THE ASSESSMENT OF PSYCHIC CLAIMANTS
An application of schema theory to the evaluation of strong psychic claims.

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To my parents

Additional note

The videotapes referred to in Chapter Four of this thesis are available for inspection from the Psychology Department, Edinburgh University.

ABSTRACT

This thesis aims to construct, evaluate, and apply a cognitive proto-model which accounts for the trickery involved in the fabrication of just one type of psychic ability, namely; macro-PK. This cognitive proto-model describes how an observer analyses a demonstration of ostensible macro-PK. The model accounts for how an observer: construes such phenomena as either a magic trick or a display of genuine psychic ability, develops counter-explanations which account for how the phenomena may be fabricated, enforces measures designed to counter such trickery, and assesses the outcome of the demonstration. The proto-model is then used to categorise the stratagems employed by magicians, and pseudo-psychics, to fabricate macro-PK. The thesis discusses how an observer may be deceived into: misconstruing a magic trick as genuine macro-PK, developing incorrect counter-explanations, employing ineffective safeguards against trickery, and incorrectly assessing the outcome of the demonstration. One small part of the model is then experimentally tested via one pilot study and two formal experiments, all concerned with the effect that observers' belief in psi has on the observation, and recall, of pseudo-psychic demonstrations. The proto-model is then used to produce recommendations for researchers wishing to investigate individuals claiming macro-PK ability. These recommendations are designed to help researchers: maximise the development of their counter-explanations, construct effective counter-deception measures, and accurately assess and report the outcome of a study. Two case studies are presented to explore the application of this model and its recommendations. First, they are employed to help assess a present day psychic claim made by the Society for Research in Rapport and Telekinesis (SORRAT). This group claimed that 'spirit entities' were able to divine the order of a sealed deck of ESP cards. The thesis outlines the design, and running, of the investigation, emphasising the controls that were employed to counter potential subject cheating. Second, the thesis describes how the recommendations were used to reassess the 'Feilding Report', a well-respected publication describing in detail an investigation into Eusapia Palladino (a well known Italian medium operating around the turn of this century). This reassessment revealed that Palladino may have used an accomplice during investigation, as the controls described by the investigators would not have prevented such trickery. Finally, the thesis discusses the implication of the above work for parapsychology, and the directions which future research in this area might take.

CONTENTS

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DECLARATION

This thesis has been composed by myself and the work is my own.

Richard Wiseman

CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

Parapsychology has been defined as the study of:

> ...apparent anomalies of behaviour and experience which exist apart from currently known explanatory mechanisms which account for organism-environment and organism-organism information and influence flow. (Parapsychological Association Report 1, n.d., p. 1)

Most parapsychologists draw a distinction between two types of ostensible psychic ability. The first of these, extra-sensory perception (ESP):

> ...refers to situations in which, under psi-task conditions[1], an organism behaves as if it has information about the physical environment (as in 'clairvoyance'), another organism's mental processes (as in 'telepathy'), or a future event (as in 'precognition). (Parapsychology Association Report 1, n.d., p. 1).

The second type of psychic ability, psychokinesis (PK):

> ...refers to situations in which, under psi-task conditions, an organism's physical environment changes in a way that appears to be related to the organism's mental or physiological processes. (Parapsychology Association Report, n.d., p. 1).

Both ostensible ESP, and PK, have been further classified according to whether statistics are required for their detection. In some circumstances the use of statistics may be necessary. For example, an individual might attempt to influence a random number generator (RNG), such that it's output deviates away from chance (see Rush, 1986a, for a brief overview of these studies). Also, an individual may be asked to score above chance during a card guessing, or 'ganzfeld', experiment (see Palmer, 1986, for a brief overview of these studies). In contrast, other examples of ostensible PK, and ESP, do not require statistics for their detection. For example, an individual might appear to use his/her psychic ability to decrease the weight of a table, such that it levitates above the ground (for often conflicting accounts of this type of phenomena

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[1]The term 'psi-task conditions', refers to conditions which eliminate all known channels of communication between organism/environment, or organism/organism.

[labelled 'macro-PK'] see Randall, 1982, and Kurtz, 1985). Also, the claimant may display ostensible ESP that obviously could not be accounted for by chance alone (see, e.g., Inglis's [1979] description of the phenomena apparently produced by the mental medium, Mrs Piper). These latter type of ostensible ESP, and PK, have been labelled 'major' paranormal phenomena (Stevenson, 1990).

Many individuals appear to possess major psychic ability. Theoretically, they may be either genuine, or false. Individuals who demonstrate fake psychic ability could be separated along a 'self-deception' to 'other deception' continuum. One extreme of this scale consists of individuals who believe that they possess genuine psychic ability, and are deceiving themselves. For example, certain individuals may, unknowingly, applying a great deal of physical pressure to cutlery during 'spoon bending parties' (Houck, 1984). The opposite end of this scale consists of individuals who consciously use trickery to fabricate psychic ability. Individuals falling towards this end of the continuum could be further separated along a second continuum, based on the claimed validity of their apparent ability. At one extreme of this continuum would be 'mainstream' magicians (e.g., close-up[2] and stage magicians). These individuals perform in a theatrical setting, do not claim to have genuine psychic ability, and aim to entertain their audiences. Other individuals fall towards the middle of the continuum, ambiguously claiming that their abilities are neither genuine, nor fake. These individuals tend to be either spirit magicians[3], bizarrists[4] or mentalists[5].

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[2]'Close-up' magicians perform within a few feet of spectators, usually using small objects such as playing cards, and coins.

[3]These magicians simulate the summoning of spirits, and fabricate phenomena commonly associated with seances (e.g., table levitations, materialisations etc.). For a good overview of this type of magic, see Burger (1986).

[4]These magicians usually simulate rituals traditionally associated with the invocation of satanic entities, and fabricate a wide range of weird, and bizarre, phenomena (see Burger, 1991).

[5]Whaley (1989, p. 441) notes that there is some confusion regarding the definition of the term 'mentalist'. However, one distinction often employed concerns the way in which the performers account for the phenomena they exhibit. The spirit magician,

Finally, the opposite end of this continuum is occupied by pseudo-psychics. These individuals unambiguously claim that they possess genuine psychic ability and, as such, engage in 'psychic fraud' (see, e.g., Morris, 1986a, Hansen, 1990).

This chapter will first discuss the benefits which may be gained through studying the fabrication of major psychic ability (be it by magicians, mentalists, spirit magicians, bizarrists or pseudo-psychics). The chapter will then briefly review previous literature concerned with this topic and finally, outline the aims, and methodology, of this thesis.

1.2 THE BENEFITS OF STUDYING CONJURING, AND PSYCHIC FRAUD

1.2.1 Introduction

This section will discuss how the study of conjuring, and psychic fraud, is beneficial to two areas, namely the assessment of psychic claimants, and the construction of a general theory of deception.

1.2.2 The assessment of psychic claimants

This section will outline why an understanding of psychic fraud is vital to the accurate assessment of psychic claimants[6], both within, and outside of, parapsychology.

1.2.2.1 Assessment within parapsychology

Parapsychologists[7] have been, and are, concerned with the assessment of psychic claimants. This assessment can take place in 'real time' (i.e., whilst a claimant is demonstrating ostensible psychic ability). For example, psychical researchers investigated individuals such as D.D. Home, Eusapia Palladino, Marthe Beraud ('Eva

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and bizarrist, usually states that the phenomena are caused by either a spirit, or satanic, 'entity'. In contrast, the mentalist appears to possess psychic ability himself.

[6]In this thesis, the term 'psychic claimant' will be used to refer to any individual who claims to possess genuine psychic ability, regardless of the validity of that claim.

[7]In this thesis, the term 'parapsychologist' will be used to refer to both modern day parapsychologists, and their historical forefathers, psychical researchers.

C'), Mina Crandon ('Margery' the medium) and Rudi Schneider (see, e.g., Inglis [1979, 1984], for an extensive, if perhaps uncritical, overview of some of this work). More recently, parapsychologists have assessed subjects such as Ted Serios (see, Eisenbud, 1989), and Bill Delmore (see, Kanthamani & Kelly, 1974, 1975). Parapsychologists have also examined such claimants in retrospect (i.e., after such claimants have attempted to demonstrate their ostensible psychic ability). For example, Tietze (1973) has described past investigations of 'Margery', Gregory (1985) has reassessed the case of Rudi Schneider, and Beloff (1991) has urged researchers to reconsider the mediumship of Eusapia Palladino.

Some researchers believe that this line of inquiry is vital to parapsychology (see, e.g., Braude, 1986, Stevenson, 1990). These writers have stressed that such abilities are, to some individuals, more convincing proof of psi than evidence derived from experimental parapsychology[8]. Also, Braude has argued that human abilities are best studied *in extremis*, and in the environment in which they naturally occur. Braude asserts that these criteria are more likely to be fulfilled by the assessment of psychic claimants, rather than more experimentally-based studies.

However, this line of research has proved problematic. Eisenbud (1983) has suggested that such work may be hindered by researchers' unconscious fear of major paranormal phenomena. Also, Stevenson (1990) has also noted that, in the early days of psychical research, the investigation of single claimants was often more expensive than running parapsychological experiments. However, it is widely acknowledged (see, e.g., Rush, 1986b, Hansen, 1990) that actual psychic fraud, and allegations of such cheating, are two of the main problems facing this line of research. The extent of these problems should not be underestimated. For example, Brandon (1983) has recently argued for the widespread occurrence of such cheating among Spiritualist mediums. In addition, Hansen (1990) has noted that:

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[8]Experimental parapsychology usually consists of studies run on 'undistinguished' subjects, in well controlled procedures and requiring statistics to evaluate it's outcome (see Rush, 1986b).

> ...every annual convention of the PA [Parapsychological Association] since 1980 has included papers reporting positive results from subjects who later admitted to, or were reported as having used, trickery at some point in their careers. (p. 26).

Failure to counter actual subject cheating, or accusations of cheating, can have serious negative consequences, both for individual researchers, and for parapsychology as a whole. Such failings can lead to loss of funding. An example of this occurred after Randi (1986) instigated his 'Project Alpha' hoax. In this project, Randi sent two pseudo-psychics to be assessed by the McDonnell Parapsychology Laboratory. Although the researchers at the laboratory did not make any formal statements, as to the validity of the claimant's psychic ability, neither did they manage to detect the trickery employed by the two young men. Randi's revelation of the hoax contributed to the loss of funding, and eventual closure, of the McDonnell Laboratory. Failure to discover subject cheating can also result in widespread publicity. For example, 'Project Alpha' was widely reported in the popular press including the Washington Post, and the New York Times (see Gardner, 1983). Also, controversy, concerning the possible fraudulent nature of many psychic claimants, has threatened to destroy the unity of parapsychology. For example, arguments concerning the validity of the Mina Crandon almost split apart the American Society for Psychical Research (see, for example, Inglis, 1984, Tietz, 1973). The magnitude of these negative outcomes are reflected in John Palmer's (1988) recent comment that:

> Psychic fraud...has been the single most important factor in damaging the reputation of parapsychology and retarding its growth. (p. 109).

However, as noted by Randall (1982):

> To refuse to investigate a phenomenon because it occurs among people who may be dishonest is rather like a bacteriologist refusing to work with the organism *Escherichia coli* because it normally lives in human faeces! We must face up to the unpleasant aspects of our task, not seek to avoid them!

Thus, according to Randall, parapsychologists should not refuse to investigate psychic claimants, but rather counter the problem of psychic fraud.

Thus, one major benefit to be gained through understanding psychic fraud is the prevention, or detection, of such trickery. However, such an understanding may have

additional benefits for researchers wishing to assess psychic claimants. For example, an understanding of psychic fraud may allow researchers to design studies which both control against subject cheating, and include conditions that may help elicit genuine psi. Second, such an understanding may help prevent researchers wasting their own time, and resources, as well as that of their claimants. For example, a genuine psychic may approach researchers, wishing to be tested. Both researchers, and claimants, may invest considerable time, and money, in the design and running, of pilot studies, and formal experimentation. Let us imagine that the claimant produces genuine psychic phenomena. If the researchers have not correctly designed, run, and reported this experiment, their results may be explained away (albeit erroneously) as being due to subject cheating. If this is the case, their endeavours will have been in vain. In addition, the psychic may have to face the unpleasant experience of being labelled a cheat. This, in turn, may dissuade other psychics from becoming involved in parapsychological testing.

1.2.2.2 Assessment outside parapsychology

Individuals claiming strong psychic ability exist in a diverse range of 'real world' settings. For example, an individual may claim to be able to psychically cure a physical illness, or psychological problem, faced by members of the general public. Second, various law enforcement agencies are approached by individuals, offering 'psychic tips' that they feel might help prevent, or solve, a crime (see Lyons and Truzzi, 1991). Finally, alleged psychics have also been used within industrial settings, being asked, for example to use their abilities to divine productive sites for mineral extraction (see Couttie, 1988). Fraudulent psychics operating in many of these areas can cause considerable economic, and social, damage. An individual may devote themselves (financially, and/or emotionally) to an alleged medium. As such, the revelation that this medium is fraudulent may prove painful. For example, Houdini (1924) notes that following Margaret Fox's confession of trickery, one woman wrote to Fox, noting:

> Hundreds of thousands have believed through you and you alone. Hundreds of thousands eagerly ask you whether all of the glorious light that they fancied you had given them, but was a false flicker of a

> common dipcandle of fraud...The disclosures that you make take from me all that I have cherished most. There is nothing left for me now but the hope for the reality of that repose which death promises us' (p. 14).

Also, an individual, or set of individuals, may fabricate psi to exploit members of the community. This may involve a leader of a religious cult fabricating biblical miracles to encourage followers to give their possessions to the cult. Youngsters, and other impressionable people, might be encouraged to join cults, after have been impressed by the apparent proof of psychic powers offered by those who lead the cult. For example, the 'Reverend' Jim Jones attracted several hundred followers to his cult in the US, often maintaining these followers by faking psychic ability, including miraculous healing, and 'walking on water' (for a more detailed description of these alleged miracles, see Mills, 1979). Unfortunately, the personal power that Jones possessed is reflected in the fact that he was able to instigate the mass suicide of nearly all his followers.

An understanding of psychic fraud may help the general public, law enforcement agencies, and industry, counter this, often exploitative, form of deception.

1.2.3 The construction of a general theory of deception

Human deception occurs within many areas, including[9]: military operations (e.g., Daniel & Herbig, 1982, Gooch & Perlmutter, 1982), 'confidence games' (e.g., Maurer, 1974, Henderson, 1985), patient malingering (e.g., Pankratz, 1981, Rogers, 1984), forgery and plagiarism in art and literature (e.g., Arnau, 1961), white collar fraud (e.g., Comer, 1977, Clarke, 1989, Price, 1991), pick pocketing (e.g., Joseph, 1940), short changing (e.g., Mayer, 1969), experimenter fraud in science (e.g., Broad & Wade, 1982), gambling scams (e.g., Ortiz, 1984), some techniques involved in

[9]These areas, and articles, were derived from a brief search of Psychological Abstracts and Social Science Citation Index (under the subject headings of 'deception' and 'fraud'). In addition, past reviews and bibliographies, of the deception literature were also scanned (e.g. Hyman, 1989, Barton Bower, 1982). Clearly, the areas, and articles, mentioned are far from comprehensive, and are cited merely to give an indication of the variety of literature pertaining to human deception.

advertising and selling (e.g., Leff, 1976), hoaxing (e.g., MacDougall, 1940), shoplifting (Farrell & Farrara, 1985), 'quack' medicine (e.g., Young, 1967, Maple, 1968), imposture (e.g., Wells, 1986), verbal lying (e.g. Ekman, 1984), and deception within the intelligence and security services (e.g., Handel, 1982, Pforzheimer, 1985).

Some theorists postulate that it may be possible to discover the underlying principles of deception, regardless of the setting in which it occurs (see, for example, Jastrow, 1900, Jones, 1980, Whaley, 1984, 1988, Mitchell & Thompson, 1986, Lambert, 1987). This notion has perhaps been most strongly advocated by Whaley (1984), when he wrote:

> I...assert that deception is the same regardless of whatever field it appears on. It is not a function of technology. All deceptions are applied psychology - the psychology of misperception - and hence are connected by more than one or two analogous points. Consequently, along psychological lines it must be logically possible to develop a general theory of deception. (p. 270).

