

## **Police Interviewing and Psychological Vulnerabilities: Predicting the Likelihood of a Confession**

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### **ABSTRACT**

This paper is concerned with examining the differences between people who confess and those who deny offences during a police interview. The main hypothesis under investigation is that psychologically vulnerable suspects are particularly likely to confess. This paper is also concerned with identifying variables that might be related to the confession process. One hundred and sixty suspects detained at two London police stations were assessed psychologically prior to being interviewed by the police. The results of this assessment, an analysis of the interview procedure and biographic details were subjected to a logistic regression analysis. There was no evidence to support our main hypothesis. However, suspects were more likely to confess if they reported having consumed an illicit (non-prescribed) drug in the previous 24-hour period, and less likely to confess when interviewed in the presence of a legal adviser or if they had experience of prison or custodial remand. In this study younger suspects were also more likely to confess. © 1998 John Wiley & Sons, Ltd.

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### **INTRODUCTION**

The audio-taping of all police-suspect interviews, introduced in the wake of the Police and Criminal Evidence Act 1984 (known as PACE; Home Office, 1985a), had become standard practice across England and Wales by 1992 (Section 61(1)(b) PACE; Richman and Draycott, 1996, vol. 1, p. 885). Studies examining confessions obtained from police detainees since that time show that the number of suspects who confess

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during interview ranges between 55% (Moston, Stephenson and Williamson, 1993) and 62% (Baldwin, 1993). A confession rate of 58% was obtained in our study for the Royal Commission on Criminal Justice (Pearse and Gudjonsson, 1996a; for other summaries, see Gudjonsson 1992a; Moston and Stephenson, 1993a; Brown, 1997). This level of consistency has emerged, intriguingly, despite a marked decrease in the number of manipulative and coercive tactics employed by the police and an increase in the number of suspects receiving legal advice (Irving and McKenzie, 1989; Baldwin, 1993). In a separate article we reported that a legal adviser was actually present at interview in 56% of cases ( $n = 161$ ), the highest recorded figure to date (Pearse and Gudjonsson, 1997).

Prior to the introduction of PACE, the absence of legal advice together with the use of coercive police interviewing tactics were often cited as crucial factors in eliciting confessions from detainees (Irving, 1980; Irving and Hilgendorf, 1980; Gudjonsson, 1992a). Whilst the reported reversal of these two factors is most welcome and suggests that, in the majority of cases, the letter and spirit of PACE is being implemented, why is it that the majority of suspects continue to make confessions? A number of theoretical models have been advanced to explain this process but these are not without their limitations (Gudjonsson, 1992a). Another way of addressing this issue would be to examine possible differences between 'confessors' and 'deniers'. Is it the case, for example, that psychologically vulnerable suspects (such as those in a poor mental state, with limited intellectual ability, or heightened interrogative suggestibility) are more likely to make a confession than a denial? This assertion has been subject to little empirical research (Gudjonsson, 1992a). Studies have confirmed that suspects who are able persistently to deny any involvement in an offence (despite police interrogative pressure) score significantly lower on tests for suggestibility and compliance than suspects who have made (but later retract) a confession (Gudjonsson, 1984a). These findings are replicated, even when groups are 'matched' for age, sex, intelligence, memory and offence seriousness (Gudjonsson, 1991).

The purpose of this paper is two-fold. In the first instance, it is to examine the performance and behaviour of a number of suspects who were psychologically assessed, prior to being interviewed by the police for a criminal offence, to determine whether those considered vulnerable were more likely to confess than their more robust counterparts. The second aim of this paper is to identify any explanatory variables that may be associated with the likelihood of a suspect making a confession or a denial. In the first instance the current legal safeguards for 'vulnerable suspects' will be outlined and a number of theoretical models of confession will be discussed which provide a framework to help understand some of the factors in this decision-making process.

## **VULNERABLE SUSPECTS**

The Codes of Practice that accompany PACE (Home Office, 1985b, 1991, 1995) offer extra protection to mentally vulnerable suspects. The main provision states that:

A juvenile or a person who is mentally disordered or mentally handicapped, whether suspected or not, must not be interviewed or asked to provide or sign a written statement in the absence of the appropriate adult ... (ibid., 1995, p. 55) (in our view the term 'appropriate adult' relates to a responsible third party, independent of the police, who is

called to the police station to ensure that the vulnerable suspect understands what is going on and that his/her needs are met).

In particular those suspects suffering from a 'mental disorder' (the catch-all phrase employed in the Codes to include all types of mental illness, including learning disability) are considered vulnerable or 'at risk' because:

... they may, without knowing or wishing to do so, be particularly prone in certain circumstances to provide information which is unreliable, misleading or self-incriminating (*ibid.*, 1995, p. 56).

There are a number of problems with the implementation of this safeguard. In particular, it is assumed that identification will be made in the first instance by the police (Pearse, 1995). The number of occasions that an appropriate adult is actually called for a mentally disordered adult is often less than a half of 1%, which clearly suggests that many vulnerable suspects are not receiving their entitlements under PACE (Pearse and Gudjonsson, 1996c,d,e). Gudjonsson (1993, 1994) has identified two major problems with the generic term 'mental disorder'. First, there is no operational definition of what exactly constitutes mental disorder (making it particularly difficult for untrained police officers to identify a condition not adequately defined), and second, the Codes fail to indicate how certain characteristics, such as mental illness or learning disability, render suspects vulnerable or 'at risk'.

