix of undergraduate, postgraduate students, and professionals.

Results. Only Yield 1 scores were found to be significantly different between the two conditions. Participants in the faking condition gained higher scores on this measure on both the GSS 1 and GSS 2.

Conclusions. Results indicate that whilst fakers may identify the need to yield to leading questions as a strategy for faking interrogative suggestibility, they do not identify the need to make shifts in their responses. An elevated Yield 1 score in the absence of any other raised scores on the scales may therefore be indicative of faking bad on the Gudjonsson Suggestibility Scales.

Clinical and forensic psychologists are often asked to evaluate individuals who may have good reasons deliberately to present themselves psychologically inadequate, i.e. to 'fake bad', because they are brought under pressure, or in the hope of escaping trial or having any likely jail sentence or fine reduced. This type of factitious responding to psychological evaluation is referred to as malingering and is recognised as a significant problem (Simon, 1994): a method for distinguishing people with a genuine psychological difficulty from malingerers may not be a part of psychological test applied to detect the difficulty.

One area where such faking may present a problem is in the evaluation of individuals who claim vulnerability to interrogative pressure. Gudjonsson and Clark (1986) term susceptibility to suggestion and pressure during police and similar interviews 'interrogative suggestibility' and define it as:

"the extent to which, within a closed social interaction, people come to accept messages communicated during formal questioning as a result of which their subsequent behavioural response is affected" (p. 84).

The Gudjonsson Suggestibility Scales (GSS) were designed to measure this form of suggestibility. Two parallel forms of the GSS exist (GSS 1 & GSS 2) and extensive testing using these has shown them to be closely comparable in the population norms for interrogative suggestibility which they produce. The basis of both tests is that participants listen to a spoken narrative consisting of 40 'ideas' or points to be recalled. They are then asked to recall the narrative freely with their performance being scored on how many of the 40 key points in the narrative they recall.

Participants are then asked 20 questions about the narrative, 15 of which are misleading. This session may follow 50 minutes after presentation of the narrative, although the delay is sometimes dispensed with (Gudjonsson, 1992;1997). Finally, participants are given negative feedback by being told that 'You have made a number of errors. It is therefore necessary to go through the questions once more, and this time try to be more accurate'. The 20 questions are then repeated allowing measures of interrogative suggestibility pre- and post-negative feedback to be calculated in addition to the recall measures (Gudjonsson, 1984, 1987).

The Gudjonsson scales are mainly used as clinical or forensic tools for identifying individuals who may require extra care during interview or in cases where a statement or confession has been retracted (Gudjonsson, 1992, 1997). In the latter case, a witness or suspect may have a motive to perform poorly on the test if he or she wishes to claim that their initial statement was obtained under duress. However, the Gudjonsson Suggestibility Scales do not include a test of malingering.

Smith and Gudjonsson (1986) conducted a study of faking on the GSS 1. One group of participants of average or above average IQ was instructed to 'fake to a level substantially below your usual standard' but was given no details of rationale or the purpose of the test except that it was a test of memory A second group of participants of slightly below average IQ acted as controls and was told only that they were taking a memory test. The main findings were that faking participants showed substantially poorer recall than non-fakers, but that there were no consistent or marked differences between the groups on the interrogative suggestibility measures. Smith and Gudjonsson argued that it was easy for the faking participants simply not to remember

details of the narrative since memory tests are familiar to most people and their purpose is readily understood. However, the authors argues, fakers naivety about the nature of the suggestibility measures meant that they had no ideas how to 'fake bad' on this aspect of the test. Reviewing a number of studies, Gudjonsson (1992) noted that memory recall correlates negatively with suggestibility; the poorer an individual's memory is for events, the more suggestible they are regarding those events. Therefore, an inconsistent, and hence suspect, performance on the scales may appear as a combination of low memory recall scores and low suggestibility scores, or high memory recall and high suggestibility scores..