Only a handful of theorists (e.g., Whaley, 1984, Jones, 1980, Lambert, 1986) have offered proto-theories containing such principles. However, as noted by Hyman (1989) none of these authors has yet managed to :

> ...demonstrate that a single, coherent framework can meaningfully account for the psychological issues involved in the various types of deception. (p. 134).

Yet, on a more optimistic note, Hyman also writes:

> Although I have managed to read only a small fraction of the literature, I have become quite optimistic about the possibility of a coherent psychology of deception. (p. 151).

Assuming that such a theoretical construct is possible, it is clear its formation may depend, in part, upon a firm understanding of deception as it occurs within some of the areas outlined above. A number of writers have suggested that an understanding of magic may play a disproportionately large part in this process. For example, Jastrow (1900) notes:

> The conjuring tricks, or paradoxes which apparently contradict or rise superior to ordinary experience, furnish the most various types of illustration of the psychology of deception. (p. 112).

Whilst, more recently, Barton Bowyer (1982) has noted:

> Unique among all cheaters, the magician proclaims before all those he is about to deceive that he is going to do so. The audience knows that he will try and trick them. For the time they are in his presence, they can give their entire attention to the magician's efforts and try and detect the method by which he achieves his illusions. No other act of deception is so concentrated in time or free of extraneous distractions. Yet the magicians are the most consistently successful of all deceivers....we can probably learn more about cheating by examining magic and magicians than by studying any other single field that practises it. [emphasis mine]. (p. 229-230).

1.2.4 The strategies, and tactics, of psychic fraud

Whaley (1969) has noted that deception theorists tend to treat the tactics, and stratagems, of deception as two extremes of a continuum. A tactical explanation of a deception accounts for how a certain type of trickery was, or can be, performed. In contrast, a strategic explanation of deception accounts for why (in terms of more abstract concepts, and principles) such trickery will be, or was, successful.

Individuals interested in the countering of psychic fraud may find it more helpful to know about the stratagems of psychic fraud, as opposed to it's tactics. This is, in part, because although there are only a limited number of stratagems involved in the fabrication of psi, there are an enormous number of tactics used to implement these stratagems[10]. Trying to detect these tactics may be problematic. For example, the literature of magic, and psychic fraud, is not well organised, such that it may be difficult for an individual to discover all the ways in which an ostensible psychic phenomena can be fabricated. Second, both magicians, and pseudo-psychics, are continually inventing new tactics by which to fabricate psi. It would be problematic to discover the nature of these innovations, especially as some of this information is not widely disseminated, even within certain sections of the magical, and pseudo-

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[10]This huge range of tactics is reflected in the enormous amount of, often clandestine, literature which outlines the methods used by magicians, and pseudo-psychics. For example, the 1991 catalogue of one British company ('Magic Books by Post') specialising in literature relating to conjuring, lists over 1400 currently available books, and pamphlets.

psychic, communities[11].

Also, the stratagems of conjuring, and psychic fraud, are more likely than tactics to generalise to both other areas of deception, and deception in general. As such, individuals interested in the construction of a general theory of deception may find it more helpful to know about the stratagems, as opposed to the tactics, involved in such trickery.

1.3 LITERATURE SEARCH

1.3.1 Introduction

The previous section outlined the benefits of understanding conjuring, and psychic fraud, to the assessment of psychic claimants, and the development of schema theory. To determine if there is a need for additional research in these areas, a literature search examined these domains for previous material concerning conjuring, and psychic fraud. This section will detail this search procedure[12].

1.3.2 Books

LCMARC BOOKS

'LCMARC Books' is a complete bibliographic record of all books that have been catalogued by the United States Library of Congress from 1968 to date. An on-line computer search of this database was carried out under the subject headings of; MAGIC, CONJURING, PSYCHIC FRAUD, PSYCHICAL RESEARCH,

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[11]For example, conjuring possesses it's own 'underground' movement. As noted by Whaley (1989), these are:

> The informal interpersonal networks of the most avid magicians who diffuse among themselves the latest effects and methods by word-of-mouth and private letter, often years before publication of public performance. (p. 726).

[12]Two points should be noted. First, this search was restricted to publications written in English. Second, the symbol '?' symbolises a search 'wild card'. For example, the expression MAGIC? would search all records which started with the letters MAGIC regardless of the remaining letters in the word (e.g. MAGIC, MAGICIAN, MAGICIANS etc.).

PARAPSYCHOLOGY.

National Library of Scotland Book Catalogue

A computer search of the National Library of Scotland Book Catalogue, from the period 1978 to date, was carried out using the following subject headings; MAGIC, CONJURING, PSEUDO-PSYCHIC, PSYCHICAL RESEARCH, PARAPSYCHOLOGY.

Edinburgh University Library Book Catalogue

A computer search of the Edinburgh University Library Book Catalogue was carried out, from the period 1985 to date, under the following subject headings; MAGIC, CONJURING, PSEUDO-PSYCHIC, PSYCHICAL RESEARCH, PARAPSYCHOLOGY.

Bibliographic Index

The 'Bibliographic Index' contains a list of bibliographies published separately, or appearing in parts of books, pamphlets and periodicals since 1937. This was searched by hand under the subject headings of; MAGIC, CONJURING, PSEUDO-PSYCHIC, PSYCHICAL RESEARCH, PARAPSYCHOLOGY.

Harry Price Library Catalogue

The Short Title Catalogue of the Harry Price Library describes itself as containing literature concerning; 'psychical research, spiritualism, magic, psychology, legerdemain and other methods of deception, charlatanism, witchcraft and technical works for the scientific investigation of alleged abnormal phenomena from circa 1450 A.D to 1929'. A supplement to this catalogue contains literature purchased between 1929 and 1935. At there time of publication, these catalogues represented possibly the most complete record of works pertaining to conjuring, and psychic fraud, in the world. Both publications were searched, by hand, for relevant literature.

Edinburgh Public Library

The book catalogue of the Edinburgh Public Library was searched, by hand, under the following subject headings; MAGIC, CONJURING, PARAPSYCHOLOGY, PSYCHIC FRAUD.

1.3.3 Journals

Psychological Abstracts

This database contains abstracts selected from psychological journals, and related disciplines. The period 1927-1975 have yet to be computerised, and so were searched by hand, under the following subject headings; CONJURING, MAGIC, PSYCHIC, PSEUDO-PSYCHIC, PSYCHICAL RESEARCH, PARAPSYCHOLOGY, DECEPTION, FRAUD. Psychological Abstracts from 1976 to date have been incorporated into a 'Silverplatter Information System', stored on CD-Rom, and were searched under the following subject headings; CONJURING, MAGIC, PSYCHIC, PSEUDO-PSYCHIC, PSYCHICAL RESEARCH, PARAPSYCHOLOGY, DECEPTION, FRAUD.

Sociological Abstracts

This data-base contains selected abstracts from the sociology literature, and related disciplines. The period 1974 to date has be incorporated as parts of a 'Silverplatter Information System', stored on CD-Rom, and was searched under the following subject headings; CONJURING, MAGIC, PSYCHIC, PSEUDO-PSYCHIC, PSYCHICAL RESEARCH, PARAPSYCHOLOGY, DECEPTION, FRAUD.

Social Science Citation Index

This database contains citations to articles that have occurred within approximately 4700 journals within the social sciences. An on-line computer search, from 1972 to date, was undertaken using the following subject headings; MAGIC, CONJUR?, PSEUDO-PSYCHIC, DECEPTION, FRAUD.

Magazine Index

The 'Magazine Index' consists of a collection of articles from over 500 popular

magazines, on a variety of topics including; current affairs, performing arts, business, sports and leisure activities. An on-line computer search of this database was undertaken, from the periods March 1959 to December 1970 and January 1973 to November 1988, under the following subject headings; MAGIC?, CONJUR?, PSYCHOLOGY? and MAGIC?, PSYCHOLOGY? and CONJUR?, PSYCHIC?, PSYCHOLOGY? and PSYCHIC?, DECEPTION, FRAUD.

British Humanities Index

The British Humanities Index is a guide to articles appearing in British newspapers, and journals, from 1916 to date. It includes good coverage of the arts, economics, history, philosophy, politics and society. In addition, it also contains selected non-specialist articles of popular interest in science and technology. This database was searched, by hand, under the subject headings of; MAGIC, CONJURING, PSEUDO-PSYCHIC, PSYCHICAL RESEARCH, PARAPSYCHOLOGY, DECEPTION, FRAUD.

Parapsychology Abstracts International

The 'Parapsychology Abstracts International' provides summaries of abstracts from over 100 parapsychology journals, and related disciplines, to date. This was searched under the following subject headings; SUBJECT FRAUD, PSEUDO-PSI, PSYCHIC FRAUD, CONJURING, FRAUD and MAGIC.

1.3.4 Dissertations

Dissertation Abstracts International

This database consists of information relating to doctoral dissertations submitted by nearly 500 institutions, mainly within North America. An on-line computer search, from 1861 to date, was carried out using the following subject headings; MAGIC?, CONJUR?, PSEUDO-PSYCHIC.

British Index to Theses

This database contains a comprehensive listing of all dissertations, for higher degrees,

within British Institutions since 1950. The period 1950 to 1970 was search, by hand, under the subject headings of; CONJURING, MAGIC, PSYCHIC, PSEUDO-PSYCHIC, PSYCHICAL RESEARCH, PARAPSYCHOLOGY. The period '1970 to date' has been incorporated as part of 'Silverplatter Information System', stored on CD-Rom. This was searched under the subject headings of; CONJURING, MAGIC, PSYCHIC, PSEUDO-PSYCHIC, PSYCHICAL RESEARCH, PARAPSYCHOLOGY.

1.3.5 Additional searches

In addition to the searches outlined above, the following individuals were contacted, with a request for relevant references; George Hansen (expert on subject fraud within parapsychology, writer on psychic fraud [see Hansen, 1990]), Professor Ray Hyman (professor of psychology at the University of Oregon, magician and expert on human deception [see, e.g., Hyman, 1989]), Dr Bart Whaley (pioneer in the general theory of deception [see Whaley, 1984, 1988]), Dr Paul Solomon (psychologist at Williams College, Williamstown, previously written on the psychology of magic [Solomon, 1980]), Colonel Michael Dewar (Deputy Director of the International Institute for Strategic Studies, writer on military deception [Dewar, 1989]), Dr David Lambert (cognitive scientist at the Naval Ocean Systems Centre, previous writer on deception [see Lambert, 1987]), Professor Jones (physicist, and expert in military deception theory [see Jones, 1980]), Professor Michael Handel (Professor of Strategy at the US Naval War College, writer on military deception [see Handel, 1982]).

1.3.6 Obtaining references

References were obtained via the Edinburgh University Inter-Library Loans Service, the National Library of Scotland, the Edinburgh Public Library, the British Library and the Harry Price Library.

1.4 A BRIEF SUMMARY OF PREVIOUS LITERATURE

1.4.1 Introduction

This section will briefly summarise the literature discovered by the search outlined above. The section will first describe literature concerning the assessment of psychic

claimants, and second, work pertaining to the relationship between psychology, conjuring and psychic fraud.

1.4.2 The assessment of psychic claimants

A large amount of literature has been written concerning psychic fraud, and the assessment of psychic claimants. This work will be split into three groups.

First, a large amount of work described 'case studies' of the investigation, and exposure, of pseudo-psychics. This work varies on many dimensions. For example, some of these exposures occurred around the turn of this century (see, e.g., Baggally, Johnson, Feilding, Taylor & Lobb, 1906, Mayhew, 1906 and Houdini, 1924), whilst others have been reported more recently (see, e.g., May & Jahagirdar, 1975, Pamblin & Collins, 1975, Delanoy, 1987, McBurney & Greenberg, 1980, and Frazier & Randi, 1981). The descriptions of these exposures also vary in detail, ranging from little more than a few pages (e.g., Bell, 1935, Baggally, Johnson, Feilding, Taylor & Lobb, 1906, and Besterman, 1928), to considerable length (e.g., Marks and Kammann, 1980, Randi, 1987). Finally, some of these exposures have been made whilst the pseudo-psychic was undergoing laboratory testing (e.g., Besterman, 1928, Delanoy, 1987, Pamblin & Collins, 1975), whilst others have taken place in 'real world' settings (e.g., Frazier & Randi, 1981, Randi, 1987).

Second, some literature contains detailed descriptions of the specific methods used within conjuring, and psychic fraud. Some of this work was written around the turn of this century, and is mainly concerned with the methods of fake mediumship (see, e.g., Carrington, 1907, Abbott, 1907, Lewis, 1886, Hodgson, 1892 and Price, 1939, Chapter 11), whilst other texts have been produced more recently, and contain details of trickery used by present day pseudo-psychics (see, e.g., Randi, 1982a and Couttie, 1988, Chapter 17).

Third, there exists a small number of articles that explicitly discuss with the stratagems that underlie conjuring, and psychic fraud. For example, Marks &

Kammann (1980) briefly discuss some of the stratagems allegedly involved in the psychic fraud practised by both 'Kreskin', and Uri Geller. In addition, Morris (1978, 1982) outlined nineteen of the major stratagems that can be used to fabricate ESP. Also, Morris (1986b) advances some pragmatic recommendations for the minimisation of psychic fraud in laboratory studies. These recommendations include, for example, guidelines for actively involving magicians in parapsychological research, and reducing the motivation of pseudo-psychics to become involved in parapsychological experimentation. In addition, Morris (1986a) has presented probably the first conceptual framework for understanding some of the principles involved in the fabrication of both ESP, and PK. Hansen (1990) recently reviewed psychic fraud within parapsychology, describing some of the stratagems used by pseudo-psychics, and their relevance for methodology within parapsychology. Other authors who have more briefly discussed the stratagems of psychic fraud include Akers (1984), and Alvarado (1987).

1.4.3 Psychology, conjuring and psychic fraud

A small amount of literature has discussed the relationship between cognition, conjuring and psychic fraud[13].

Some of this work was produced around the turn of this century (e.g., Dessoir, 1897, Binet, 1896, Triplett, 1900 and Jastrow, 1900). These writers evoked contemporary psychological principles to explain the efficacy of conjuring, and psychic fraud. For example, Dessoir employed the notion of 'association' to explain how spectators can be deceived into making erroneous inferences whilst watching a conjurer. Also, Binet employed the then contemporary notions of 'positive/negative' and 'active/passive' illusions to classify conjuring tricks. However, soon after 1900, psychological interest in the study of conjuring, and psychic fraud, rapidly declined. Hyman (1989) has speculated that:

> ...it disappeared for the same reasons that attention, imagery, and other mentalistically orientated topics did. A psychology of deception is, of

[13]For an extended review of some of this literature, see Hyman (1989).

> necessity a mentalistic psychology...The behaviouristic psychology that dominated American psychology from the early 1900's until the cognitive revolution in the late 1950's had no room for mentalism of any kind...(p. 135).

However, from the 1960's onwards, psychology experienced a rise in cognitivism and with it, a renewed interest in the psychology of conjurers, and pseudo-psychics. For example, Moskowitz (1973), produced a paper which, although primarily related to the use of magic within occupational therapy, also contained sections regarding the psychology of conjuring. Solomon (1980) noted how various types of cognitive bias (e.g., perceptual readiness, perceptual set, the 'gestalt' laws of perception and auditory illusions of location) are exploited by the magician. Other relevant research has also been carried out within social psychology, and social cognition. For example, Kelley (1980) examined magic tricks in terms of the erroneous attribution of causality. In addition, Nardi (1984) employed the tools of frame analysis to explain the efficacy of conjuring. Also, Randal (1982) noted how ideas within communication theory in general, and persuasion theory in particular, may help explain the efficacy of conjuring. Finally, other authors who briefly discuss psychology and conjuring include Gregory (1982) and Derlien (1975).