Research has been undertaken in respect of a number of personality characteristics, such as suggestibility, compliance and acquiescence, which are thought to be relevant to the question of assessing the reliability of self-incriminating admissions made to the police (Gudjonsson, 1992a, 1993, 1994). The case of Engin Raghıp (one of three individuals found guilty of the murder of a police officer in the Tottenham Riot of October, 1985, whose conviction was subsequently quashed by the Court of Appeal) provides a valuable insight into appreciating the deleterious effect of prolonged police interrogation on suggestible individuals. Suggestibility relates to the tendency of people to give in to leading questions and interrogative pressure. Gudjonsson (1984b, 1987, 1997) has developed a behavioural test that involves systematically misleading subjects in an experimental manner and comparing their responses with a normative group. It follows that suggestibility will only be relevant where the suspect is placed under some pressure by the police, by way of either leading questions or negative feedback. Engin Raghıp was 19 at the time of his arrest; he had learning difficulties and was illiterate. He was interviewed over a period of five days and on 10 separate occasions, lasting over 14 hours. There was no solicitor present. Suggestibility tests carried out at the request of the defence, however, uncovered a striking inability to cope with interrogative pressure. These findings, together with confirmation of other psychological vulnerabilities, led to the Appeal Court quashing the conviction on the grounds that it was unsafe and unsatisfactory (for a review of these issues, see Gudjonsson, 1992a,b).

## **THEORETICAL MODELS OF CONFESSION AND EMPIRICAL FINDINGS**

The decision to confess is best understood in terms of the interaction of a number of variables (such as custodial pressure, case details, suspect characteristics and police

interview strategies) rather than as a solitary factor. Such a concept accommodates the notion of a hierarchy, allowing for the possibility that one factor is perhaps more influential than others. A number of theoretical models of confession have been proposed to help us understand some of the prevailing influences in relation to the decision-making processes of the detainee. The models appear to contain one central theme: that the subjective perceptions and experiences of each suspect, i.e. what he/she believes will happen, rather than the objective probabilities of occurrence, can greatly influence the suspect's decision-making process.

The 'Reid model' (Inbau, Reid and Buckley, 1986) originates from America and is primarily concerned with suggesting ways to break down the reluctant suspect. In this model, interviewing is seen as the opportunity to manipulate the suspect psychologically in order to overcome any resistance. Here, the best scenario, from the interviewer's point of view, is to decrease the suspect's perception of the adverse consequences of confession, yet increase his/her internal anxiety associated with denial. In broad terms it seeks to identify the suspect's weaknesses, expose them, and then manipulate the person using questionable psychological techniques. Whilst this process fails to provide any safeguards for the less able suspect, such deceptive tactics continue to be sanctioned by the American legal system (Leo, 1992) and according to a recent report are still present in England and Wales despite the safeguards offered by PACE (Justice, 1994).

Coping with feelings of guilt and the cathartic effect of confession, especially to a person in authority, are included in a psychoanalytic model offered by Reik (1959). This model relies heavily on the work of Freud and his concepts of the id, ego and super-ego. Whilst this model can account, in part, for relieving the suspect from a feeling of guilt—where police officers encourage the suspect to 'get it off your chest' (internal pressure)—it does not begin to explain the many individuals who often fail to make a confession.

Moston, Stephenson and Williamson (1992) have recently proposed a model emphasizing the interaction between a number of case- and suspect-related variables. Together these can influence both the response of the suspect and, just as important, the tactics and attitude of the interviewing officers. This model begins to account for the considerable 'baggage' that is imported into the interview scenario by all the participants. The authors emphasize the interaction effect of two main groups of factors: (a) background—type and severity of offence, age and sex of suspect; with (b) contextual—legal advice, strength of evidence, and tactics used. What is appealing about this approach is that the authors do not make the common mistake of examining variables in isolation; rather, they focus on the way variables interact to produce either a confession or a denial. They found that the decision to confess was significantly influenced by the strength of evidence, offence severity, legal advice and the police station location.

Arguably, the most comprehensive model is the cognitive-behavioural approach put forward by Gudjonsson (1989, 1992a), which focuses on the existence of a particular relationship between the suspect, the environment and significant others within that environment. The process involved is best understood in terms of the 'antecedents' and 'consequences' of confession. These encompass a series of events which are categorized as social, emotional, cognitive, situational and physiological. There are two major types of consequence, immediate and long-term. The perceived immediate consequences of making a confession may be particularly powerful in

eliciting a confession. This is essentially a descriptive model—in terms of how people are feeling or thinking at the time—although it also embraces many features of the other models. Its strength is that it focuses on the specific psychological components involved in the different modalities (e.g. cognitive, emotional, physiological).

In most of the models discussed the focus is almost exclusively on the process that takes place within the interview situation rather than what may have taken place beforehand. Given the number of confessions that occur at the very beginning of a police interview (Baldwin, 1993; Moston, Stephenson and Williamson, 1992; Pearse and Gudjonsson, 1996a) and the corrupting influence of ‘informal’ police interviews prior to the audio-taping process (Moston and Stephenson, 1993b; Justice, 1994), this decision-making capacity ought to be reflected within the framework of any substantive model. The Reid model is unashamedly concerned with breaking down the reluctant suspect and outlines a considerable number of questionable tactics that may be employed to achieve this aim. It is very much ‘how’ to achieve a confession. The Reik model, on the other hand, is posited on principles that do not readily allow themselves to be subjected to rigorous empirical examination, and it can only account for ‘why’ some people confess in a rather small proportion of cases. In comparison, the interactive model proposed by Moston *et al.*, (1992) introduces a sound analytic approach to determine ‘what’ is associated with the confessions obtained in their large study. A more general criticism of this model is that it has been formulated on the basis of observational data without seeking to elicit the perceptions of the suspect.

Talking to convicted offenders about why they made confessions to the police has highlighted the importance of individual differences in attitude and personality. In other words, whilst suspects are likely to confess as a result of a combination of factors, in relation to an individual suspect one group of factors is likely to predominate that reflects how he/she perceives the strength of the evidence against him/her (Gudjonsson and Petursson, 1991; Gudjonsson and Bownes, 1992; Sigurdson and Gudjonsson, 1994). In this respect, the Gudjonsson model not only succeeds in capturing the emotive nature of the individual suspect’s perceptions but also provides the capacity to cater for any cognitive element, such as bargaining strategies that the suspect might employ. It is this almost evolutionary notion of ‘What is this going to cost me?’, or ‘What’s in it for me?’ that is missing from some of the other models.