One difficulty with generalising from results of the Smith and Gudjonsson (1986) study to what goes on in real-life investigations is that its faking participants were told nothing about the nature of the GSS 1 or about the nature of suggestibility generally. The study therefore gives no clue about the likely performance of a witness or suspect who regrets, or is made to regret, a statement or confession which they have made, and who realises, or is told, that their best hope of having their previous testimony discounted is now to appear gullible and easily pressured.

The present study aims to re-investigate the issue of malingering on the GSS 1. Participants were primed to "fake bad" in a manner that provided them with some information of what a bad performance might look like. It was hypothesised that participants issued with more specific faking instructions than those used by Smith and Gudjonsson (1986) would exhibit a unique pattern of scores on the GSS 1 and the GSS 2, which would differentiate them from both normal adults and genuinely vulnerable populations.

Method

Design

The study had a single-factor, between-participants design. The independent variable had two levels: faking and standard conditions of testing.

Participants

Participants were from varied backgrounds. The sample consisted of a mix of undergraduate, postgraduate students, and professionals. Suggestibility has been found to be unaffected by intelligence where IQ scores range from average to above average (Gudjonsson, 1983). It was assumed that all participants would be of at least average intelligence. The mean age for the group was 28.93 (SD = 11.02, range = 18-57). A total of 42 participants took part in the study. Of these 22 were male and 20 were female. Equal numbers of participants were tested in each condition, with 11 males and 10 females randomly assigned to each of the two conditions.

Procedure

All participants were tested on both the GSS1 and the GSS2. The scales were administered in accordance with those recommendations made by Gudjonsson (1997). Participants were instructed to listen to a short story and to listen carefully as they would be asked to recall as much of it as possible afterwards. The experimenter then read the narrative aloud to participants, followed by the request to provide free recall. The only deviation from the standard procedure was that there was no 50 minute delay so that only immediate recall was recorded. Participants were then informed that they would be asked a series of questions about the story and that they were to

answer them as accurately as possible. Following the questions, negative feedback was administered by telling participants "firmly" that they had made mistakes, that the questions would therefore be repeated, and that they should try to be more accurate. The two scales were administered in the same sitting, and were counterbalanced between participants.

Prior to testing, participants in the faking condition were given the following set of instructions:

The interviewer is going to interview you about the content of two stories you'll hear. What I'd like you to do is to role-play being a suspect in a criminal investigation who may get off the hook if they can convince the interviewer that they are very gullible or very susceptible to pressure, that they are likely to accept whatever is said to them uncritically, and are therefore an unreliable witness. However, please do not go in for amateur dramatics or answer wildly. Try to concentrate on appearing gullible - but not stupid - by giving the interviewer whatever she seems to want.

The interviewer doesn't know who is being given this information and who isn't, so it's important that you don't let her know what I've said to you.

All participants were initially greeted by a confederate of the interviewer who either primed participants for faking or did not. At the point of testing the interviewer was unaware of which participants were primed and which were not.

Scoring the GSS

Scoring of the GSS 1 & 2 was done in accordance to the guidelines provided by Gudjonsson (1997), viz.

(i) *Memory Recall.* Memory recall is scored for each correct idea recalled. Ideas are scored as correct if the meaning is the same as the original item in the narrative. Each correct idea earns one point, with the maximum score being forty. The scoring of memory recall is not included in the scoring of suggestibility.

(ii) *Total Confabulations.* This score is the total number of distortions and fabrications given during free recall. A distortion represents a major change in the details of an idea that exists in the narrative, and a fabrication is the introduction of a new element into the narrative.

(iii) *Suggestibility.* The scale provides four scores:

1. *Yield 1.* Every suggestive question that is answered affirmatively, or in the case of false alternatives where one alternative is chosen, in the first period of questioning is scored as one yield point. The range of possible scores is 0 to 15.

2. *Yield 2.* This measure is scored in the same manner as Yield 1 following the administration of the negative feedback. Again, the range of possible scores is 0 to 15.