1.4.4 Section summary

This section has summarised some of the previous literature relating to the study of conjuring, and psychic fraud. Section 1.2 noted the benefits that an understanding the stratagems, as opposed to the tactics, of psychic fraud may bring to individuals both wishing to assess psychic claimants, and construct a general theory of deception. Unfortunately, most of the previous literature within this area has tended to concentrate upon the tactics of psychic fraud, taking the form of case studies of individual pseudo-psychics, or 'cook books' of methods for fabricating psi. However, a small number of theorists have started to outline some of the stratagems of pseudo-psychic trickery. Most of these writers have tended to concentrate on the fabrication of ESP, as opposed to PK. Given the importance of forming such an understanding, further research in this area is clearly needed.

1.5 THESIS AIMS AND METHODOLOGY

Section 1.4.4 noted that, for the most part, previous researchers have not examined the stratagems of psychic fraud. Of the little work which has been undertaken in this area, most of it has concentrated upon the fabrication of ESP, as opposed to PK. For this reason, the first part of the thesis aims to identify the stratagems used to assess, and fabricate, PK. This will be achieved via the formation of a cognitive model which concentrates on the way in which an observer assesses ostensible macro-PK, and the way in which this process is disrupted by magicians, and pseudo-psychics. Cognitive modelling postulates:

> ...explanations of human cognition are expressed as abstract models based on the conception of the human brain as a physical symbol system, and the processes which manipulate it. (Aitkenhead & Slack, 1985, p. ix).

This type of modelling is germane to the analysis of conjuring, and psychic fraud, for two reasons. First, conjuring, and psychic fraud, are clearly complex, and 'real world', occurrences. Several theorists (e.g., Bartlett, 1932, Brewer & Treyens, 1981, Neisser, 1976), have noted that cognitive models aim to account for such naturalistic phenomena. Second, conjuring, and psychic fraud, clearly exploit human bias. Again, most cognitive models aim to account for the bias, and error, frequently discovered in various cognitive processing (see, for example, Alba & Hasher, 1983, Nisbett & Ross, 1980, Hewstone, 1989).

There are a number of ways in which cognition can be modelled (see Rumelhart & Norman, 1985). However, this thesis will employ by far the most popular type of modelling, namely 'schema theory'. Thorndyke (1984) has defined a schema as:

> ...a cluster of knowledge representing a particular generic procedure, object, percept, event, sequence of events, or social situation.(p.167),

further noting that:

> This cluster provides a skeleton structure for a concept that can be 'instantiated', or filled out, with the detailed properties of the particular instance being represented. (p.167).

Thorndyke & Yekovich (1980) noted five concepts which help define the 'schematic'

approach to mental modelling. First, schemata are a prototypical abstraction of the concepts they represent. For example, a 'desk' schema may consist of the abstract properties of a desk (e.g., the number of desk legs, the composition of the desk top, and the shape of the desk). Second, schemata are hierarchically organised, with higher level schema being more abstract than lower level schema. For example, an individual may have an 'office' schema that consists, in part, of the type of furniture likely to be found in an office (e.g., desks, chairs, and filling cabinets). Each of these types of furniture would themselves consist more specific schema (e.g., the type of desk schema outlined directly above). Third, to represent specific instances of events and objects, these abstract schema can be filled with specific information. For example, to represent a particular desk, the 'desk' schema may be completed with certain 'values' (e.g., a particular desk may have four legs, a metal top and be rectangular in shape). As noted by Rumelhart (1981):

> The total set of schemata instantiated at a particular moment in time constitutes our internal model of the situation we face at that moment in time. (p. 166).

Fourth, schemata allow an individual to make predictions concerning the type of information likely to be present in a particular situation. Such predictions usually help the observer interpret 'incoming' information, as well as completing missing information with 'default' values. For example, an individual may see three legs of a desk and assume that the fourth leg is identical to these three, because his 'desk' schema dictates that most desks have four identical legs. Finally, schemata are formed through by induction from numerous experiences with various exemplars of the generic concept. For example, an abstract 'desk' schema may be formed by an individual perceiving a large range of many different types of desks.

Theorists have proposed schemata that are capable of representing information from both physical (see, e.g., the 'object' schemata proposed by Palmer, 1975), and social (see, for example, the five types 'social' schemata identified by Taylor & Crocker, 1981), domains. In addition, theorists have postulated ways in which schemata may be employed within a variety of cognitive tasks including; perception (see, for e.g., Palmer, 1975), comprehension (see, e.g., Bransford & Johnson, 1973), memory (see,

e.g., Alba & Hasher, 1983) and problem solving (see, e.g., Wason & Johnson-Laird, 1972).

Chapter two will outline the construction of a schematic proto-model that identifies the main stages involved in assessing ostensible macro-PK. A 'proto-model' represents the first step towards a fully fledged cognitive model. As noted by Miller, Polsen & Kintsch (1984) such a model aims to identify the general stages involved in a procedure, rather than account for those stages within a general theoretical framework. For example, the above authors note that a proto-model, concerned with baking a cake, might outline the stages involved in the baking process (e.g., collecting of ingredients, mixing of ingredients, etc.). However, a more complete cognitive model of this procedure would attempt to explain each of these stages in terms of a more general theoretical framework. Thus, a full cognitive model might discuss the role of short term memory, and perceptual 'pattern matching', in the collecting, and mixing of the cake ingredients. These authors note that, although the 'proto-model' is not in itself a full explanation of behaviour, it does represent a necessary initial step towards the full cognitive modelling of a task. This 'proto-model' will be constructed from several different types of information. For example, the model will use literature that has discussed the relationship between psychology, and the fabrication of macro-PK (see section 1.4.3). In addition, it will also use information contained within case studies of psychic claimants, and pseudo-psychics (see section 1.4.2).

Chapter three will then describe how this proto-model can be used to classify the stratagems used by pseudo-psychics, and magicians, to fabricate macro-PK. This chapter will draw upon literature which has been produced by, and for, pseudo-psychics, and conjurers[14]. This material clearly falls into the category of 'folk psychology' and, some theorists (e.g., Churchland, 1984, Nisbett & Wilson, 1977) have advocated that such material may often be incomplete, and inaccurate.

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[14]See Appendix A for details of the literature search used to discover, and obtain, this material.

However, other theorists advocate that such 'folk psychology' should be taken very seriously within academic psychologists, in that it can form a useful stating point for the construction of more formal theories (see, e.g., Heider, 1958, Joynson, 1974, Flanagan, 1984). This chapter will also draw upon my own intuitions gained through working as a professional magician,and from informal conversations, and formal interviews, with fellow practitioners of magic.

Chapter four will then outline the elaboration, and experimental testing, of just one section of this proto-model (i.e., the effect that an observer's belief in psi has on the recall of a pseudo-psychic demonstration).

The second part of the thesis concentrates on the way in which the above proto-model can help assess claims of major psychic ability.

Chapter five outlines recommendations for researchers who wish to assess the validity of ostensible macro-PK. These recommendations draw upon work presented within the previous three chapters. Chapter six then applies the recommendations to an assessment of a claim of major psychic ability, made by the Society for Research into Rapport and Telekinesis. Chapter seven then applies these recommendations to the analysis of one of the best known, and well-respected, documents in psychical research (the 'Feilding Report' produced by Feilding, Baggally and Carrington, 1909).

Finally, chapter eight will briefly outline how future research could build upon the work presented in this thesis.

1.6 SUMMARY

This chapter first described the type of phenomena which constitute major ESP, and PK. The chapter next noted that these phenomena were fabricated by a range of individuals including mainstream magicians, spirit magicians, bizarrists, mentalists and pseudo-psychics. The next section of the chapter argued that an understanding of the

stratagems of conjuring, and psychic fraud, may benefit the assessment of psychic claimants, and the construction of a general model of deception. A brief review of previous literature pertaining to this topic revealed the need for additional work in this area. Finally, the chapter discussed the overall aims of the thesis, as well as the methods used to achieve these aims.

CHAPTER 2

A PROTO-MODEL FOR THE ANALYSIS OF OSTENSIBLE MACRO-PK

2.1 INTRODUCTION

This chapter will briefly outline a proto-model that describes how one individual (referred to as the 'observer') analyses a demonstration of ostensible macro-PK, performed by another individual (referred to as the 'claimant'). The model describes the analysis of ostensible macro-PK in several situations. For example, the 'observer' may be a member of a magician's audience, a sitter at a fake seance or a parapsychologist investigating an alleged psychic. The 'claimant' may be a magician, a fake medium, or a psychic claimant.

The model will draw upon literature derived from sociology, social cognition, cognitive psychology, psychical research, parapsychology, conjuring and psychic fraud.

The model is composed of several sections. The chapter will outline each section in turn, discussing how the model operates during both active (i.e., as an investigation is taking place), and retrospective (i.e., after an investigation has occurred), analyses.

2.2 FRAMING A DEMONSTRATION

2.2.1 Introduction

The notion of 'framing' has provided sociologists, and social psychologists, with a useful tool for examining the way in which individuals experience a wide variety of social events (see, e.g., Goffman, 1974/1986). However, despite the popularity of the concept, theorists have found it difficult to explicitly define the term 'frame'. This point is noted by Goffman (1974/1986) who, at the beginning of his seminal book on frame analysis, writes:

> My treatment of these initial terms [i.e., 'frame' and 'frame analysis']

> is abstract, and I am afraid the formulations provided are crude indeed by the standards of modern philosophy. The reader must initially bestow the benefit of mere doubt in order for us both to get to matters that (I feel) are less dubious. (p. 10).

In addition, the vagueness of the 'frame' concept is reflected by the wording of the definitions themselves. For example, Goffman notes:

> I assume that definitions of situations are built up in accordance with principles of organisation which govern events-at least social ones-and our subjective involvement in them; frame is the word I use to refer to such of these elements as I am able to identify. That is my definition of frame. (p. 10-11).

Also, more recently, Reber (1985) has defined the term in the following way:

> Any social situation can be 'defined' in accordance with basic principles that will affect and control the ways in which people involve themselves with and experience that situation. These 'definitions' are frames. (p. 286).

In this thesis, a frame will be seen as a relatively abstract, high level, schema which dictates the type of lower level schemata that can be used to make sense of a situation. As such, frames are used by individuals to help to define, and construe, a situation in a certain way. For example, an observer may see two individuals engage in lip to lip contact. The observer may frame this event as two people kissing, and simply walk by the two individuals concerned. Alternatively, the observer may frame the event as one individual giving mouth to mouth resuscitation to another, and offer to help out at the scene of an emergency. As illustrated by this example, certain social situations can be framed in different ways. Likewise, a demonstration of ostensible macro-PK may be framed in one of three ways. First, the demonstration could be perceived as a magic trick, and the claimant as a magician (i.e., an individual who openly acknowledges fabricating macro-PK). If this is the case, the observer would believe that any ostensible macro-PK which occurs is the result of trickery. Second, the demonstration could be framed as a pseudo-psychic hoax, and the claimant as a pseudo-psychic (i.e., an individual who fabricates macro-PK, but claims such phenomena to be genuine). Again, if this is the case, the observer would believe that any ostensible macro-PK which occurs is the result of trickery. Third, the observer may frame the demonstration as a display of psychic ability, and the claimant as a

genuine psychic. If this is the case, the observer would believe that any ostensible macro-PK which occurs is the result of genuine psychic ability, and not trickery. It should also be noted that the observer may be unwilling to frame a demonstration in one specific way. For example, an observer may be unable to decide if a demonstration should be framed as either genuine, or fake.

The following sections will outline the way in which the framing of a demonstration may be affected by, and affect, the observer's analysis of that demonstration.

2.2.2 Factors which influence the framing process

The main factors involved in the framing process can be split into three categories; cognitive, motivational and social. On a cognitive level, the degree to which an observer associates schemata with certain frames, may influence the way in which a demonstration is framed. Motivational factors act at a more psychodynamic level. These factors operate on an observer's wants, and needs, to influence the way in which that demonstration is framed. Social factors consist of the interpersonal pressures bearing on the observer. Such pressures may also influence an observer in the framing of a demonstration. Each of these factors will be discussed in turn.

2.2.2.1 Cognitive factors which influence the framing process

The following sections will discuss how the framing of a demonstration may be influenced by the observer's internal cognitive representations of the claimant, and claim (referred to, respectively, as 'claimant schemata' and 'claim schemata').

2.2.2.1.1 Claimant schemata

This section describes some aspects of the observer's claimant schemata, and outlines how such schemata may influence the framing of a demonstration.

First, these schemata may contain information concerning the capability, and resources, needed to engage in a certain type of trickery, as well as a claimant's capability, and resources, to carry out such fraud. For example, Hasted (1981) has

discussed the strength required within a claimant's hands, if he/she is to use physical force to fabricate certain types of PK metal bending. To figure out if a claimant was capable of such fraud, a parapsychologist may wish to evaluate the strength possessed within that claimant's hands. Alternatively, the claimant may need to possess a certain degree of physical dexterity, or agility. For example, Kurtz (1985) has noted how Eusapia Palladino would have required considerable athletic skills to fake certain of her seance phenomena (e.g., being able to manipulate various objects, placed inside her 'spirit cabinet', with her feet). The observer may also wish to assess the claimant's knowledge of conjuring and psychic fraud. Relevant information may include a claimant's membership to conjuring or pseudo-psychic organisations (such as The International Brotherhood of Magicians, The Magic Circle, or the Psychic Entertainers Association), and acquaintance with conjurors or pseudo-psychics. Finally, the observer may assess if the resources, needed to carry out certain types of trickery (such as financial backing and personal contacts), are, or were, available to a claimant. The resulting schemata can influence the framing process. For example, a psychic claimant who is capable of engaging in trickery is more likely to be seen as pseudo-psychic, as compared to a claimant who does not appear to possess such capability.

Second, an observer may develop schemata relating to a claimant's motivation for engaging in a demonstration of ostensible macro-PK. A claimant may be motivated by a range of possible goals, such as the need to further science, to help individuals suffering from illness, or to entertain. An observer may view some types of motivation as associated with certain frames. For example, a claimant only motivated by fame, or financial reward, may be seen as a pseudo-psychic, or magician. In contrast, claimants who stand to gain little financial reward from a demonstration may be more likely to be seen as genuine psychics. Thus Inglis (1984), when discussing the possibility of fraud within the Goligher family, notes:

> What would be the purpose? These were private seances. They could bring neither fame nor financial reward to the Golighers. (p. 78).

Also, Randi (1982a) has noted that some individuals were reluctant to accuse the two

girls involved in the fraudulent production of the Cottingley fairies as tricksters, partly because the girls had no apparent motive to deceive.

Third, an observer's schemata may relate to a claimant's willingness to engage in fraud. Relevant information may concern aspects of the claimant's personality. For example, the observer may decide that the claimant is honest or dishonest, sincere or insincere, likable or unpleasant. A psychic claimant, who is perceived as honest, might be framed as a genuine psychic. In contrast, a psychic claimant who appears dishonest may be seen as a pseudo-psychic. For example, W.J. Crawford, when investigating the apparent physical phenomena produced by the Goligher family, notes that the family were:

> ...eminently upright, honourable and likable people of the best type - quite incapable of practising a mean and objectless trickery. (Cited in Inglis, 1985, p. 78).

In addition, Hanlon (1974), in discussing Uri Geller, has noted:

> The whole phenomena is dominated by Geller's own personality. He exudes sincerity and a childlike innocence and desire to please which makes people really want to like and believe in him. (p. 171).

Whilst, Harris (1985) also notes:

> I met Uri Geller backstage after one of the shows on his first Australian tour. He was an all-encompassing character. Smooth and charming, the ladies were falling all over him. He was the sort of person who gave you the impression that he wouldn't deceive you for the world (p. 13).

When attempting to assess a claimant's willingness to engage in fraud, the observer may also be influenced by the social standing, and profession, of the claimant. For example, Carrington (1907) in discussing the preacher, and physical medium, Stanton Moses, noted:

> Certainly Mr Moses did not produce the phenomena in the usual fraudulent manner - his social position, both public and private, forbids our considering such a thing for a moment (p. 14-15).