Age, type of offence, previous convictions and legal advice are amongst a number of other variables which have been examined in studies seeking to identify tangible characteristics that would distinguish ‘confessors’ and ‘deniers’. Some of the findings have been contradictory. For example, according to some studies, younger suspects are more likely to confess than their older, perhaps more psychologically experienced, counterparts (Leiken, 1970; Softley *et al.*, 1980). Baldwin and McConville (1980), in their Birmingham Crown Court study, reported that 62% of those aged under 21 confessed, compared with only 32% of those aged 40 or more. In contrast, other studies have not found age to be a significant factor (Neubauer, 1974; Mitchell, 1983; Moston *et al.*, 1992). The same is true in relation to previous convictions. The majority of studies suggest that those with previous convictions are less likely to confess (Neubauer, 1974; Softley *et al.*, 1980; Moston, Stephenson and Williamson, 1992), yet the findings from the studies by Baldwin and McConville (1980) and Mitchell (1983) are in the opposite direction, with the actual number of convictions appearing to be of little relevance.

## THE PRESENT STUDY

The field work for this study was undertaken at two London police stations from December 1991 to April 1992 on behalf of The Royal Commission on Criminal Justice (Runciman, 1993), and this paper represents the latest in a number of publications originating from this data. The first publication examined the identification of psychological vulnerabilities and persons 'at risk' in police custody (Gudjonsson *et al.*, 1993). The most striking finding from this part of the study was the low IQ scores of many of the suspects. Almost 9% had an IQ score below 70, with about one-third of the sample ( $n = 160$ ) being intellectually disadvantaged. Second, about 20% of the suspects reported a state anxiety level outside the normal range, indicating that for many suspects being detained at a police station is a highly stressful experience. Despite this high anxiety, however, many suspects were not found to be unduly suggestible. Thirdly, about 7% of the suspects were thought to be suffering from a major mental illness, such as schizophrenia or depression. In many of these cases such a diagnosis might have been missed without the clinical interview. Finally, about two-thirds of the suspects had previous convictions and most understood their basic legal rights, such as the right to free legal advice and the right to silence. We suggest that these findings are representative of the police suspect population for Peckham and Orpington in South London; the extent to which they are representative for other areas, or for suspects who were not to be interviewed, is uncertain.

Later publications examined the nature and frequency of police interviewing tactics (Pearse and Gudjonsson, 1996a) and also the role and performance of the legal adviser (Pearse and Gudjonsson, 1996b, 1997). In relation to the former, the findings revealed that the majority of interviews were rather short (80% were completed in less than 30 minutes), non-confrontational and often conducted with rather polite suspects. Challenging or robust interviewing tactics were evident in only a fifth of the cases examined. A significant difference was detected between the two stations, with Orpington suspects more 'co-operative' than their Peckham counterparts, and this was thought to reflect the different social and demographic composition of the two populations and environments. A breakdown of the legal advisers attending the two stations, in the later papers, reveals that qualified solicitors accounted for 39 cases (24%) with legal representatives (whose qualifications were often unknown) present in 52 cases (32%,  $n = 161$ ). Highly significant relationships were found between the presence of a legal adviser and (a) a suspect's decision to exercise his/her right to silence ( $\chi^2 = 14.2$ ,  $df = 1$ ,  $p < 0.0001$ ) and (b) a suspect's decision not to confess ( $\chi^2 = 15.1$ ,  $df = 1$ ,  $p < 0.0001$ ). Since this field work was undertaken, a number of changes affecting the rights of detainees have been implemented and are contained in the second revised edition of the Codes of Practice, introduced in April 1995 (Home Office, 1995). These include a new form of caution (*ibid.*, p. 50) and changes to a suspect's right of silence, where in certain circumstances a court may be allowed to draw an inference from a suspect's refusal to answer police questions (*ibid.*, p. 50). These changes have yet to be the subject of any published empirical work and do not impinge on the relevance of the findings from this present study.

In our report to the Royal Commission (Gudjonsson *et al.*, 1993), the three clinical psychologists (authors Gudjonsson, Clare and Rutter) estimated that 15% of the sample were vulnerable and required the presence of an appropriate adult. This figure was based on a brief clinical interview with each suspect, and given their considerable

clinical and forensic experience, these decisions were used to divide the sample of suspects into two groups: a vulnerable group ( $n = 28$ ) and a non-vulnerable group ( $n = 132$ ). The aim of this paper is to examine whether membership of a particular group was associated with the likelihood of confession and to identify any other variables that might be related to predicting the likelihood of a confession, or the likelihood of denial.

The main hypothesis under investigation is that vulnerable suspects are more likely to make a confession than their non-vulnerable counterparts (Gudjonsson, 1994). There are also a number of other hypotheses generated from previous research:

1. Younger suspects are more likely to confess than their older counterparts (Softley *et al.*, 1980; Baldwin and McConville, 1980).
2. Suspects who have legal advice will be less likely to make a confession (Moston, Stephenson and Williamson, 1992).
3. Suspects with a criminal record are less likely to make a confession than those suspects without a criminal history (Neubauer, 1974; Softley *et al.*, 1980; Baldwin and McConville, 1980).

## **METHOD**

### *Subjects*

A total of 197 adult suspects at the two police stations were approached, 24 (14%) of whom refused to participate and a further 13 who either had their assessment seriously interrupted or were not interviewed. Overall, 160 psychological assessments were carried out, but in a few instances (interruptions by police or solicitor before the assessment could be completed) it was not possible to complete all the tests. Therefore, for some variables not all cases could be included in the final analysis. The majority of the sample were male (84%) with a mean age of 28 years (SD 10.4). Over 60% had been arrested for property-related offences (theft, burglary), with the remainder being arrested mainly for violence and drug-related matters.