3. *Shift.* Any distinct change in response to all twenty questions in the second period of testing is scored as a shift. Thus, possible shift scores range from 0 to 20.

4. *Total Suggestibility.* Total Suggestibility is the sum of Yield 1 and Shift. Therefore, the range of scores is 0 to 35.

Results

A one-way ANOVA on the data showed significant differences between the two conditions for Yield 1 on both the GSS 1 (F (1,41) = 5.564, p = 0.023) and the GSS 2 (F (1,41) = 4.1, p = 0.05), with participants in the faking condition gaining higher scores than those in the standard condition. The other measures of Yield 2, Shift and Total Suggestibility were not significantly different between the conditions. Associated statistics are shown in Tables 1 & 2.

Table 1. Mean suggestibility scores for GSS 1 X condition and GSS 1 norms

	Condition								
	Standard		Faking					GSS norms	
	M	SD	M	SD	F-ratio	d.f.	sig.	M	SD
Yield 1	3.6	3.2	6.5	4.5	5.6	1,41	0.02	4.6	3.0
Yield 2	5.4	4.2	7.1	4.7	1.6	1,41	0.21	5.6	3.8
Shift	2.9	2.4	3.0	2.6	0.04	1,41	0.85	2.9	2.5
Total Suggestibility	6.5	4.7	9.5	5.5	3.5	1,41	0.07	7.5	4.6
Memory Recall	19.0	6.5	17.0	6.3	1.1	1,41	0.30	21.3	7.1
Total Confabulations	1.0	1.1	0.8	0.8	0.4	1,41	0.53	*	

Note: Norms derived from Gudjonsson (1997).
* no norm is available for Total Confabulations in the general population

Table 2. Mean suggestibility scores for GSS 2 X condition and GSS 2 norms

	Condition								
	Standard		Faking					GSS 2 norms	
	M	SD	M	SD	F-ratio	d.f.	sig.	M	SD
Yield 1	3.2	3.8	5.7	4.1	4.1	1,41	0.05	4.5	3.6
Yield 2	4.3	6.3	6.3	4.4	2.1	1,41	0.16	5.5	4.0
Shift	2.2	2.6	3.0	2.1	1.1	1,41	0.31	3.0	3.0
Total Suggestibility	5.4	5.5	8.7	5.4	3.7	1,41	0.06	7.5	5.3
Memory Recall	17.5	7.8	15.9	4.6	0.6	1,41	0.42	19.7	6.1
Total Confabulations	2.3	6.8	0.7	0.9	1.1	1,41	0.31	*	

Note: Norms derived from Gudjonsson (1997).
* no norm is available for Total Confabulations in the general population

A one-way ANOVA on the data for memory recall revealed no significant differences between conditions for either over-all Memory Recall score or Total Confabulation score. These means and standard deviations can be found in Table 1 & 2.

A comparison of the average of the mean scores obtained on both scales by participants in the faking condition with the average of the norms (Gudjonsson, 1997) for the scales (see Tables 1 & 2), revealed a significant difference for Yield 1 ($t(160) = 2.401$, $p<0.02$). None of the other means were significantly different from the norms.

In sum, the results indicate that participants in the faking condition exhibited a unique pattern of scores. Faking participants scored significantly above the established norms for the GSS on Yield 1, a score which was also significantly higher than that of participants in the standard condition The other scores of Yield 2, Shift, and Total

Suggestibility were not elevated in the faking condition, and did not differ significantly from the norms for the scales.

Discussion

The aim of the present study was to investigate possible indicators of faking suggestibility on the Gudjonsson Suggestibility Scales (1984, 1987). It was hypothesised that participants instructed to fake suggestibility would demonstrate a unique pattern of scores, which would set them apart from the pattern of scoring expected of normal adults or genuinely vulnerable populations. Results obtained supported this hypothesis with participants in the faking condition gaining high Yield 1 scores on both scales. As shown in Tables 1 and 2, Yield 1 was the only measure on the scales found to be significantly different between the 'standard' and 'faking' conditions.