Finally, some observers may also take into account the claimant's age. For example, Professor John Hasted has noted that:

> To me children are more genuine than adults, and with adults there may be a chance that the chap is hoaxing you or defrauding you, as

seems to happen sometimes (Cited in Couttie, 1988, p. 59).

In an active analysis, an observer may complete the above schemata from written material. For example, a claimant may be featured in newspaper articles, magazine articles, academic papers and books, and 'publicity' material. In addition, information may be gleaned through media coverage of the claimant, or through individuals who have had personal contact with the claimant. Also, the observer may personally meet the claimant. For example, Couttie (1988) describes his first meeting with Uri Geller, noting:

> ...[Geller] looked older than he should have done. At thirty nine, there were white flecks in his hair, now cut short, military style. He seemed almost painfully thin - he is a vegetarian - but with a wiry muscularity...I liked him immediately. He has a boyish vulnerability and charm...He came in barefoot, wearing shorts and a sports shirt. (p. 7-8).

When attempting a retrospective analysis, the observer may have to reconstruct relevant information from written material, photographs, film footage, and from individuals who were in personal contact with the claimant. For example, Tietze (1973) commenting, retrospectively, on Mina Crandon's personality, writes:

> Humour has been called the essence of her personality. Friends who remember her today agree that she was an utterly charming woman. It is the only element on which both friends and critics agree. (p. 7).

2.2.2.1.2 Claim schemata

This section will describe some aspects of the observer's claim schemata, outlining how such schemata may influence the framing of a demonstration.

First, the observer's claim schemata may contain information relating to the system that the claimant intends to influence, or has influenced (referred to as the 'target'). This target may be a physical object, such as a piece of cutlery, or musical instruments that have been placed in the seance room. Alternatively, the target may be a biological system. For example, a faith healer might claim to be able to psychically remove diseased tissue from a patient. The target may influence the way in which an observer frames a demonstration. For example, some claimants work with objects that are associated, by some, with demonstrations of apparently genuine

psychic ability (e.g., cutlery, watches, Ouija boards). In contrast, other claimants may work with targets that are traditionally associated more with a magic show (e.g., highly decorated boxes, rabbits, doves).

Second, the observer's claim schemata may contain information relating to the time and place in which the demonstration occurs, as well as the individuals, and objects, contained within this area. This will be referred to as the 'target system'. Spatially, the target system could be defined in several ways. For example, the walls of the seance room might act to define the area inside that room as the target system. An area can also be defined by observational boundaries. For example, Delanoy (1987) notes that, in a study testing the 'fire raising' ability of one subject, the target (i.e., 'some crumpled-up newspaper topped by some balls of cotton-wool placed on a metal tray') were placed within a 'target area', which was defined by the area within a video camera's field of vision. The target system will also be defined by temporal parameters. Such parameters may include the year in which the demonstration is taking place, or has taken place. It may also include more specific information concerning the year, month, date and time of a demonstration. When defining the temporal aspects of a demonstration an observer must employ some form of 'start', and 'stop', points. These points may be demarcated in several ways. For example, when watching a stage magician, the observer may believe that the demonstration (i.e., the magician's act) commences as the curtains open, and ends when they close. When testing an alleged psychic, the investigator may announce when a test session begins, and when it ends. The investigator may then regard any events outside this time frame as being irrelevant to the test session. The 'contents' of the target system consist of the individuals, and objects, located within that system. For example, at the start of a seance, the observer may note all the sitters, and furniture, present in the seance room. When framing a demonstration, the observer may associate certain target systems with trickery (e.g., the theatrical setting of the magician), whilst associating others with apparently genuine macro-PK (e.g., a seance room).

The observer's claim schemata may also contain information relating to the apparent

macro-PK that the claimant intends to demonstrate, or has demonstrated. Both parapsychologists (e.g., Price, 1939, Rush, 1986a), and magicians (e.g., Fitzkee, 1944, Warlock, 1956) have attempted to classify the range of macro-PK abilities that could, theoretically, be possessed by a claimant. Although there is some disagreement among these writers, the following six categories appear in much of this literature, and appear to possess some heuristic value. First, 'appearances' consist of the production of a target within the target system. For example, magicians apparently produce small objects (e.g., coins and playing cards) from their empty hands. On a larger scale, some mediums claim to have produced full figure materializations (e.g., Florence Cook). Such appearances may occur suddenly (see, e.g., the 'Appearing Cane'[15]), or gradually (see, e.g., 'Pepper's Ghost' illusion[16]). The second category, 'vanishes', entails the claimant apparently making a target disappear from the target system. For example, a magician may apparently place a coin in his/her closed hand, whereupon it vanishes. Again, such objects may apparently disappear suddenly (see, e.g., the 'Strike Vanish'[17]), or gradually (see, e.g., 'Pepper's Ghost' illusion described above). As such, this category is the opposite of 'appearances'. The third category, 'transportations' is essentially a combination of the first two categories, involving the disappearance of a target from one location within the target system, and its subsequent reappearance at a second location, outwith or within the target system. For example, the 'Cups and Balls' trick involves a magician apparently placing a ball under one cup, only to have it suddenly reappear under a different cup. This category has often been labelled 'teleportations' by parapsychologists. The fourth category is that of 'penetrations'. This occurs when a target appears to penetrate some form of

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[15]An 'Appearing Cane' consists of a coiled steel spring, tempered such that, when released, it springs into the shape of a full walking cane (see Page, 1976, p. 250).

[16]'Pepper's Ghost' is a stage illusion which secretly utilises a large sheet of glass onto which the figure of an individual is projected. The strength of projection can be varied to give the impression that the individual is gradually appearing, or disappearing (see Sharpe, 1985, p.143-146).

[17]The 'Strike Vanish' consists of an instant vanish of a small object held in the magician's hand (see Williamson, 1981).

barrier, without either the target or barrier being damaged. The barrier itself may be a physical object (see, e.g., the 'Chinese Linking Rings'[18]), or a biological system (when, e.g., the magician appears to saw another individual in half). A fifth category is that of 'modifications'. This occurs when the target undergoes some apparent transformation in type, property, form, size, or colour. The target involved may be a physical object (e.g., a magician may transform low denomination currency into that of high denomination), or a biological system (e.g., the famous medium, D.D. Home, was reportedly able to modify himself, such that he was able to pick up hot coals in his bare hands, without harm). Finally, the sixth category consists of the apparent application of force. This category includes several diverse phenomena, such as the apparent levitation of a target, the adherence of one target to an object, and the animation of a target. The vast range of 'telekinitic' effects apparently displayed by many mediums would fall into this category, as would the stage levitations often performed by magicians. The ostensible macro-PK displayed by a claimant may influence the way in which an observer frames a demonstration. For example, an observer who is extremely sceptical of the paranormal may frame any ostensible macro-PK as either a magic trick, or a pseudo-psychic hoax. Alternatively, an observer may believe that some individuals may possess certain types of macro-PK ability (e.g., the ability to move objects), but not others (e.g., the ability to materialise objects). If this were the case, a claimant stating that he/she can perform telekinesis might be seen as a genuine psychic, whilst a claimant stating that he/she can produce a full figure materialisation might be perceived as a pseudo-psychic.

Finally, the observer's claim schemata may also contain information relating to the conditions apparently required to elicit ostensible macro-PK. Such information could relate to the necessity for certain physical conditions. For example, mediumistic lore may demand that any white light in the seance room could be physically damaging, if not fatal, to the medium. Other schema may relate to the necessity for the observer to be in a certain psychological condition. For example, a psychic claimant may infer

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[18]A classic effect within conjuring, involving the magician appearing to inexplicably link, and unlink, a number of solid metal rings.

that it is more difficult to produce macro-PK in front of observers who are sceptical of psi. Other claimants may require certain observational conditions. For example, Taylor (1980) once noted that many children cannot demonstrate their apparent macro-PK under direct observation, labelling this phenomena the 'shyness effect'[19]. Finally, some claimants may wish to engage in some form of ritualised behaviour. For example, the magician may wave a magic wand to bring about the appearance of a rabbit in a hat. Other claimants may feel the need to engage in some form of ceremony, verbal incantations etc. The framing of a demonstration may depend, in part, on how the above conditions compare with the conditions believed by the observer to elicit genuine macro-PK. For example, an observer may be suspicious of a claimant who states that psychic phenomena are only forthcoming under bad lighting conditions, knowing that such conditions often give rise to trickery.

An observer about to undertake an active analysis, might form the above schemata in several ways. For example, the observer may research a claimant's past performances, assuming that the phenomena produced at a forthcoming demonstration will be similar to phenomena produced in the past. Alternatively, the claimant may state which phenomena will occur at a demonstration, or the observer may request that certain phenomena are produced. An observer, attempting a retrospective analysis, may have to reconstruct the above information from eyewitness testimony, film, videotape, photographs, and written reports. The resulting schemata may contain information that ranges in both quantity, and quality. For example, before starting a trick, a magician may not state the nature of the target, or apparent psychic influence. Also, when reconstructing a past claim, the observer may discover that eyewitnesses are unable to remember certain details of a past demonstration. In both cases the observer's schemata will be impoverished. In other situations (e.g., at the start of a formal experimental test of a well known psychic, or when a past demonstration has been recorded in great detail) these schemata may be both qualitatively, and quantitatively, rich in data.

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[19]It should be noted that John Taylor later renounced his belief in this phenomena (see Kurtz, 1985).

2.2.2.2 Motivational factors involved in the framing of a demonstration

An observer may be motivated to frame a demonstration in a certain way. The needs, and wants, which fuel such motivation, may vary enormously between observers. For example, an observer may have a strong need to witness phenomena which 'prove' the validity of a certain religious belief system. Thus, if a claimant appears to provide such proof (perhaps through performing apparently paranormal feats predicted by that religion) the observer may be motivated to frame that claimant as genuine. For example, physical mediums, operating around the turn of the century, maintained that the phenomena produced in the seance room constituted proof of spirit entities. As such, an observer wishing to believe in the tenants of the Spiritualist Church may have been motivated to frame such a claimant as genuine.

Other claimants may say they are able to employ their abilities to solve an observer's emotional, or physical, problems. For example, a faith healer may claim to be able to cure a patient's physical illness. Alternatively, a medium may apparently place an observer in contact with recently deceased friends and relatives. In both examples, the observer may be motivated to believe the claimant genuine, especially when that claimant ~~is~~ represents a last resort for the observer.

Other observers may realise that, if a claimant's ability is valid, it would have significance for our scientific understanding of the world. For example, some claimants may assert that their abilities are derived from, and therefore proof of, extraterrestrial beings. Uri Geller (1977) has noted how his powers only emerged when, as a small child, he had a strange encounter with a UFO. Other observers have noted that the validity of psychic ability may support certain scientific theories. For example, Professor Zöllner felt that the physical medium, Henry Slade, provided evidence of 'a space with four dimensions' (see Randall, 1982). An observer, wanting such a theory to be true, may be motivated to frame a claimant as genuine (and vice versa).

Finally, an observer may be motivated to believe the validity of a claimant for reasons

of increased self-esteem. For example, the claimant may say he/she is able to teach an observer to be psychic, or that the observer is already psychic, and that the claimant can elicit these powers. An observer, with a need to believe in the validity of his/her own psychic powers, or frame himself/herself as being psychic, may be motivated to frame the claimant as genuine. Harris (1985) notes that Uri Geller uses this strategy, writing:

> Geller's presentation was such that he allowed or forced the spectators to participate in the experiment....He gave the impression that the experiment would not be successful without the audience mentally willing it to be so...if the experiment was a success, the audience, as participants would not only credit Geller, but would also credit themselves. Thus, an element of ego involvement is introduced. This provides psychological incentive for belief. (p. 8-9).

2.2.2.3 Social factors involved in the framing of a demonstration

An observer's framing of a demonstration may also be influenced by interpersonal pressure. Such pressure may be imposed by the claimant. For example, a claimant may firmly state that his/her demonstrations are the result of genuine psychic ability. The observer may feel a social pressure not to appear to disbelieve the claimant. Alternatively, the pressure may be bought about by other individuals. For example, at a seance, the observer may be surrounded by individuals (e.g., researchers and other sitters) who strongly believe in the validity of the phenomena being produced. Such individuals may pressure the observer into framing the demonstration as genuine (and vice versa).

2.2.3 Factors influenced by the framing process

The framing of a demonstration may influence the way in which the observer assesses that demonstration. For example, an observer may believe that a demonstration will definitely contain some form of trickery (i.e., it is a magic trick, or a pseudo-psychic hoax). If this is the case, the observer may be more likely to attempt to detect, and/or counter, such deception. This point has been noted by several writers. For example, Carrington (1907) wrote:

> It must be remembered that the observer, at a spiritualistic seance, is not in a normal state of mind, but is in a condition of more or less suppressed excitement, induced by the conditions of the seance

> itself...Needless to say, therefore, this attitude of mind makes it easy for the medium to entrap his sitters...To just that extent the medium has an advantage over the conjuror, since, in the latter case, the spectators already know that the effects they see are merely the result of fraud, and come prepared to detect the trick. (p. 58),

whilst Dingwall (1921) has also noted:

> ...the frame of mind in which a person goes to see magic and to a medium cannot be compared. In one case he goes either purely for amusement or possibly with the idea of discovering 'how it was done', whilst in the other he usually goes with the thought that it is possible that he will come into direct contact with the other world (p. 211).

The framing of a demonstration may also influence the way in which an observer attributes meaning to any inexplicable macro-PK produced during that demonstration. For example, the observer may have framed the demonstration as magic show, or a pseudo-psychic hoax. If this is the case, that observer may decide that inexplicable phenomena are the result of some form of trickery. Alternatively, the observer may have framed a demonstration as a genuine psychic demonstration. If this is the case, the observer may decide that any inexplicable phenomena are genuine macro-PK. Finally, if the observer is unsure how to frame a demonstration, he/she may be equally uncertain whether any inexplicable phenomena are genuine, or fake.

2.3 THE DEVELOPMENT OF COUNTER-EXPLANATIONS

2.3.1 Introduction

This section outlines how an observer develops hypotheses that account for the way in which a demonstration may be, or may have been, fabricated. These hypotheses will be referred to as 'counter-explanations'. This step of the assessment procedure has been remarked upon by various writers. For example, Beloff (1985) has stated:

> Whenever one is confronted with a claim, from whatever source, that has certain paranormal implications, one should ask oneself what normal explanation there could be that would obviate the necessity of invoking anything of a paranormal nature. (p.361).

Whilst Inglis (1979) has noted that 'Donkin's Law'[20]:

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[20]This 'law' is based upon the comments made by Heratio Donkin during the trial of the slate writing medium, Henry Slade.

> ...demands that every known mode of explanation of the facts should be exhorted before the possibility of an unknown mode is considered. (p. 373).

In an active analysis the observer may develop counter-explanations at a number of points in time. For example, the observer may form some hypotheses before the start of a demonstration. This may be the case when the observer has prior information concerning the nature of the forthcoming demonstration. Alternatively, the observer may not be able to anticipate the nature of the demonstration, and so have to develop counter-explanations during the demonstration. In a retrospective analysis the observer is forced to develop counter-explanations after a demonstration has occurred.

Counter-explanations can vary in both number, and specificity.

The number of counter-explanations may range on a continuum. For example, a claimant may state he/she will cause a table to levitate into the air. If this were the case, some observers may only develop one counter-explanation, perhaps believing that the claimant may use very thin thread to fabricate the levitation. Alternatively, other observers may form many counter-explanations believing, for example, that the claimant may use thread, hooks, or verbal suggestion to fabricate the levitation.

The specificity of each counter-explanation also ranges on a continuum. For example, a magician may announce that he/she is about to cut a rope into two pieces, and then magically restore the rope. If this is the case, an observer may expect the magician to engage in some form of suspicious behaviour, at some point, during the magic trick. Such an observer will have formed only a very general counter-explanation (e.g., that the actions of the magician will be important). The opposite end of this continuum will consist of counter-explanations that are far more detailed. In the case above, an observer may, for example, expect ~~that~~ the magician to switch the cut rope for a duplicate (uncut) piece of rope. Such an observer may suspect that the magician will perform the switch at a certain time (e.g., when the rope is placed into a bag),

and in a certain way (e.g., by using a bag with a secret partition, in which the duplicate rope was initially concealed).