### *Instruments and procedure*

In order to avoid any unnecessary delay to the suspects' detention, the clinical interview and psychological testing were limited to that which could be completed by most suspects within one hour. First there was a standardized clinical interview, which took between 10 and 15 minutes to complete. This dealt with the suspects' mental state during the previous seven days prior to their arrest, as well as their functioning during the clinical evaluation. The detainees were also asked a series of detailed questions (giving a score of 1–8) about their legal rights. Then psychological testing commenced. This included the Gudjonsson Suggestibility Scale (GSS 2; Gudjonsson, 1987, 1997), the Spielberger State–Trait Anxiety Inventory (STAI, Spielberger, Gorsuch and Lushene, 1970), three subtests of the WAIS-R (Vocabulary, Comprehension and Picture Completion, Wechsler, 1981), and the Schonell Graded Word Reading Test (Schonell and Goodacre, 1974). For the information of the reader, the complete interview schedule is reproduced at Appendix 1, although for a detailed description of the sample, type of offence alleged and tests used, please see Gudjonsson *et al.* (1993).

It is important to realize that it is not possible to control for the 'ground truth' of the allegation in each case. Clearly, there are likely to be some suspects arrested by the police who will be innocent, and there will also be many who are guilty. The law in England and Wales, appreciating the inherent difficulty in attempting to achieve this elusive goal, has for many centuries sought to determine the more manageable concept of proving a case 'beyond reasonable doubt'. This is not an option that is open to empirical research and such a limitation needs to be articulated.

The audio-tape(s) of the interview were copied and analysed using a specially constructed coding frame. This coding frame covered 39 variables, including the personal and administrative details of the suspect, third party involvement, interview tactics adopted, the suspect's reactions, as well as the legal protocol and duration of each interview. To determine inter-rater reliability, the second author carried out a separate and independent assessment which produced 86% overall agreement (Pearse and Gudjonsson, 1996a). In this study, legal concepts such as intent (*mens rea*) and guilty action (*actus reus*) were employed to disentangle inherent semantic complexities. The distinction between a confession and an admission serves as a useful case in point. There were five categories for this one variable: a full or partial confession, a full or partial admission, and finally no confession. Using an allegation of assault as an example, a full confession amounts to accepting responsibility for hitting another person, intending to cause injury. A partial confession entails admitting to attacking another person but not intending to cause such extensive injuries. A full admission on the other hand will represent an admission to the physical contact but lacks the intent to cause injury, e.g. acting in self-defence. Finally, a partial admission will include being present at the scene, perhaps engaging in an argument with the victim, but will be devoid of any admission with regard to intent. For this paper the first four categories have been collapsed into one variable, 'confession'. This concurs with the definition found in PACE, which '... includes any statement wholly or partly adverse to the person who made it...' (Home Office, 1985a, Section 82(1), Part vii; see Pearse and Gudjonsson, 1996a, for a full account of methodological issues).

A logistic regression analysis was employed to investigate the possibility that some of the variables might independently predict a confession vs. a denial. The use of logistic regression analysis is well established in clinical and psychiatric epidemiological studies (Dunn, 1981, 1982; Everitt and Dunn, 1991), and more recently has been applied to statistical models seeking to predict an offender's characteristics (Aitken *et al.*, 1995) or the criminal antecedents of the stranger rapist (Davies, Wittebrood and Jackson, 1997). This method seeks to develop a statistical model that relates the presence of certain explanatory variables to the odds on the individual suspect having a particular dependent variable, in this case making a confession. Accordingly, the results of the psychological assessments and clinical evaluations, together with the analysis of the interview tapes and the suspect's criminal history, were subjected to analysis using the 'Forward Logistic Regression' procedure on the SPSS (Windows) statistical programme (Norusis and SPSS Inc, 1994). This particular process simply identifies and extracts the most significant explanatory variables from the variable list. The variables extracted by this procedure were also tested for pairwise interactions to examine whether the effect of one variable depends, or is altered by, the value of another variable. It should be noted that those categorical (mental state) items that were rarely endorsed, or which occurred in fewer than 5% of the cases, were excluded from the analysis. Such items included being withdrawn or

angry during the clinical assessment and presenting as intoxicated. Only three police interviewing tactics, out of 19, were eventually analysed. Some of the tactics not commonly endorsed included manipulation of self-esteem, minimizing responsibility or consequences of offence and offering inducements or threats.

The following explanatory variables were subjected to analysis:

- Personal details, including age, gender and ethnicity.
- Mental state prior to arrest—crying, loss of appetite, feeling paranoid or suicidal and sleep disturbance. The only mental state condition included from the clinical observation itself related to those suspects that presented as highly agitated.
- Self-report of alcohol and illicit drug-taking prior to arrest.
- Anxiety levels—both state and trait.
- Memory, delayed verbal recall and suggestibility.
- Reading ability, pro-rated full-scale IQ (FSIQ) and knowledge of legal rights.
- Clinician's recommendation for an appropriate adult, and whether or not one was present.
- Police station and the presence or absence of a legal adviser.
- The suspect's criminal history—number of convictions and experience of prison.
- Three interview tactics. These involved the officers introducing the evidence in the case, emphasizing the serious nature of the offence and challenging a suspect by saying that he/she was lying.

## **RESULTS**

Tables 1 and 2 are arranged according to the nature of the data under examination. Thus, continuous variables (age, memory and suggestibility scores) appear before the categoric data relating to the frequency with which a variable either was, or was not, present.