Anyone intent on faking a poor performance on the GSS must decide on a strategy. The results of the present study suggest that such a strategy may involve yielding to more leading questions than an honest 'normal' person would, but without necessarily yielding to all the questions. By contrast, people who are genuinely vulnerable to interrogative pressure may show elevated Yield 1 scores, but they would also be expected to show elevated Shift scores (cf. Gudjonsson, 1992; Baxter & Boon, 2000; Bain & Baxter, 2000). The results of the present study seem to indicate that while it may be relatively simple to identify leading questions and yield to them, it may be much more difficult to fake vulnerability to interrogative pressure: fakers may identify the need to yield to leading questions as a strategy for faking interrogative suggestibility but will fail to shift their responses following negative feedback if they have no detailed knowledge of how the scales work. There is no reason to suppose that the participants in the present study had any such knowledge. This would suggest

that the 'Shift' component of the scale is more sensitive to genuine vulnerability in interrogations than is the Yield 1 component (cf. Smith & Gudjonsson, 1986).

As noted above, Smith and Gudjonsson (1986) concluded that a lack of knowledge about the nature of the scale had rendered participants unable to fake higher levels of suggestibility. However, in the present study, participants in the faking condition were encouraged to think of a way to "get off the hook" by appearing vulnerable to pressure, with the results described above. In the case of forensic evaluations, it is more likely that individuals would be motivated by such a goal rather than the more ambiguous 'fake bad' instructions given in the Smith and Gudjonsson study. In practical terms, the present findings suggest that no simple conclusions based on GSS scores may be possible in the case of a witness or suspect who produces a high Yield 1 score with a normal Shift score, i.e., their performance may be the result of a deliberate attempt to appear gullible rather than indicating genuine interrogative suggestibility.

Smith and Gudjonsson (1986) highlighted the difference in responses required for the memory' recall and suggestibility measures on the GSS 1 and suggested that inconsistency in responding between these two measures would be indicative of malingering.. The present results complement those of Smith and Gudjonsson by indicating a further type of inconsistency that may arise in GSS scores when people tested using the GSS have the specific goal of appearing gullible, i.e. they are able to fake susceptibility to leading questions but do not identify the need to fake vulnerability to interrogative pressure. The authors can only hope that this point will continue to be lost on malingers and unscrupulous defence lawyers.

References

Bain, S. A. & Baxter, J. S. (2000). Interrogative suggestibility: the role of interviewer behaviour. *Legal and Criminological Psychology,* 5, 123-133.

Baxter, J.S, & Boon, J.C.W. (2000). Interrogative suggestibility: the importance of being earnest. *Personality and Individual Differences*, 28, 753-762.

Gudjonsson, G. H. (1983). Suggestibility, intelligence, memory recall and personality: An experimental study. *British Journal of Psychiatry,* 142, 35-37.

Gudjonsson, G. H. (1984). A new scale of interrogative suggestibility. *Personality and Individual Differences*, 5, 303-314.

Gudjonsson, G. H. (1987). A parallel form of the Gudjonsson Suggestibility Scale. *British Journal of Clinical Psychology,* 26, 215-221.

Gudjonsson, G. H. (1992). *The Psychology of Interrogations, Confessions and Testimony.* Chichester, UK: Wiley.

Gudjonsson, G. H. (1997). *The Gudjonsson Suggestibility Scales Manual.* Hove: Psychology Press.

Gudjonsson, G. H. & Clark, N. K. (1986). Suggestibility in police interrogation: a social psychological model. *Social Behaviour*, 1, 83-104.

Simon, M. J. (1994). The use of the Rey Memory Test to assess malingering in criminal defendants. *Journal of Clinical Psychology, 50 (6),* 913 - 917.

Smith, K., & Gudjonsson, G. H. (1986). Investigation of the responses of 'fakers' and 'non-fakers' on the Gudjonsson Suggestibility Scale (GSS). *Medicine, Science and the Law, 26 (1),* 66 - 71.