The number, and specificity, of the counter-explanations depends, in part, upon the observer's claim schemata (outlined in section 2.2.2.1.2), causal schemata (i.e., schemata relating to the methods used to fabricate macro-PK) and perceived adequacy of prior counter-explanations. Each of these factors will be discussed in turn.

2.3.2 Claim schemata

The number, and specificity, of counter-explanations will depend, in part, upon the information contained within the observer's claim schemata. If this information is quantitatively, and qualitatively, rich, the observer should be better able to form a larger number of more specific counter-explanations. If however, such information is impoverished, the development of counter-explanations may be hindered. This section will discuss how an observer's claim schemata may influence the development of counter-explanations during an active, and a retrospective, analysis.

2.3.2.1 Active analysis

The amount of information contained within an observer's claim schemata may vary. On some occasions the observer's schemata may be relatively impoverished. For example, the observer may only be aware that the claimant will attempt to demonstrate some form of macro-PK, on some type of target, at some point in time. This may be the case, for example, when a claimant states that his/her macro-PK ability is not at all predictable, and thus he/she is unsure exactly when, and what, will occur. As such, the observer's claim schemata will not contain a great deal of detailed information, and the observer may be unable to develop appropriate counter-explanations before a demonstration. Instead, the observer may have to wait until the demonstration is in progress, or has finished. Alternatively, the observer's schemata may contain a relatively large amount of information. For example, an alleged psychic may be able to predict the exact nature of a forthcoming demonstration, or repeatedly perform the same type of ostensible macro-PK. If this is the case, the

observer may have more enriched claim schemata and thus be able, before a demonstration commences, to form a larger number of more specific counter-explanations.

2.3.2.2 Retrospective analysis

When carrying out a retrospective analysis, the observer has to reconstruct a claim from past evidence. Such evidence may vary in quantity. For example, the observer may base a reconstruction on primary sources of information (i.e., information obtained first hand). Such information may include, for example, the observer's own recollections of a demonstration, testimony obtained directly from other eyewitnesses, and original photographic or film material. The observer may also use secondary sources of information (i.e., information obtained second hand). Such information may include, for example, descriptions of eyewitness testimony conveyed to the observer by other individuals, and photographic material that has already been edited before being shown to the observer.

Depending upon the nature of such material, the information within an observer's claim schemata may vary in both the quantity, and quality. If such schemata do not contain the information needed to reconstruct a claim, the observer may conclude that the claim cannot be analyzed further. This might be the case when important information is absent, ambiguous or unreliable. For example, Carrington (1907) has noted how:

> In reading through descriptions of slate writing seances, we very seldom find the statement made as to who placed the slates on the table, or under the table etc., generally the account reading 'the slates were then placed on the table,' without any qualifying statement as to who placed them there. Accounts of this kind are absolutely worthless, from an evidential standpoint. (p. 53-54).

More recently, Hanlon (1974) has noted that, when investigating phenomena produced by Uri Geller:

> I found it extremely difficult to go back and find out just what happened in a Geller event, because of the...problem of getting accurate descriptions of the event. (p. 173).

In contrast, an observer may believe that a claim can be reliably reconstructed (i.e., the information upon this reconstruction is based appears complete, unambiguous and reliable), and thus will continue with the analysis.

2.3.3 Causal schemata

The nature of the observer's causal schemata (i.e., schemata regarding the strategic, and tactical, fabrication of macro-PK) will influence the counter-explanations developed by the observer. Observers with more enriched causal schemata may be more likely to produce a greater number of more specific counter-explanations, as compared to observers who possess inferior causal schemata.

2.3.4 Adequacy of prior counter-explanations

The development of counter-explanations may also be influenced by the perceived adequacy of hypotheses that have already been developed. For example, the observer may believe that one particular counter-explanation has a high likelihood of being correct, and thus refrain from forming additional explanations. Alternatively, the observer may believe former explanations to be inadequate, and continue to develop additional hypotheses.

2.4 THE PLAUSIBILITY OF COUNTER-EXPLANATIONS

2.4.1 Introduction

This section will outline some of the factors which may effect the way in which an observer assesses the plausibility of any counter-explanations which are being, or have been, developed. The outcome of this analysis can have a considerable effect on the assessment process, as an observer is likely to spend little time considering, or countering, any hypotheses which appear to be implausible.

2.4.2 Claimant capability

An observer may assess a counter-explanation in terms of whether the claimant is, or was, capable of carrying out the trickery required by an hypothesis. This may involve, for example, assessing the physical strength, dexterity or knowledge of

conjuring that would be required to perform a certain type of trickery. The observer would then compare this 'required capability' with the actual capability of the claimant (contained in the observer's claimant schemata [see section 2.2.2.1.1]). A counter-explanation would be seen as implausible if it entails the claimant engaging in trickery of which he/she is incapable, and vice versa. For example, if a claimant is relatively old, an observer may spend little time considering any hypotheses which entail this claimant engaging in any acts of great physical agility.

2.4.3 Simplicity, or obviousness, of explanation

The observer may reject a counter-explanation that appears too obvious, simple or straightforward. For instance, the observer may assume that, if the claimant is an accomplished sleight-of-hand performer, he/she will be unlikely to use fake apparatus, when it is possible to accomplish the same trick via sleight-of-hand.

2.4.4 Past methods

The observer may assess the plausibility of a method with regard to the type of trickery that the claimant has used, or been accused of using, in past demonstrations. For example, an alleged psychic may have performed in several earlier demonstrations. During these demonstrations he/she may have been accused of fabricating macro-PK using one particular method. The observer may assume that the claimant will attempt to use similar types of subterfuge forthcoming demonstrations, and thus reject counter-explanations that do not entail such trickery.

2.5 THE (RE)CONSTRUCTION OF CONTROLS

2.5.1 Introduction

Counter-explanations allow an observer to predict when, where, and how, a claimant may engage, or have engaged, in deception. However, a complete assessment of a claim does not simply entail accounting for that claim via one, or more, counter-explanation(s). This point was noted by Sir Arthur Conan Doyle, when he wrote:

> ...I should warn the critic, however, not to be lead away by the sophistry that because a professional trickster, apt at the game of deception, can produce a somewhat similar effect, therefore the

> originals were produced in the same way. (Cited in Randi, 1982a, p. 15).

Instead, the observer must counter (or, in the case of a retrospective analysis, assess) the likelihood of trickery by (re)constructing the controls (i.e., measures designed to prevent, or detect, deception) which will be, or were, used in a demonstration. This section will first outline some general types of control. It will then describe how an observer may construct, or reconstruct, such controls when conducting active, or retrospective, analyses.

2.5.2 Categories of controls

This section will identify, and discuss, three aspects of control.

First, some controls are designed to eliminate fraud from occurring (referred to as 'barriers'), whilst others are designed to monitor it's occurrence (referred to as 'detectors'). For example, a parapsychologist may wish to prevent a psychic claimant physically bending a target object (e.g., a spoon). To do so, the observer may place the spoon within a sealed test tube. As such, the observer will have placed a barrier (in this case, consisting of glass) around the target. Alternatively, the parapsychologist may wish to detect, as opposed to prevent, the physical bending of the target. For this reason, the parapsychologist may use some form of monitor (such as a film, or video, camera) to observe any instances in which the claimant handles the spoon.

A second distinction can also be drawn between physical, and observational, controls. Physical controls consist of a physical object that is used to counter deception. For example, to prevent the possibility of an accomplice entering a seance room, the investigator may lock all the doors leading to the room. As such, these doors and locks would all classify as physical barriers. Alternatively, the investigators may place some form of light beam inside the doors such that, should the beam be broken, a sound will be activated. The apparatus involved in the production, and monitoring, of this 'beam' would classify as a physical detector. Observational controls counter

deception by placing the target, or target system, under close supervision. For example, a claimant may hold a piece of cutlery between his/her fingers, and, to show that he/she (i.e., the claimant) does not apply physical pressure to the metal, the observer may closely watch the claimant's hands.

A third distinction can be drawn between 'open' and 'hidden' controls. Whereas 'open' controls are accessible to the claimant, 'hidden' controls are concealed from the claimant. For example, an experimenter may wish to detect a psychic claimant applying physical force to a piece of cutlery. To do so, an experimenter may choose to use only open controls. For example, the claimant may be informed that a demonstration will be closely filmed. Alternatively, the experimenter may use hidden controls to detect such deception. For example, Hasted (1981) notes that:

> Of course it is not unknown for a child to exert more manual force [to a target] than he should do. I have devised a rather wicked test for such behaviour. I offer a piece of a special metal that, although in appearance soft and elastic, is in fact brittle and cannot be bent quickly without a precisely monitored dynamic force. If the metal-bender attempts to use force, then there is an extremely strong probability he will break the specimen. (p. 39).

2.5.3 The (re)construction of controls

This section will discuss the (re)construction of controls during an active, and a retrospective, analysis.

2.5.3.1 Active analysis

In an active analysis, the observer must develop effective controls, and ensure that such controls can be properly implemented during the forthcoming demonstration.

For example, to help detect certain types of sleight of hand, the observer may ask a magician to observe the claimant during a forthcoming demonstration. If this were the case, the observer may wish to ensure that the magician will actually act as a competent detector of such trickery, perhaps taking into account the magician's physical well being (e.g., his/her state of health, level of alcohol or drugs, and degree of fatigue), psychological state (e.g., his/her knowledge of conjuring and level of

stress) and the conditions under which the demonstration will take place (e.g., lightning conditions, distance from event to be observed, potential obstructions to observation). The observer should also assess the effectiveness of any physical controls which will be used in the forthcoming demonstration. For example, the observer may intend to prevent the claimant secretly gaining access to target material being held in a locked box. This may be achieved by the observer ensuring that the various measures used to seal the box cannot be easily overcome by the claimant. In addition, the observer should ensure that controls cannot be removed during a demonstration. As noted above, the observer may ask a magician to observe the claimant during the demonstration. If this is the case, the observer should ensure that the magician will not allow his/her attention to be relaxed during this period. For example, the magician may only be able to apply a limited amount of intense attention during a demonstration. This occurred to John Hasted (1981), when attempting to observe one of Uri Geller's key bending performances. After just two minutes of observation Hasted notes:

> Although the operation [Geller apparently bending a key] had taken little more than two minutes, the strain of the close observation was beginning already to tell on me. I do not think that I could have continued at this intensity for very much longer. (p. 11).

Also, the observer should ensure that any controls will be properly implemented during the demonstration. This may prove problematic for several reasons. First, the observer may be limited by ethical considerations. For example, Morris (1986a) has noted that:

> Addressing the social ethics of psychic fraud is not necessarily easy, however. If we burst into a mediumistic camp and grab great handfuls of cheesecloth to show that Aunt Joan is not really available in spirit form, have we necessarily made the world a happier place?..With disillusionment may come despair and worse. (p. 73).

Second, an observer may not be able to implement certain controls due to social limitations. For example, Couttie (1988), in discussing the famous medium D. D. Hume, notes:

> ...in order to put the lack of exposure of Hume in context it is important to realise that in the circles in which he moved, making a fuss was a sin. It would have been very difficult for anyone who saw

> him cheat to make his voice heard and still remain acceptable in polite society. (p. 28).

One should not underestimate the strength of such social forces. For example, Mayhew (1906) describes how, during one seance, he became suspicious of the medium (Mr Craddock) and requested that a search of the medium be undertaken. Mayhew reports that:

> Rear-Admiral Moore [another sitter], who was 'in charge' now assumed command, with the approval of all, and appointed a search committee to search the medium and his wife. The door was locked and the key given to Admiral Moore...The medium however, refused to be searched, and ordered us out. Mrs Craddock attacked Admiral Moore with the fire shovel in her attempts to get the key from him. Admiral Moore again demanded a search of Craddock, who placed himself in a fighting attitude and threatened to 'set about' any one who touched him. (p. 267).

If an observer cannot construct, or implement, effective controls, he/she will conclude that the demonstration cannot be assessed. In such a case, the observer will believe that he/she has thought of a way in which trickery might occur in a demonstration, and is unable to counter such deception. If, however, the observer believes that effective controls have been developed, the observer will continue with the analysis.

2.5.3.2 Retrospective analysis

When carrying out a retrospective analysis, the observer has to reconstruct the controls that were in place during a past demonstration. The observer may also wish to reconstruct information pertaining to the implementation of past controls. This may entail the observer discovering if the claimant could have gained access to, and therefore tampered with, controls before the start of a demonstration. For example, if entry to a seance room was being prevented by the doors of that room being locked, the observer may wish to discover if a claimant could have gained prior access to the doors, and locks, in question. Also, a past demonstration may have used 'hidden' controls. If this were the case, the observer may wish to discover if the claimant could have gained prior knowledge of such controls, perhaps by accessing any documentation which describes these controls. In addition, the observer may also wish to reconstruct information relating to whether previous controls could have been

removed during the demonstration. For example, as described above, a previous study may have involved a magician observing the claimant in order to detect evidence of trickery. If this were the case, the observer may wish to discover if the magician's attention could have been relaxed during the demonstration, perhaps after a relatively long period of close observation.

The issues involved in this reconstruction process are similar to those outlined in section 2.3.2.1.2 (describing the reconstruction of a past claim). For example, information concerning past controls may take the form of the observer's own recollections, the recollections of others, diagrams and photographs, and film or videotape. Additional evidence may also be derived from secondary sources, such as descriptions of eyewitness testimony conveyed to the observer by other individuals, and photographic material that has already been edited before being shown to the observer.

The observer will want to reconstruct past controls in enough detail to assess the effectiveness of such measures. This may involve the observer discovering the construction, and working, of the objects used as physical controls. For example, as noted above, a previous study may have secured target material by locking it inside a small box. If this were the case, the observer may wish to discover the exact way in which the box was secured. Also, an observer may wish to reconstruct the nature of previous observational controls. For example, as noted above, a previous study may have involved a magician observing a claimant for any evidence of trickery. If this were the case, the observer may wish to discover the physical, and psychological, state of that magician, as well as the conditions under which such observation took place. Once reconstructed, the observer would then assess the effectiveness of such controls, as outlined in section 2.4.3.1. In carrying out this analysis, the observer may conclude that past controls were ineffective. This happened, for example, when Jastrow (1900), analyzed Professor Zöllner's testing of Henry Slade. Jastrow concluded that the observational controls enforced at the time of the demonstration were ineffective, noting that:

> ...it is somewhat unexpected to read in the report of a reliable observer who interviewed Zöllner's associates, that 'of the four eminent men whose names have been made famous by the investigation, there is reason to believe one, Zöllner, was of unsound mind at the time, and anxious for an experimental demonstration of an already accepted hypothesis (the fourth dimension of space); another, Fechner, was partly blind, and believed because of Zöllner's observations; a third, Scheibler, was also afflicted with defective vision, and not entirely satisfied in his own mind as to the phenomena; and a fourth, Weber, was advanced in age, and did not even recognise the disabilities of his associates'. None knew anything about conjuring, and...they were certainly not fitted to compete with a professional like Slade' (p. 139)[21].

The reconstruction outlined above may prove problematic. For example, the observer may discover that important information is either missing, ambiguous, or unreliable. If this is the case, the observer will believe that he/she has thought of a counter-explanation for a past demonstration, and is unable to reconstruct the controls used during this demonstration. Alternatively, the observer may have reconstructed the controls used in a previous demonstration, and discovered that such controls were ineffective, or not correctly implemented. If this is the case, the observer will believe that he/she has thought of a counter-explanation for a past demonstration, and the controls used in that demonstration were insufficient to counter such trickery. Either of these scenarios will result in the observer believing that a past demonstration cannot be assessed further. If, however, an observer believes that past controls have been accurately reconstructed, and appear effective, the observer will continue with the analysis.