Table 1 provides the mean and standard deviation scores for the vulnerable and non-vulnerable groups in relation to the personal characteristics and case variables examined. The mean scores of the two groups were analysed using *t*-tests for independent samples (continuous variables) and Chi-square analysis was conducted in relation to the categoric data. The most significant differences between the groups related to memory (both delayed and immediate recall), as examined by the GSS-2, followed by reading ability, pro-rated FSIQ, trait anxiety, and understanding of legal rights. Surprisingly, no difference between the two groups was found with regard to state anxiety. Significant differences were detected between the groups in relation to those suspects that reported feeling suicidal and to have been off their food during the previous seven days. A confession was made in a total of 93 cases (58%), compared with 67 cases (42%) where no confession was made. There was no significant difference between the vulnerable and non-vulnerable groups in this respect (see Table 1). Out of 160 suspects, 28 (18%) were classified as vulnerable, exactly half of whom made a confession.

Table 2 outlines the differences between the confessors and deniers. The results support our hypothesis that younger suspects are more likely to make a confession than older suspects, with a significant mean age difference in the two groups of almost three years. Further examination reveals that nearly 60% of those that confessed were

Table 1. Differences between vulnerable and non-vulnerable groups

Explanatory variables	Vulnerable		Non-vulnerable		Significance
	Mean	SD	Mean	SD	
Age	29.9	10.1	27.9	10.8	NS
Memory					
Immediate recall***	7.7	4.7	12.5	6.6	$t = 4.4, p < 0.001, 2\text{-tail}$
Delayed recall***	6.4	4.0	11.6	6.5	$t = 5.3, p < 0.001, 2\text{-tail}$
Total suggestibility	11.6	6.6	9.5	5.8	NS
FSIQ*	77.6	10.5	83.7	12.5	$t = 2.59, p < 0.05, 2\text{-tail}$
Reading**	59.1	30.4	77.2	15.6	$t = 2.95, p < 0.01, 2\text{-tail}$
Anxiety					
State	52.5	13.5	54.1	13.6	NS
Trait*	49.4	14.0	41.7	11.4	$t = 2.54, p < 0.05, 2\text{-tail}$
Knowledge legal rights*	6.1	1.6	6.9	1.2	$t = 2.20, p < 0.05, 2\text{-tail}$
Criminal history					
No. of convictions	9	19	5.7	10.3	NS
Ethnic (Caucasian–non-Caucasian)	Cauc 21	Non-C 7	Cauc 96	Non-C 36	NS
Sex (male = M, female = F)	M25	F3	M109	F23	NS
Mental state (last 7 days)	Present	Absent	Present	Absent	
Crying	8	20	20	112	NS
Sleeping badly	15	12	46	86	NS
Feeling suicidal*	6	22	8	123	$\chi^2 = 4.9, df = 1, p < 0.05$
Feeling low	16	12	53	79	NS
Off food*	11	17	21	110	$\chi^2 = 6.4, df = 1, p < 0.05$
Feeling paranoid	9	19	21	111	NS
Agitated (observed)	7	21	13	119	NS
Drugs (last 24 hrs)	8	18	28	104	NS
Alcohol (last 24 hrs)	10	16	44	88	NS
Solicitor present	19	9	71	61	NS
Interview tactics					
Intro evidence	20	8	98	34	NS
Emphasize serious offence	1	27	11	121	NS
Challenge lies	4	24	27	105	NS
Confession	14	14	79	53	NS
Case disposal					
Plea	10	4	46	26	NS
Convicted	14	14	55	77	NS
Criminal history					
Experience of prison	10	17	47	81	NS
Peckham and Orpington stations	P 19	O 9	P 88	O 44	Significance NS

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

aged 25 years or under, compared with more than 60% of the deniers who were aged over 25 years. There were no other significant differences noted in relation to the continuous variables, although a number of significant findings did emerge in relation to the categoric data. As one might expect those suspects who confessed were also

Table 2. Differences between confessors and deniers

Explanatory variables	Confessors		Deniers		Significance
	Mean	SD	Mean	SD	
Age*	27.1	10.8	30	10.2	$t = 1.72, p < 0.05, 1\text{-tail}$
Memory					
Delayed recall	10.8	6.5	10.5	6.5	NS
Immediate recall	11.6	6.7	11.8	6.4	NS
Total suggestibility	9.6	5.8	10.3	6.3	NS
FSIQ	82.4	12.2	83	12.8	NS
Reading	75.7	18.8	72	21.4	NS
Anxiety					
State	54.5	13.7	52.9	13.4	NS
Trait	43.4	12	42.1	12.4	NS
Knowledge legal rights	6.7	1.4	6.8	1.2	NS
Criminal history					
No. of convictions	4.5	7.5	4.3	5.2	NS
Ethnic (Caucasian–non-	Cauc	Non-C	Cauc	Non-C	
Caucasian)	72	21	45	22	NS
Sex (male = M, female = F)	M77	F16	M57	F10	NS
Mental state (last 7 days)	Present	Absent	Present	Absent	
Crying	19	74	9	58	NS
Sleeping badly	38	54	23	44	NS
Feeling suicidal	11	81	3	64	NS
Feeling low	45	48	24	43	NS
Off food	21	72	11	55	NS
Feeling paranoid	19	74	11	56	NS
Agitated (observed)	11	82	9	58	NS
Drugs (last 24 hrs)*	27	65	9	57	$\chi^2 = 4.5, df = 1, p < 0.05$
Alcohol (last 24 hrs)	36	56	18	48	NS
Solicitor present***	40	53	50	17	$\chi^2 = 14.6, df = 1, p < 0.0001$
Appropriate adult present	5	88	3	64	NS
Interview tactics					
Intro evidence	65	28	28	14	NS
Emphasize serious offence*	3	90	9	58	$\chi^2 = 4.5, df = 1, p < 0.05$
Challenge lies	13	80	18	49	NS
Case disposal					
Plea***	45	10	11	20	$\chi^2 = 16.8, df = 1, p < 0.0001$
Convicted*	47	46	22	45	$\chi^2 = 4.3, df = 1, p < 0.05$
Criminal history					
Experience of prison*	25	65	32	33	$\chi^2 = 6.6, df = 1, p < 0.01$
Peckham and Orpington stations	P	O	P	O	Significance
	59	34	48	19	NS

\*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ .

more likely to plead guilty and to be convicted of the offence. Interestingly, self-report of the consumption of an illicit drug (in the previous 24 hours) was the only other variable that was significantly associated with making a confession. In keeping with earlier research, the presence of a legal adviser and criminal history were found to be

Table 3. Outcome of interview: likelihood of confession or denial

Variable	Odds ratio	CI (95%)	Significance
Drugs	3.37	1.36–8.32	0.01
Prison	0.46	0.22–0.95	0.05
Solicitor	0.26	0.12–0.54	0.001

significantly related to not making a confession, and finally, the police tactic 'emphasizing the serious nature of the offence' was more likely to be employed where the suspect was denying the allegation.