2.6 THE ASSESSMENT OF THE CONDITIONS APPARENTLY NEEDED TO ELICIT MACRO-PK

2.6.1 Introduction

This section of the model is concerned with the way in which the observer assesses if the conditions of a demonstration will be, or were, psi conducive.

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[21]It should be noted that this interpretation of the Zöllner investigation has been challenged by a number of writers including Inglis (1977) and Randall (1982).

2.6.2 Active analysis

When conducting an active analysis, the observer must ensure that the conditions, apparently needed to maximise the occurrence of psi, are present during the demonstration. This process may often be quite problematic. The claimant may object to certain controls. For example, Hanlon (1974) has noted that, in Puthoff and Targ's testing of Uri Geller, the experimenters were:

> ...so eager to keep Geller around that they worked themselves into a box by meeting his every whim. If he threatened to walk off they would relent and do what he wanted. Of course, they lost control of the situation and it got worse and worse and worse. (p. 180).

If this is the case, the observer may have to modify the counter-explanations being considered, and develop additional controls. The process of protocol development can entail a considerable amount of back and forth communication between claimant and observer. Eventually either party may decide that such a protocol cannot be developed, and the demonstration aborted. Alternatively, a protocol, acceptable to both parties, may be developed and the demonstration undertaken.

2.6.3 Retrospective analysis

In a retrospective analysis, the observer must first assess if ostensible macro-PK was produced at the demonstration in question.

If such phenomena ~~was~~ were produced, the observer can continue with the analysis, ~~despite~~ whether or not the conditions of the demonstration were psi conducive. If, however, no apparent macro-PK was produced, the observer must decide if the conditions, under which the demonstration took place, were psi conducive. If the observer decides that conditions were not psi conducive, he/she will conclude that the original demonstration was not well designed and that the claim was not properly assessed. However, this may be a hard decision to make, as the observer has to assess whether the conditions of the demonstration were clearly understood, and agreed to, by the claimant. This decision may be based, in part, upon relevant statements made by the claimant before, during, or after, the demonstration. For example, Marks and Kammann (1980) note that, when Uri Geller failed to reproduce a drawing sealed

inside an envelope, Geller:

> ...protested that it [the target drawing] was difficult because it was 'not clear' and stated that he could have got it right if it wasn't shaded inside...He [Geller] said he could never get drawings if they were shaded in. (p.100).

If an observer believes these statements, he/she may conclude that the study was badly designed, and was not a fair test of the claimant's ability. Alternatively, the observer may conclude that the conditions of a demonstration were psi conducive. If this is the case, the assessment procedure will continue.

2.7 ASSESSING THE RUNNING, AND RESULTS, OF A DEMONSTRATION

2.7.1 Introduction

This section will first detail some of the factors involved in assessing the running of an active demonstration. Second, the section will outline the way in which the results from both an active, and retrospective, analysis are assessed.

2.7.2 Running a demonstration

When running an active demonstration, the observer has to ensure that controls were properly implemented during that demonstration. This may entail the observer ensuring that the claimant did not tamper with controls before they are used in a demonstration. For example, when securing a box containing target material, the observer may ensure that the box has already been tampered with by the claimant, such that it can easily be opened at a later point in time. In addition, the observer may wish to minimise the likelihood that the nature of any hidden controls have been concealed from the claimant, perhaps by placing them in an especially secure location. If the observer discovers that controls were not properly implemented, he/she may conclude that the demonstration cannot be assessed further. However, if controls were implemented properly, the observer will continue with the analysis.

In the case of a retrospective analysis, the reconstruction, and assessment, of the way in which past controls were implemented has already been discussed in section 2.5.3.3.

2.7.3 Assessing results

The procedure involved in assessing the outcome of a demonstration differs, according to the type of controls employed during that demonstration. This section will discuss the assessment procedure for demonstrations involving barriers, and detectors.

2.7.3.1 The use of barriers as controls

If the demonstration used 'barriers' as controls (see section 2.5.2), the observer must first decide if any apparent macro-PK was produced during the demonstration (in a retrospective analysis, this process will already have been carried out [see section 2.6.3]). If no ostensible macro-PK was produced, the observer will conclude that the claimant has failed. Alternatively, the observer may conclude that such phenomena were produced, and, given that the various barriers precluded trickery, such phenomena will appear inexplicable.

2.7.3.2 The use of detectors as controls

If the demonstration used 'detectors' as controls (see section 2.5.2), the observer must decide if any apparent macro-PK was produced during the demonstration (again, in a retrospective analysis, this process will already have been carried out [see section 2.6.3]). If no ostensible macro-PK was produced, the observer may conclude that the claimant has failed. If this was the case, the observer may appraise any evidence of fraud, detected during the demonstration. If evidence of fraud is discovered, the observer may consider any hypotheses that might provide an alternative explanation for such evidence. For example, Inglis (1984) describes how, in the Scientific American tests of the Mina Crandon, the experimenters discovered a carpenter's rule (which could have been used to fabricate the phenomena produced during the seance) inside the box constructed to constrain the medium. In an attempt to explain away this discovery, Mina Crandon accused one of her investigators, Harry Houdini, of placing the ruler inside the box to discredit her.

Alternatively, ostensible macro-PK may have been produced during the demonstration.

If this was the case, the observer will have to decide if any apparent evidence of fraud was detected during the demonstration. If no evidence of fraud was discovered, the phenomena produced will appear inexplicable. If apparent evidence of fraud was discovered, the observer will have to consider if such evidence explains away the ostensible macro-PK. For example, Inglis (1984) describes how William Crawford noted that on some occasions the pseudo-pods, apparently produced by Kathleen Goligher, were able to leave impressions in bowls of clay. However, Crawford also noted that the end of the pseudo-pod appeared to be covered in a material similar to the medium's stockings and that, after the seances 'various marks are left by the clay on the medium's stockings and shoes' (cited in Inglis, 1984, p. 80). As noted by Inglis:

> The discovery of the fabric impressions on clay, and still more of clay on the medium's person, would have been regarded, even by many of those who accepted materialisations, as proof of fraud. (p. 80),

yet notes that Crawford believed that:

> ...as the ectoplasm emerged from her it occasionally took on the appearance of whatever fabric she was wearing, and then carried bits of it, along with fluff, to the clay; and brought back traces of the clay to the point at which the ectoplasm re-entered her body. (p. 80).

If the observer is unable to account for the ostensible macro-PK by evidence of fraud, he/she will conclude that the phenomena produced were inexplicable. A vital part of this process will involve assessing any hypotheses that might provide an alternative explanation for apparent evidence of fraud.

2.8 SUMMARY

This chapter has briefly outlined a proto-model that accounts for the way in which an observer analyses a demonstration of ostensible macro-PK. First, the chapter discussed how an observer may frame a demonstration as either a magic trick, a pseudo-psychic hoax or a display of genuine macro-PK. The three major factors (i.e., cognitive, motivational and social) which influence this framing process were discussed. In addition, the chapter outlined the way in which such framing may influence an observer's analysis of a demonstration. The chapter next outlined how an observer develops counter-explanations for a demonstration, noting how such

hypotheses depended upon the observer's claim schemata, causal schemata and perceived adequacy of prior counter-explanations. Next, the chapter outlined how such counter-explanations were assessed for plausibility. Following this, the chapter discussed how an observer may develop controls designed to counter the trickery predicted by the various counter-explanations. Three types of control were discussed, namely detectors/barriers, physical/observational and open/hidden. The chapter next outlined how the assessment process can be influenced by consideration of the conditions apparently needed to elicit psi. Finally, the chapter noted how an observer assesses the running, and outcome, of a demonstration.

CHAPTER THREE

THE FABRICATION OF MACRO-PK

3.1 INTRODUCTION

The previous chapter described a proto-model that outlined how an observer analyses ostensible macro-PK. This chapter will build upon that work, noting how this analyses can be exploited by both pseudo-psychics, and magicians (collectively referred to as 'fake claimants').

The chapter will briefly restate portions of the proto-model, and, step by step, describe how an observer can be deceived during both an active, and retrospective, analyses.

3.2 MISFRAMING A DEMONSTRATION

3.2.1 Introduction

Section 2.2 described how an observer may frame ostensible macro-PK as either a magic trick, a pseudo-psychic hoax or a display of genuine psychic ability. Most magicians, and genuine psychics, wish the observer to frame their demonstrations correctly. In contrast, the pseudo-psychic wishes to deceive the observer into misframing his/her fake demonstration as genuine. This section will discuss how a pseudo-psychic may manipulate various cognitive, motivational and social factors (outlined in section 2.2) to achieve this goal.

3.2.2 Exploiting the observer's claimant, and claim, schemata

Section 2.2.2.1 described how an observer's framing of a demonstration depends, in part, on the degree to which that observer associates the claimant, and claim, with certain schemata. This section will discuss how this process is exploited by a pseudo-psychic.

3.2.2.1 Exploiting an observer's claimant schemata

Section 2.2.2.1.1 outlined some of the information contained within an observer's claimant schemata. The section also noted how such schemata may influence the way in which an observer frames a demonstration of ostensible macro-PK. The pseudo-psychic manipulates the content of these schemata, to increase the likelihood of the observer viewing him as a genuine psychic. Such manipulation may take several forms.

First, the pseudo-psychic may appear incapable of the type of trickery required to fabricate macro-PK. For example, the pseudo-psychic may conceal any manual dexterity he/she possesses. Thus, Fuller (1975), when advising pseudo-psychics how to behave in the company of those they aim to deceive, notes:

> Don't act like a magician...Act clumsy with your hands...You can do a double lift[22] and some easy coin moves, but never let anybody know that you can do any sleight of hand. (p.11).

A pseudo-psychic may also attempt to conceal previous evidence, or accusations, of trickery. For example, Hansen (1990) describes how Steve Shaw (one of the pseudo-psychics involved in Project Alpha) had been accused of trickery prior to Project Alpha (see McBurney & Greenberg, 1980), yet did not mention this to investigators at the McDonnell Parapsychology Laboratory. Also, a pseudo-psychic may conceal the true extent of his/her knowledge of conjuring, or psychic fraud. For example, 'Tim', the pseudo-psychic investigated by Delanoy (1987) was a member of the International Brotherhood of Magicians, but failed to mention this whilst being investigated.

In addition, the pseudo-psychic may conceal evidence that suggests he/she has any motivation to engage in psychic fraud. For example, a fake faith healer may assure an observer that he/she never accepts payment for his/her services, insinuating that he/she has no motive to deceive. However, as noted by Thomas (1989):

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[22]A 'double lift' is a sleight that involves simultaneously picking up the top two cards of a deck as if they were a single card. (see Whaley, 1989, p. 227).

> Apparent lack of financial inducements is no guarantee against fraudulent practise. Randi reports that 'psychic surgeons' did not charge a fee for their services: they received a registration fee and donations. (p. 382).

Also, an observer may not realise the range of factors that motivate an individual to deceive. For example, various authors have suggested that some individuals deceive simply for enjoyment (e.g., Moss, 1977, Ekman, 1985). It has been suggested that this, in part, may account for the success enjoyed by the two girls who fabricated the 'Cottingley' fairies (see, e.g., Randi, 1982a, Cooper, 1990). For example, Randi notes how some observers believed that:

> The two girls had no stake in the deception that could have brought them money...The assumption made is that only money and notoriety are plausible motives. Ego and just plain fun are not thought to be sufficient. (p. 37).

In addition, Morris (1986b) has noted how a pseudo-psychic may be motivated by personal fame, raised self-esteem, a desire to be socially helpful, and/or increased personal power. The skilled pseudo-psychic may be able to conceal some, or all, aspects of his/her motivation from an observer.

The pseudo-psychic may also attempt to convince observers that he/she would not engage in psychic fraud, even if capable of doing so. This may involve the pseudo-psychic fabricating certain personality traits, such as honesty, sincerity, and friendliness. For example, Fuller (1980), in his manual of pseudo-psychic trickery, advises:

> ...when you're being tested by a parapsychologist, you'll catch him doing something stupid - like leaving unguarded a sealed envelope with a target drawing. When this happens, bawl the hell out of him. It will impress him no end with your honesty. It will prove to him you can't be a charlatan. (p.68).

Also, Delanoy (1987), in writing about her work with one pseudo-psychic, writes that:

> I felt I had come to know Tim [the pseudo-psychic] fairly well. We had established what appeared to be an honest, friendly and trusting rapport. (p. 252),

and notes how:

> ...[Tim] devoted a great deal of time to working with us, and also had a relatively long journey getting to and from our lab. These things, particularly when combined with his very cooperative and friendly manner may well have biased me towards liking him. This in turn may have coloured my perspective in viewing his claims. (p.255).

Finally, the pseudo-psychic may fabricate some of the physical characterises (such as dress and speech content) that the observer associates with a genuine psychic. For example, Corinda (1958), in his classic text on mentalism and spirit magic, writes:

> Personal appearance has a lot to do with the way in which the audience regard you. Consider what you want them to think of you. If you wish to present your mentalism as supernatural phenomena, then you are almost obliged to appear supernatural...Question people and ask what they think a Medium looks like (p. 392),

as well as noting that a pseudo-psychic should always use the type of language that the observer associates with a genuine psychic:

> Reference to the audience or place of performance is made with phrases such as 'Meeting, Gathering, Sitting or Seance' and direct reference to the audience is made by 'Sitters, Friends or The Gathering' (avoid 'Ladies and Gentlemen)...Never use the term 'Trick' or 'Effect'. Always refer to the actions of a performance as 'Psychical Experiments, Mediumistic Tests, Phenomena etc'. (p. 276).

3.2.2.2 Exploiting an observer's claim schemata

Section 2.2.2.1.2 outlined some of the information contained within an observer's claim schemata. In addition, the section noted how these schemata may influence the way in which an observer frames a demonstration of ostensible macro-PK. The pseudo-psychic may manipulate the content of his/her claim, such that it is more likely to be perceived as genuine. Such manipulation may take several forms.

First, the pseudo-psychic may claim to produce the type of macro-PK that the observer finds believable. Thus, an observer may believe that PK can rarely be used to produce really large physical effects. As such, the pseudo-psychic may only fake effects that appear (when compared to those of the magician) fairly trivial. As noted by Truzzi (1983):

> ...it is perhaps actually the very triviality of such an action that lends it plausibility. (p. 18).

Also, when being formally assessed, a sophisticated pseudo-psychic might discover trends in previous investigations of macro-PK, and conform to those patterns. Randi (1986) has noted that part of the success of Project Alpha rested upon the two pseudo-psychics discovering, and then conforming to, their investigators' notions concerning the nature of psi. For example, Randi notes how:

> Steve and Mike [the two pseudo-psychics] complained about the electronic equipment putting out 'bad vibes'...to satisfy this established bit of mythology....Also, they were careful to mention that in early childhood both had experienced electric shocks, after which they had become aware of their psychic powers. (p. 164).

Finally, the pseudo-psychic may state that his/her psychic ability is only elicited under the conditions that the observer associates with the production of genuine macro-PK. Thus, many pseudo-psychic manuals advise their readers to seek out, and conform to, the conditions under which an observer believes genuine psi might occur. For example, 'Invocation' (a magazine devoted mainly to bizarre magic) contained articles that advised it's readers on how to fabricate certain types of unusual rituals which some observers (e.g., those interested in occultism) may find particularly convincing (e.g., Kirke, 1977, Karnak, 1977). Also, Corinda (1958), when discussing how to create a fraudulent seance, notes:

> Start off by creating strange and exotic smell - use Joss Sticks or Oriental Incense which gives a weird, and mysterious odour strange to the atmosphere...Concentrate on unusual lighting schemes. Make particular use of red lamps for any part of the seance that involves physical manifestations. (p. 277).