Table 3 presents the results of the logistic regression analysis and includes the odds ratio, a 95% confidence interval and the significance level for each relevant variable. There were no significant pairwise interactions between these three variables. The results suggest that the odds of a suspect making a confession are more than three times greater if that suspect has reported using an illicit (non-prescribed) drug within the 24-hour period prior to arrest, compared with a suspect who claimed he/she has not taken such a substance. Other factors that the model predicts as influential in determining the outcome of the interview are prison experience and the presence of a legal adviser. According to this model, the odds of a suspect not making a confession are four times greater for a suspect who has a legal adviser present compared with a suspect who does not have a legal adviser in the interview. The model also predicts that a suspect with experience of prison or custodial remand has twice the odds of not making a confession, compared with the suspect who has no such experience.

A jack-knife procedure (SAS/STAT, 1989) was employed to assess the predictive accuracy of the model. This procedure entails removing one case and fitting the model using data from the remaining ( $n - 1$ ) cases to predict the outcome of the excluded case. This procedure is then replicated for every case in the data set and the outcomes of all the individual tests are combined to provide an unbiased assessment of performance, which in this case amounted to 68.2% as the overall probability for a correct prediction. This finding is identical to that predicted in the original analysis using the 'forward logistic regression' procedure, which is particularly encouraging as it lends weight to the accuracy and generalizability of the original model. Of the eight probabilities predicted by the model, the smallest probability of confession (where a legal adviser was present, where the suspect had some prison experience and had not recently taken an illicit drug) was found to be 28%. On the other hand, the largest probability of confession was found to be 92%, where no legal adviser was present and the suspect had recently taken drugs and did not have any prison experience.

## DISCUSSION

There was no evidence from this study to support our main hypothesis that those suspects considered vulnerable were more likely to confess than their more robust counterparts. To some degree this may relate to the relatively small sample size ( $n = 160$ ), but it might also reflect the type of offences under investigation and the nature of the police interviews. The cases in this study were general, 'run of the mill' cases which produced very little interaction between the suspect and interviewing

officers or indeed, any third party (legal adviser, appropriate adult), with the result that confessions appeared to be made despite the tactics used, rather than because of them (Pearse and Gudjonsson, 1996a). This lack of interaction is also reflected in two other findings. First, a mere three police tactics (from an original total of 19) were sufficiently common to be analysed. Second, the confessions were typically made early on in the interview. This latter finding suggests that suspects had made their minds up prior to the interview whether to admit or deny the offence and were able to maintain this stance throughout.

The main hypothesis will need to be tested with another sample, comprising serious cases, where there is likely to be a more dynamic interaction between all the parties. It may be that in these 'run of the mill' examples, psychological vulnerabilities, such as heightened suggestibility or limited intellectual capacity, are not important in determining whether or not suspects confess, mainly because very little pressure is actually placed on suspects in the interview itself. Those cases where such characteristics have proved influential have tended to be of a more serious nature, where the suspect has been subjected to a prolonged and concentrated period of challenging interrogation by the police (Gudjonsson, 1992a). This was not the case in this sample.

This was the first study that set out to identify possible psychological vulnerabilities within a suspect population (whilst still detained at a police station) and to relate these findings to the suspect's subsequent performance in the police interview. The attribution of vulnerability was based on the researcher's decision to recommend the need for an appropriate adult following a brief clinical interview; given the importance attached to such a decision, this process merits further discussion. The time constraints imposed by PACE and the sometimes hectic environment of a busy inner city police station did not always present 'ideal' test conditions. The final decision in relation to the question of vulnerability was made by the researcher after he/she had spent 10–15 minutes with the suspect, and the item was only positively endorsed if there was clear and definite evidence of the behaviour or mental characteristic that merited the detainee being considered vulnerable. Such a strong criterion was necessary to reduce the number of false positive errors, even though this may have produced some false negative errors. It is likely, therefore, that the final figure of 15% from the clinical interview represents an underestimate of the vulnerable population in this sample. Indeed, an examination of the FSIQ results reveals that there were nine cases where the suspect's IQ was below 70, who were not identified from the clinical interview as vulnerable. The identification of vulnerability within the criminal justice system is a particularly complex issue that requires a sensitive appreciation of both legal issues (admissibility and reliability) and clinical matters (psychological vulnerabilities).

Notwithstanding clinicians' difficulties, there is some reason to believe that their decisions with regard to vulnerability were valid: significant differences between the two groups did emerge in relation to a number of cognitive functions. These characteristics were measured by the psychometric tests, which were administered after the clinical interview and were therefore independent of the 'vulnerable' categorization decision. The significant findings in respect of memory, reading ability, intellectual capacity and trait anxiety serve to confirm the validity of the initial clinical assessment. It is perhaps a little surprising that state anxiety has not also emerged, although it has already been reported that the suspects felt more at ease with the researchers during the assessment, as they were able to take their minds off their current

predicaments (Gudjonsson *et al.*, 1993). This finding also serves as an example of the situational complexities of assessing anxiety (Gudjonsson *et al.*, 1995).

A significant difference was also found between the two groups in terms of their knowledge of legal rights. In particular it would appear that the questions that posed the most difficulty, in terms of comprehension, related to telling the truth and answering police questions (questions No. 7 and 1 respectively; see Appendix 1). This raises a number of concerns; not least in relation to the wisdom of their initial decision-making capability when first advised of their legal rights on their arrival at the police station. On a positive note, a more detailed investigation of the vulnerable group shows that almost 70% (19,  $n = 28$ ) actually had a legal adviser present during the police interview. It may be the case that such an influential third party was able to provide advice in respect of admission or denial and that his/her presence served to provide valuable support, both physically and psychologically, to enable the suspects to maintain their chosen stance (i.e. to confess or otherwise) throughout the interview.

It remains the case, however, that nearly a third of this group chose not to have legal advice, and this decision may have been made because they did not initially fully understand their rights (see Pearse and Gudjonsson, 1996e). This is clearly an important finding and may have implications for future police practice in relation to the delivery and service of a suspect's rights. In a progressive initiative, the Metropolitan Police Service in London are introducing a series of mandatory questions for all detainees, which place some of the onus of identification onto the suspects themselves (as recommended by Clare and Gudjonsson, 1992). Where these questions are already in use a pilot study suggests that identification of vulnerability can increase by 100%, although the extent of identification remains rather small (Clare, Jarman and Gudjonsson, 1997). The current findings reinforce the suggestion that, where identified, vulnerable suspects should be positively encouraged to seek the services of the duty solicitor (Pearse and Gudjonsson, 1996c,e).

The second part of this study was concerned with identifying factors that might be used to predict the outcome of the police interview in terms of a confession or denial. The finding that prison experience and the presence of a legal adviser are likely to increase the odds of a person denying an allegation, tend to confirm previous research and are in line with our earlier hypotheses. Moston, Stephenson and Williamson (1992), for example, found that 'full admissions' dropped by about 20% given contact with a legal adviser, and also reported that the rate of admissions differed depending on whether or not the suspect had previous convictions. In our study, however, the model has provided an explanatory variable, 'prison experience', that is more discriminating than the presence or number of convictions. Our model suggests that what needs to be considered is experience of *custody* on remand or following conviction, rather than convictions *per se*. It may be that the application of 'custodial experience' to other studies would resolve the conflicting reports of the effects of conviction on confession. In the majority of cases, personal experience of a period of incarceration will serve to reinforce the long-term consequences of making a confession, especially in serious cases.

However, the most intriguing finding remains the impact of illicit drug use within the previous 24-hour period. A substantial proportion of the suspects (36, 23%) admitted using illicit drugs (mainly smoking cannabis or taking heroin or methadone) and in the clinical interview 12 (7%) appeared to be under the influence of drugs. The question is, to what extent did this interfere with their functioning or coping ability

during the police interview? Robertson (1992), for example, reported that one in six drug-related referrals in London were unfit to be interviewed. One clinical consideration must be that a suspect's perception of events (strength of evidence, case severity) may have been impaired, and that if this was combined with a desire to get out of the station (escape further questioning or satisfy addiction), then rational thought processes may have been compromised, leading to a confession. In a recent Icelandic study of 359 serving prisoners, 54 offenders (15%) claimed to have been under the influence of drugs (predominantly cannabis) during the police interview (Sigurdsson and Gudjonsson, 1994). The prisoner reported feeling confused, although this did not increase their levels of anxiety or make them feel they were not coping; neither, apparently, did it influence their reasons for making a confession. This suggests that the integrity of the outcome remains intact. However, withdrawal from opiates has been found to be associated with heightened suggestibility (Murakami, Edelman and Davis, 1996) and it may, under certain circumstances, result in suspects making a false confession (Gudjonsson, 1992a).

In this sample, however, there would appear to be no evidence from our findings to challenge the reliability or admissibility of any confession made. For example, drug users were not over-represented in the vulnerable group compared with non-drug users, and 23 of the drug cases (66%) had a legal adviser present in the police interview. There remains a distinct possibility that the 'drug users' in this study elected to admit to the allegations against them in order to expedite their removal from custody to pursue their own needs. This predicament can be explained in terms of the Gudjonsson model outlined earlier, where the aroused physical state (withdrawal) forms an important part of the 'antecedents' that impact upon the suspect's decision-making process when considering the 'consequences' of his/her actions, which may be immediate (release) or long-term (satisfying addiction).

A legal insight touching on the motivations behind the confession process, provided in the case of Rennie (1982) 74 Cr. APP. R. 207, seems appropriate in this instance. The Lord Chief Justice commented that:

Very few confessions are inspired solely by remorse. Often the motives of an accused are mixed and include a hope that an early admission may lead to an earlier release or a lighter sentence. . . . In some cases the hope may be self-generated. If so, it is irrelevant, even if it provides the dominant motive for making the confession. . . . There can be few prisoners who are being firmly but fairly questioned in a police station to whom it does not occur that they might be able to bring both their interrogation and their detention to an earlier end by confession.

As this judgement suggests, the mere fact that a person is withdrawing, and may have a motive for making a confession, does not mean that the confession is necessarily unreliable. In a recent Court of Appeal judgement it was held that a confession made whilst withdrawing from the symptoms of heroin addiction need not be considered unreliable, solely on those grounds (*R. v. Crampton*, 1991, 92 Cr. APP. R. 369).

There were two main limitations with this study. The first concerns the 'ground truth' of each allegation, an important factor that we have already discussed. The second relates to the fact that it was not possible to ask the detainees to complete a confession questionnaire *after* the police interview, in an attempt to determine the individual's perception of events and, in particular, why they confessed or denied the allegation. Considering the impressive level of co-operation received from the

detainees in this study, future researchers may wish to consider incorporating this feature into their design.