3.2.3 Exploiting the motivational factors which influence the framing process

Section 2.2.2.2 discussed how various motivational factors may influence the way in which an observer frames a demonstration. The pseudo-psychic may attempt to exploit these factors. For example, the pseudo-psychic may exploit an observer's physical, and emotional, needs. An observer may have a serious illness and thus a strong need to recover. As such, a pseudo-psychic may claim to possess psychic healing powers, in the hope that the observer will be strongly motivated to frame the demonstration as genuine. Also, if an observer has recently suffered a bereavement, he/she may be exploited by a fake medium who promises some form of

communication with deceased friends, and relatives. Two additional points should be noted. First, the flexible pseudo-psychic may modify his/her claim to satisfy the needs of a particular observer, or set of observers. Second, researchers may not be immune from such forms of manipulation. For example, Delanoy (1987), after working with one pseudo-psychic, noted:

> We are all familiar with the difficulties arising from the so-called 'elusive nature of psi'. In short, we cannot study a phenomenon unless we can first produce it. Thus, Tim's [the pseudo-psychic] claims, that he could produce macro PK at will, suggested exciting possibilities. I wanted his claims to be true and this desire may have influenced my evaluation of his performance. [Emphasis mine] (p. 256).

3.2.4 Exploiting the social factors which influence the framing process

Section 2.2.2.3 noted that the framing process may be influenced by interpersonal pressure. The pseudo-psychic may exploit this process by firmly stating that he/she believes his/her psychic ability to be genuine. Delanoy (1987) notes how one pseudo-psychic was able to employ consummate acting skills, and firmly appeared to believe in the validity of his abilities. In addition, the pseudo-psychic may ensure that, when the observer attends a demonstration (e.g., a fake seance), he/she is surrounded by individuals who are convinced of the claimant's validity.

3.3 PREVENTING DEVELOPMENT OF CORRECT COUNTER-EXPLANATIONS

3.3.1 Introduction

Section 2.3 outlined how an observer may develop a number of counter-explanations to account for the way in which ostensible macro-PK may be fabricated. This section will discuss how both magicians, and pseudo-psychics, may prevent the observer from developing the 'correct' hypothesis (i.e., the hypothesis that correctly accounts for the trickery involved in a demonstration). The fake claimant can then shown these erroneous explanations to be wrong, and thus the observer will have no ready hypothesis to account for the phenomena produced.

Section 2.3 noted that the development of counter-explanations can be influenced by

the observer's claim schemata, causal schemata (i.e., schemata relating to the methods used to fabricate macro-PK) and perceived adequacy of prior counter-explanations. This section will outline how fake claimants exploit one, or more, of these factors.

3.3.2 The manipulation of claim schemata

This section will note how a fake claimant may manipulate an observer's claim schemata during both an active, and a retrospective, analysis.

3.3.2.1 Active analysis

During an active analysis, a fake claimant may manipulate an observer's claim schemata in one of two ways.

First, the fake claimant may prevent the observer from forming a detailed representation of the claim. For example, a fake claimant may not state, before the demonstration, the nature of the target, target system or intended psychic influence. This strategy is frequently utilised by magicians. Henri Decremps (1785), noting the first of his 'general principles' of conjuring, writes:

> Never acquaint the company before-hand with the particulars of the feat you are about to perform. (p.123).

The same advice can also be found in other standard textbooks of magic, written both at the turn of the century (e.g., Robert-Houdin, 1878), and more recently (e.g., Tarbell, 1953, Wilson, 1988). The pseudo-psychic may conceal the nature of a forthcoming demonstration by stating that he/she has little control over his/her psychic ability, and therefore cannot predict the phenomena that might occur[23]. Without

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[23]This strategy may also help the fake claimant, should a demonstration not go according to plan. This point was clearly noted by Robert-Houdin (1878), who notes:

> However skilful the performer may be, and however complete his preparations for a given trick, it is still possible that some unforseen accident may cause a failure. The only way to get out of such a difficulty is to finish the trick in another manner. But to be able to do this, the performer must have strictly complied with this important rule: never announce beforehand the nature of the effect which you intend to produce. [emphasis mine] (p. 33).

detailed claim schemata, it is problematic for an observer to develop specific counter-explanations. As a result, the observer may have to wait until during, or after, the demonstration before developing such hypotheses.

Second, the fake claimant may manipulate the observer into forming incorrect claim schemata. This may involve deceiving the observer as to the nature of the intended target. For example, the magician may remove a pack of playing cards from his/her pocket, stating that he/she has the ability to make objects shrink in size. The magician then removes the cards from the card case. The observer may assume that the magician intends to influence the size of the playing cards, and thus focuses his/her attention on these cards. However, the magician may suddenly reveal that it is the card case, not the cards, which has shrunk in size. Given that the observer concentrated his/her attention on the cards, the magician was free to manipulate the card case without fear of detection. A fake claimant may also deceive the observer regarding the psychic influence that he/she intends to produce. Magicians occasionally utilise this strategy. For example, at the start of Ascanio's 'knives and colour-blindness' routine (described in Torre, 1975), the magician states that he/she is about to make a penknife vanish, and places the knife into his/her hand. However, in reality, the magician does not intend not to make the knife vanish, but rather change colour. As such, the observer may be likely to form erroneous counter-explanations. For example, the observer may suspect, for example, that the magician is secretly going to move the knife from his/her hand to a place of concealment (e.g., his/her jacket pocket). This hypothesis, along with all others based upon the 'vanishing knife' scenario, are likely to be incorrect.

3.3.2.2 Retrospective Analysis

When carrying out a retrospective analysis, an observer has to reconstruct information relevant to claim schemata. A fake claimant may use two stratagems to deceive the observer during this process.

First, a fake claimant may deceive the observer into reconstructing incorrect claim

schemata. This may be achieved in several ways, depending upon the type of information around which the reconstruction is based. The second stratagem involves a claimant preventing the observer from being able to reconstruct a past demonstration at all. Each of these stratagems will be discussed in turn.

The observer may be basing a reconstruction upon his/her own recollections of a past demonstration. The magician, and pseudo-psychic, may use various stratagems during a demonstration to bias the observer's later recollection of that demonstration. For example, to manipulate an observer into forgetting the part of a demonstration that contained trickery, magicians utilise the notion of 'time misdirection'. This has been described by Leech (1960) as:

> ...the ruse of allowing a certain amount of time to elapse between the accomplishment of a secret sleight or movement and it's ultimate result. (p.10).

Thus a magician may appear to pass a coin from his/her right hand into his/her left hand, yet in reality, secretly retain the coin in his/her right hand. If the magician were using 'time misdirection', he/she may allow a few seconds to pass before opening his/her left hand to reveal that the coin has apparently vanished. The time lag, between the magician apparently placing a coin in his/her hand and then showing that the coin has vanished, is designed to manipulate the observer into forgetting where the coin was last actually seen. As noted by Ammar (1983), if the magician were to show that the coin has vanished immediately after apparently passing the coin into that hand:

> ...the spectators try and reconstruct by asking themselves where they last knew the coin to be and what actions or motions have taken place since that time...and..they'll probably have you. On the other hand, if Time Misdirection is employed...the we can further mislead the audience to the point that reconstruction is virtually impossible. (p. 8).

In addition, magicians, and pseudo-psychics, may use 'verbal recapping'. This has been described by Nardi (1984):

> ...in recapping the sequence a magician often inserts events that have not occurred, yet go unquestioned by the audience. (p. 32).

This techniques is often used by pseudo-psychics. For example, Fuller (1975) notes:

> Keep saying things to distort their [the observers] memories. If you declare in a loud voice that you never touched a key when it bent, that's what they'll remember. They'll never remember that you had the key in your hands a few minutes before. (p. 15).

An observer's recollection of a demonstration may also be distorted by the fake claimant's use of 'in transit' actions. These have been defined by Lehn (cited in Tamariz, 1988):

> In all actions there is a main action, and a series of minor actions that you [the magician] have to perform in order to execute the main action. These minor actions are in-transit, 'on the way', and when it is possible to realise sleight during these intermediate actions, they will pass unnoticed. Ex: Your attention is drawn to a piece of lint on the table, and in order to remove it with your right hand, you leave the (double[24]) card in your right hand on top of the deck in your left., but your attention is still on the main action, the removal of the lint. You remove it and take the card back in your right hand (single card) and place it on the table. The dumping of the extra card occurred during an action 'in transit' that the audience will probably forget. (p. 184).

The extent to which an observer's testimony may be made unreliable should not be underestimated. For example, Hodgson & Davey (1887), in their classic study of eyewitness testimony in relation to fake slate writing phenomena, consistently found that sitters often recalled events that did not occur, did not recall events that did occur and incorrectly recalled the order of events (this work will be described in detail in Chapter Four).

Additional sources of bias may be encountered by the observer who bases a reconstruction upon the testimony of other individuals. For example, if an eyewitness watches a pseudo-psychic, and believed the claimant to be genuine, that eyewitness may not wish the observer to 'debunk' (i.e., produce a counter-explanation) the demonstration. If this were the case, when relating the event to an observer, the original eyewitness may omit, or distort, information that suggests possible trickery. Randi (1982a), accuses a Life magazine reporter of producing an inaccurate description of the conditions under which the alleged psychic, Ted Serios, performed:

> In 1967, writer Paul Welch had a piece on Serios in Life

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[24]Two cards held as one.

> magazine...The paper tube, which Serios called his 'gismo' and was used to conceal his optical device, was never mentioned. Although it was prominent in all of Serio's work, and showed up in most of the photos, Life chose to censor all reference to it to make a better story, for once the 'gismo' was made known it would not be hard to figure out that the experimenters were allowing rather wide latitude for procedure in their 'scientific tests'[25]. (p 223-224).

The observer may also reconstruct information from photographs, or diagrams. Such evidence may be fabricated, or biased, in several ways. For example, a fake claimant may use some form of trick photography to create evidence of ostensible macro-PK. For example, short exposure photographs can be used to fabricate evidence of apparent human levitation (Herbert, 1939). In addition, Sharpe (1985) outlines how photographic evidence can be fabricated by the use of double exposure, and the retouching of negatives. The fake claimant may bias, as opposed to fabricate, such evidence. For example, a pseudo-psychic may have successfully deceived a researcher into believing that a display of fake macro-PK was genuine. If this were the case, the researcher may wish to take a photograph of the laboratory in which such phenomena were produced. However, the pseudo-psychic may realise that this photograph may, to certain observers (e.g., magicians), contain clues as to the type of trickery used in the demonstration (e.g., the photograph may reveal the presence of a small 'gimmick'[26] that has not been noticed by the researchers). If this is the case, the pseudo-psychic may attempt to remove such evidence from the photograph, or conceal it from view. This could entail, for example, the pseudo-psychic noting that he/she is very tired and asking that any photography is postponed until the next morning. In the meantime the pseudo-psychic returns to the laboratory and removes the gimmick.

The observer may also reconstruct information based on film, or videotape,

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[25]It should be noted that one of the main experimenters concerned, Jule Eisenbud, has disputed that Serios could have fabricated all his phenomena in this manner (see Eisenbud, 1989).

[26]Any secret device (usually a small object) used within a magic trick (see Whaley, 1989, p. 312).

recordings. Again, such evidence could be fabricated, or biased. A fake claimant may fabricate evidence of ostensible macro-PK via fake photography (see, for example, Sharpe's [1985] description of how stop motion photography can be used to fabricate macro-PK). The fake claimant may also bias such evidence. For example, Harris (1985), in his advice to individuals who fake PK metal bending, notes:

> ...the cameraman is only a human being looking through a lens system. He is just as prone to misdirection as a spectator...When the camera comes in for a close-up shot, which is a must for any small effect such as a Geller effect, it can only concentrate attention on a very small area or field. This area may consist of the left hand, leaving the right hand well out of audience view, enabling it to perform all sorts of useful tasks. In other words, if one can draw attention and hold it in a close-up on one hand, the other hand is free to secretly bend a key or a spoon or to ditch something in a pocket. This is of course very basic. It can become more involved...a monitor...allows the performer to actually watch what the spectators at home are seeing...It acts like a mirror which allows any angle adjustments necessary to be made. The performer of magical tricks has never had it so good. (p. 21-22).

Finally, an observer may reconstruct a claim based around 'secondary sources' of information (i.e., information obtained second hand). Such information may include, for example, descriptions of eyewitness testimony conveyed to the observer by other individuals, and photographic material that has already been edited before being shown to the observer (see section 2.3.2.2). The information, upon which these secondary sources are based, may be biased by any of the factors outlined above. In addition, secondary sources may be vulnerable to extra sources of bias. Secondary source may not contain important information that was included in it's primary source. For example, film footage may be edited such that important information has been omitted. Alternatively, the secondary source may have mis-interpreted information contained within the primary source.

A second stratagem, used to bias the reconstruction of a claim, involves a claimant preventing the observer from being able to reconstruct a past demonstration at all. This stratagem is used to prevent a retrospective analysis from taking place and may involve, for example, the fake claimant creating confusion, and chaos, during the

demonstration. Fuller (1975), in his advise to pseudo-psychics, notes:

> Nobody but nobody can remember exactly what happened during a trick...When you're working for a group, keep talking and moving fast. Create maximum chaos. Flit from one task to another...Things get so confused that nobody'll be able to remember anything clearly. (p. 15).

If this occurs, an observer will be unable to reconstruct, and therefore reassess, the demonstration in question.

3.3.3 The exploitation of inappropriate causal schemata

Section 2.3.2 described how an observer may use causal schemata (relating to both the strategic, and tactical, fabrication of macro-PK[27]) to develop counter-explanations. If such schemata are incomplete, or inaccurate, an observer may be unable to form appropriate counter-explanations. A fake claimant may be aware of, and thus be able to capitalise on, such inadequacies.

First, the observer may not be aware of the different strategies used by fake claimants to fabricate macro-PK. Second, the observer may have an incomplete, or inaccurate, understanding of the tactics that can be used to implement the strategies discussed above. For example, the observer may not appreciate the myriad of tactics that may be secretly used to apply force to cutlery during a demonstration (see, for example, Harris, 1985). Also, the claimant may use a piece of apparatus of which the observer is unaware. As Harold Kelley (1980) has noted:

> ...some of the gimmicks of the magic art are interesting because they are difficult to imagine. In a sense they are unthinkable. This property seems to derive from there being a sharp incongruity between the audience's conception of a particular object and a property it is constructed actually to have, as is the case with a folding coin[28] or hollow dice. (p.31).

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[27]See section 1.2.2.3 for the distinction between tactical, and strategic, explanations of fabricated psi.

[28]A coin faked by sawing it into two or more strips and hinging them together, usually by the use of a small elastic band running around the perimeter of the coin. (see Whaley, 1989, p. 292).

Alternatively, the observer may be unaware of the esoteric means by which a target can be influenced. For example, when attempting to assess strange physiological effects produced by a claimant, an observer may be unaware of the various ways in which an individual can influence the working of his/her own body by normal means alone (see, e.g., Fisher, 1979). For example, the performer may place a small ball under his/her left armpit and, by pressing his/her left arm against the ball, cause the pulse in his/her left wrist to cease. Magicians, and pseudo-psychics secretly employ many esoteric scientific, medical, and mathematical principles during their demonstrations. Indeed, this stratagem has a long history, with Triplett (1900) noting:

> The priests exploited the secrets of science for a thousand years...Some of the positive sciences had their birth in the temples of the ancient religions. The miracles performed during the initiatory rites of the sacred mysteries are to be explained as physical and chemical effects...Sir David Brewster says on this subject that there can be little doubt that the concave mirror was the principal instrument used in connection with the pretended apparitions of the gods and goddesses in the ancient temples. (p. 449-450).

Conjurors also use this stratagem when attempting to fool fellow magicians. Some of the leading inventors of magic have developed their methods in isolation from other magicians. For this reason, such methods deceive magicians whose causal schemata consist of the 'mainstream' methods of magic. For example, Tony Slydini devised a new style of 'lapping'[29] and, because of this, consistently deceived lay audiences, and experienced magicians, alike (see Ganson, 1960). Perhaps, as noted by Truzzi (1983):

> ...the real lesson to be learnt from doing magic is that everyone is fallible, that everyone can be fooled. (p. 34).