There are a number of findings from this study which have important implications for the criminal justice system. To start with, the study has reaffirmed that even for trained clinicians the identification of vulnerability can be an extremely difficult task, and whilst this may tend to mitigate the low identification rate achieved by police officers, it confirms that it is clearly not safe to assume that vulnerable suspects will receive the additional legal safeguards (the presence of an appropriate adult) to which they are entitled. That identification is not taking place represents a fundamental flaw in the current legislation. Secondly, and by extension, vulnerable suspects may not fully understand their legal rights. It is thought likely that the introduction of a more complicated police caution will serve to exacerbate the problem (Gudjonsson, 1994). Thirdly, the results indicate that there are likely to be a number of reasons why a suspect makes a confession and it is not safe to assume that the mere presence of psychological vulnerabilities, on their own, will predispose a person to confess to a crime. Finally, the findings highlight the need for future research on: (a) the specific effects of drugs and drug withdrawal on the behaviour of detainees in the police interview; and (b) the decision-making process of suspects and the relevance of psychological vulnerabilities in serious criminal cases.

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**APPENDIX—PROTOCOL FOR POLICE STATION STUDY**

At the beginning, say: ‘*May I remind you that we are not prepared to discuss what you’ve been arrested for. We are nothing to do with the police*’

<i>Custody Record Number:</i>	<i>Name:</i>	
<i>Number of Subject:</i>	<i>Time seen:</i>	
<i>Police Station:</i> Peckham/Orpington	<i>Date seen:</i>	
<i>Sex:</i>	<i>Age:</i>	
<i>Ethnic origin:</i> Caucasian		Yes–No
Afro-Caribbean		Yes–No
Indian sub-continent		Yes–No
Other		Yes–No
Dont’t know		Yes–No

*Offence of which suspected:*

1. *Occupation*  
If unemployed please note, and note nature and date of last paid employment. If not employed since leaving school, please note.  
If unemployed, please ask whether person attends day centre—if Yes, ask what type. Yes–No
2. *Have you got any academic qualifications?* Yes–No  
If Yes, what? (just number and level)
3. *Have you drunk any alcohol in the last 24 hours?* Yes–No  
If Yes, what, and approx. how much?
4. *Have you taken any drugs in the last 24 hours other than those prescribed by a doctor?* Yes–No–DK  
If Yes, what?
5. *Have you any previous criminal convictions (inc. as a juvenile)?* Yes–No–DK  
If Yes, number. If possible, please find out what for.  
If Yes, to Q.5, has the person ever been in prison/DC, etc. (after conviction)? Yes–No–DK  
If Yes, how many times, and what for?
6. *Have you needed medication for the following at any time in the last 12 months (year)?* Yes–No–DK  
If Yes, at what date?  
(a) Epilepsy Yes–No–DK  
(b) Nerves/feeling low Yes–No–DK  
(c) Diabetes Yes–No–DK  
(d) Heart problems Yes–No–DK  
If Yes, have you been in hospital for any of these conditions within the last 12 months? Yes–No–DK
7. *Are you taking any medication prescribed by a doctor at present?* Yes–No–DK  
If yes, what is name of drug/what’s it for?

8. *How have you been feeling during past seven days?*

Ask specifically whether the person has suffered any of the following (if the answer to any of the items is Yes, get details):

- |   |           |
|---|-----------|
| (a) Hearing voices?   | Yes–No–DK |
| (b) Sleeping badly (trouble getting to sleep, staying asleep, or waking early)? | Yes–No–DK |
| (c) Feeling off his/her food?   | Yes–No–DK |
| (d) Finding him/herself crying more than usual?                                 | Yes–No–DK |
| (e) Feeling low?  | Yes–No–DK |
| (f) Feeling like killing him/herself?   | Yes–No–DK |
| (g) Feeling that other people are talking about him/her?                        | Yes–No–DK |

9. Ask the following question in exactly these words:

*Have the police explained to you what you are and are not allowed to do while you're at the police station? This means, have they told you your rights?*

Yes–No–DK

Regardless of the answer, ask:

*What do you know about what you're allowed to do at the police station?*

10. Please ask the person to answer Yes or No to each question.

- |  |        |
|--|--------|
| (a) Do you have to answer the police questions even if you don't really want to?   | Yes–No |
| (b) If you say anything to the police and your case goes to court, can the police tell the Court what you've said to them?                               | Yes–No |
| (c) Is it true that you only need a solicitor if you've done the crime you're being questioned about (i.e. you're guilty)?                               | Yes–No |
| (d) Do you need money in order to have a solicitor to help you at the police station?  | Yes–No |
| (e) If you ask the police to tell your family or someone who cares about you that you're at the police station, will they normally contact them?         | Yes–No |
| (f) Do you have to give the police money before they'll contact someone who cares about you?   | Yes–No |
| (g) If you say anything to the police, do you have to tell them the truth?   | Yes–No |
| (h) If you don't want a solicitor to help you or someone told that you're at the police station straightaway, are you allowed to change your mind later? | Yes–No |

11. Ask *Have you got the leaflet explaining your rights (what you are and aren't allowed to do) with you now?*

Yes–No

If No, ask where it is?

12. Ask *Have you read the leaflet explaining your rights (what you are and aren't allowed to do)?*

Yes–No

If No, ask why not?

13. *How has the person seemed during the interview?*

If answer to any of the following is Yes, put details.

- |                              |           |
|------------------------------|-----------|
| (a) OK                       | Yes–No–DK |
| (b) Intoxicated              | Yes–No–DK |
| (c) Drugged                  | Yes–No–DK |
| (d) Crying                   | Yes–No–DK |
| (e) Very agitated/distressed | Yes–No–DK |
| (f) Angry/suspicious         | Yes–No–DK |
| (g) Withdrawn/suspicious     | Yes–No–DK |
| (h) Mentally ill             | Yes–No–DK |
| (i) Learning disability      | Yes–No–DK |
| (j) Language problems        | Yes–No–DK |

14. *Does the person require treatment?*

Yes–No–DK

If Yes, for what reason?

*Time interview ended:*