To prevent observers improving their causal schemata, fake claimants ensure that many secrets of conjuring, and pseudo-psychic trickery, remain clandestine. This is achieved in several ways. For example, many magic organisations have their members swear an oath of secrecy. In addition, fake claimants may not mention, or even hint at, the type of trickery that is being used during a demonstration. This is

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[29]A form of magic wherein the conjurer, seated behind a table, is able to secretly move small objects to, and from, his lap (see Whaley, 1989, p. 389).

epitomised in a well known phrase among magicians[30], 'don't run when nobody is chasing you'. As explained by Dai Vernon:

> Many magicians consider that it is desirable for even the most innocent looking piece of apparatus to be examined. They often create suspicion by the mere fact that, having an article examined, they suggest to an audience that the article could be faked. (Ganson, 1958, p. 36).

Also, many handbooks of conjuring advise magicians against mentioning specific tactics of trickery during a demonstration, even if that demonstration does not involve such trickery. As noted by Robert-Houdin (1878):

> Many conjurors make a practice, in the course of their performances, of indicating such and such expedients of the art, and of boasting that they themselves do not use employ the method in question. 'You observe' they will remark, 'that I don't make the pass - that I don't change the card' etc.: and yet, a moment later, they use in some other trick the expedient they have just revealed. It follows, as a natural result, that the spectator, being thus made acquainted with the artifices of which he would otherwise have known nothing, is put on his guard, and is no longer open to the deception. (p. 34).

Whilst Fitzkee (1945), in agreement, wrote:

> Nothing the performer says should suggest, directly or indirectly, a clue to the method...If you are doing a rope trick it is not advisable to mention secret loops, cement, fasteners, substitutions or any other of the numerous contrivances magicians have and do apply to this trick. (p. 102).

3.3.4 'Sucker' tricks

Section 2.3.4 noted how an observer's development of counter-explanations may be influenced by the perceived adequacy of prior explanations. For example, if an observer has developed an explanation that he/she believes to be correct, he/she may cease to develop any additional hypotheses to account for the claim. Fake claimants exploit this mechanism by the use of 'sucker tricks'. These have been defined by Whaley (1989) as:

> A double bluff; the method of leading the audience to believe they

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[30]This phrase has been credited to Al Baker (see, for example, Ganson, 1958, p. 36).

> have detected a trick's method and the pulling a double bluff to surprise them even more. (p. 659).

For example, in one effect, known as 'Where Did the Ducks Go?', the magician may announce that he/she will make several ducks disappear. The magician displays a table covered with a cloth that (suspiciously) hides the large space underneath the table. On top of the table rests a large box. Several ducks are placed into the box. Each side of the box is then dismantled and removed from the stage. The ducks have apparently disappeared. However, because of the suspicious nature of the table cloth, the audience believes that the ducks may be concealed beneath the table. The magician then removes the cloth to reveal that this is not the case. Thus, because the audience were led to believe that one counter-explanation (i.e., that the ducks were concealed beneath the table) was correct, they failed to develop alternative hypotheses (e.g., that the ducks may have been concealed behind one side of the box as it was dismantled, and removed from the stage).

3.4 ERRONEOUS ASSESSMENT OF AN EXPLANATION'S PLAUSIBILITY

3.4.1 Introduction

Section 2.4 discussed the various ways in which an observer assesses the plausibility of a counter-explanation. Even if the observer develops the correct strategy or tactic, a fake claimant may be able to manipulate that observer into erroneously rejecting the hypothesis as implausible. This section will discuss how such a stratagem may be achieved.

3.4.2 Erroneous assessment of claimant capability

Section 2.4.2 noted that an observer may reject a counter-explanation as implausible, if the claimant does not appear capable of performing the trickery required by such an hypothesis. As such, a fake claimant may deceive an observer in two ways. First, the observer may be deceived into underestimating the claimant's capability to engage in deception. For example, the observer may correctly assume that a claimant would have to possess great manual dexterity to fake a certain type of macro-PK (e.g., the continual production of small objects). The fake claimant may possess this expertise,

but conceal it from the observer. As such, the observer may erroneously assume the claimant incapable of such sleight-of-hand. Second, the observer may underestimate the necessary skills, resources etc., needed to carry out a counter-explanation. For example, the observer may assume that a certain sleight-of-hand would take many years to perfect when, in reality, this is not the case. Again, this may cause an observer to erroneously reject an hypothesis as implausible.

3.4.3 Rejection due to simplicity/obviousness

Section 2.4.3 noted how an observer may reject counter-explanations that appear too simple or obvious. Fake claimants may exploit this assumption by purposely choosing a method which is likely to be reject by an observer on the grounds of simplicity. For example, Hanlon (1974) does not consider some of the simpler methods by which Geller could have attempted to fake some of his demonstrations (outlined, for example, by Randi, 1982b), instead proposing far more complex methods (e.g., the use of a radio receiver concealed within Geller's tooth, and a faked 'radio die' which electronically signals which of it's faces is uppermost). Also a fake claimant may manipulate an observer into rejecting an explanation as obvious. For example, a fake claimant may be highly skilled at faking certain types of macro-PK by using magnets concealed on his person (e.g., built into a finger ring). Before the start of a demonstration, the fake claimant may briefly mention that some fake psychics use concealed magnets to fabricate macro-PK. These comments may 'double bluff' the observer into rejecting the notion that the claimant would himself employ such methods.

3.4.4 Restriction of past methods

Section 2.4.4 noted how an observer may reject a counter-explanation if it does not entail the type of trickery that the claimant had used, or been accused of using, during previous demonstrations. A fake claimant may exploit this assumption, by developing a number of ways of fabricating a certain type of macro-PK, and then switching methods both within, and between, demonstrations. For example, many texts on magic, and pseudo-psychic trickery, contain several different methods for achieving

just one effect. Tamariz (1988) has described eighteen methods for performing the 'oil and water' card effect[31], whilst Harris (1985) explains a whole range of methods that may be employed to fabricate PK metal bending. The fake claimant may then be able to manipulate the observer into being suspicious of just one of these methods, thus rejecting as implausible the method which the fake claimant intends to employ. This strategy can be very effective. As noted by Leech (1960):

> Nothing can be more bewildering than the repetition of an effect three or four times, each repetition dependent upon a different principle. This is psychological misdirection of the highest order. (p. 7).

Diaconis (1985), labels this approach the 'bundle of sticks phenomena', noting:

> An effect is produced several times under different circumstances with the use of a different technique each time...the weak points of one performance are ruled out because they were clearly not present during other performances. The bundle of sticks is stronger than any single stick. (p.572).

As noted by Tamariz (1988), the success of this strategy rests on the fact that some observers erroneously assume that 'the same causes produce the same effects', and not that a single effect may be produced by many, quite different, methods. A fake claimant may then use several stratagems to manipulate an observer into expecting a certain method. For example, when investigating an alleged psychic, the observer may watch the claimant perform during several informal pilot studies. On these occasions, the pseudo-psychic may fabricate phenomena using the same method (provided this repetition did not significantly increase the risk of him/her being caught). In this way, should the observer become suspicious of this method (and thus guard against it during a formal experiment) the pseudo-psychic can switch to a novel type of trickery. Alternatively, the fake claimant may discover the counter-explanations that have been developed by the observer, and then select a method accordingly. For this strategy to be successful, the fake claimant must have feedback from the observer, as to the methodology that observer expects the claimant to employ. For example, Dingwall (1926), in his investigation of Mina Crandon, notes

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[31]A card trick where a packet of playing cards, consisting of two different coloured suits, is mixed up, yet appear to sort themselves by colour. (see Whaley, 1989, p. 480).

that certain conditions had to be agreed upon, before the investigation could commence. One condition entailed that:

> The investigator shall supply the doctor [Mina Crandon's husband] with a signed copy of his notes of each seance, before he attends the next seance. (p. 88).

As noted by Dingwall, this meant that, if Mina Crandon was fraudulent, she would have access to the investigators' thoughts concerning possible trickery. Thus Dingwall concludes:

> Thus, if the phenomena are not supernormal [this rule].. gives the other parties full information as to the discoveries made by the investigator. For example, if a touch is experienced in the third seance, and the investigator remarks certain facts which lead him to suppose that a reaching rod is being employed, then these fact must become the property of the persons concerned in the manipulation of that rod before the next sitting. These persons can in this way keep themselves au fait with all the investigator's discoveries,and since they are virtually in entire charge of the sittings...discovery of the methods employed is rendered absolutely impossible. (p. 89).

Alternatively, the fake claimant may inspect the controls employed by an observer, figure out the methods that are being countered, and then select a different method. Several magicians have written about some of the techniques involved in this 'improvisational', or 'jazz' magic (see, e.g., Hopkins, 1940, Lang, 1981). For example, Lang (1981) outlines a number of sleight-of-hand moves which are flexible enough to be used within extemporised routines of card tricks.

The use of such 'multiple methods' may also allow the fake claimant to switch methods during a demonstration, should one method prove problematic. Indeed, magicians often consider the ways in which a trick may go wrong, and develop various ways to switch the method of that trick, to salvage the demonstration. These are referred to as 'outs' and, as noted by magician Jerry Mentzer:

> If the performer knows enough outs, he will never fail to bring a trick to successful conclusion. (Cited in Whaley, 1989, p.489).

For example, a magician may have a card selected, and apparently shuffle the card back into the pack. In reality, the magician secretly controls the chosen card to the top of the pack. The magician may have planned to palm the card off of the top of

the pack, and, under the cover of returning a pen to his/her pocket, secretly place the card into his/her wallet. However, the magician may be aware that sometimes he/she replaces the pen in his/her pocket earlier in his/her act, and thus has no logical reason to place his/her hand into his/her jacket. If this is the case, the magician may keep a card inside one section of his/her wallet. If the magician has mistakenly placed the pen back into his/her pocket, he/she can still complete the trick by removing his/her wallet and openly taking out the extra card, being careful not to show it's face to the spectators. The magician then secretly swaps this card for the chosen card (on top of the pack), thus making it appear that the chosen card has magically travelled from the pack to the wallet.

3.5 ERRONEOUS (RE)CONSTRUCTION OF EFFECTIVE CONTROLS

3.5.1 Introduction

Section 2.5 noted how an observer may (re)construct, and assess, a number of controls (i.e., measures designed to counter trickery). One main stratagem, used both by magicians and pseudo-psychics, involves deceiving the observer into erroneously believing that these controls will be, or were, effective safeguards against deception. This section will outline the ways in which this stratagem may be implemented. The following sections will discuss the development of ineffective controls based upon both erroneous, and correct, counter-explanations.

3.5.2 Controls based upon erroneous counter-explanations

As noted in sections 3.3, and 3.4, the observer may not have developed, or developed but not taken seriously, the method that the fake claimant intends to use, or has used, during a demonstration. If this is the case, the observer is unlikely to implement controls that are intended to counter such deception[32].

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[32]There are two exceptions to this rule. First, an effective control may occur by accident. For example, John Nevil Maskelyne (1910) noted that when he was watching some ostensible macro-PK being produced by the 'Davenport Brothers', a piece of drapery fell from a window and the resulting ray of light revealed the way in which the Brothers were faking the phenomena. Second, two methods may be countered by the same control. The observer may think of the incorrect method, not

Inappropriate controls

The observer may apply controls at an inappropriate moment in time. Thus, an observer may not expect the magician to engage in deception before the start of the trick. To deceive such an observer, the magician may secretly gain prior access to the target, or target system. Fitzkee (1945) labels this 'anticipation', noting that:

> ...the critical thing is done before the spectator's attention is fixed upon it (p. 165).

This technique was often used by the world renowned Scottish conjurer, John Ramsey, to fool fellow magicians. As noted by Galloway (1969):

> Another John Ramsey saying was 'Hold and Hide'. It simply meant, be prepared well in advance. Before John went into company, he always palmed a coin or a thimble so that if anyone asked him to do a trick, he was ready...At one of the conventions he was having tea with some of his 'disciples'...They asked him if he would perform his cups and balls routine...John took out the cups and wand and went straight into the routine. This puzzled the onlookers because they knew that according to John's book, at the start of the effect the performer must have four balls palmed in the right hand and they had not seen him make any steal. The explanation was simple. John had them palmed long before his friends asked him to do the trick. In fact he had eaten a meal with the balls concealed in his hand. (p. 2-3).

Fuller (1975) has noted how pseudo-psychics may also use this technique, especially when they find themselves working on television. Fuller notes how it is usually possible to be able to gain access to target materials before the start of a demonstration. These objects may be left laying around, although the observer, watching the television show may not suspect that this is the case. Alternatively, an observer can be deceived by a fake claimant engaging in deception after a demonstration has apparently terminated. Fitzkee (1945) has referred to this as 'premature consummation', noting that:

> ...the critical thing is done after the attention has relaxed. (p. 165).

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realising that by controlling against this method, he/she is also countering the correct method.

For example, at the conclusion to 'The Miser's Dream'[33], the magician may produce a flurry of coins, and then bow to the audience. As such, the audience may assume that the trick has finished, and relax their vigilance. The magician may utilise this lapse in attention to steal[34] a final load of coins. These coins can then be suddenly produced as the audience are applauding.

Absent controls

The observer may not have developed the tactic by which the claimant intends to fabricate macro-PK. Again, this may lead an observer to apply inappropriate controls. For example, the observer may believe that any trickery taking place during a demonstration will appear suspicious. If this were the case, such an observer would be deceived if the fake claimant is able to use trickery that appeared quite natural. Magicians have labelled this stratagem the 'principle of naturality'. One of its most well known practitioners, magician Dai Vernon, has stated:

> ...watch a good performer and note that he is perfectly at ease because he is doing the things that are natural to him...he has adapted the tricks so that they fit him like a glove ...Every action he makes is a natural action; if he picks up an object that he is going to make vanish, then he does not pick it up in a way that only takes into account the position he needs to hold it to perform the sleight; he has altered the sleight so that when he picks up the object in the way that is natural to him it is already in position to be vanished. (Ganson, 1958, p. 32).

Fitzkee (1945) also advocated the importance of the principle, writing:

> Here is an example where an unnatural appearance on the part of the performer would awaken the suspicions of his spectators: The magician is smartly groomed. He is polished, refined, confident, poised. It would be natural that his costume would be well-fitting and smartly cut. But this particular magician desires to produce a large rabbit. He wants to use a rabbit bag under his arm. If the dress suit he wears were to be shaped to his contours, there would be an unsightly bulge. This would be visible. It would act as a stimulus to

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[33]A classic stage production routine in which a seemingly endless supply of coins are plucked from the air and dropped into some form of receptacle (see Whaley, 1989, p.454).

[34]Any sleight used by magicians to secretly gain possession of an object, or number of objects (see Whaley, 1989, p. 645).

the minds of the spectators. (p. 87).

To achieve such naturality, fake claimants may exploit the types of actions, and objects, which the observer encounters in everyday life. For example, in discussing the psychology behind fake PK metal bending, Harris (1985) notes that:

> ...if a common everyday object is used, the audience can identify with that object, and they automatically and naturally assume that the item is free from deception. (p. 11).

Alternatively, the fake claimant may actually create certain 'norms', which an observer will not then find suspicious. These norms can be created through repetition. Mulholland (1929) notes the use of this strategy by the well known chinese magician, Ching Ling Foo. Foo was well known for the production of a large fish bowl under a scarf that had previously been shown to be empty. For the production to be successful, Foo had to secrete the bowl between his legs, beneath a full length Chinese robe. However, when the bowl was in place Foo was restricted to rather a 'straddle legged walk'. To prevent the audience being suspicious of this, rather unusual, movement Foo formed the habit of always walking in this way, regardless of whether or not he had the bowl secreted between his legs!

Magicians strive to utilise the 'principle of naturality' throughout all aspects of their performances. For example, if a magician has to employ fake apparatus (e.g., a 'bottomless glass'[35], or a 'mirror box'[36]) the performer may disguise it as an 'everyday' object. Fitzkee (1945) in his advice to magicians, notes:

> Some pieces of apparatus...are tricky looking. Spectators are certain to regard them with utmost suspicion...The device looks just like what it most obviously is - something with which to do tricks....No frankly looking magical device is nearly as deceptive as a device which looks like an ordinary thing familiar to the spectator. This is because, since the device is a special contrivance, it must be suspected. (p.111- 112).

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[35]'A tumbler of clear glass faked by being completely open at the lower end'. (Whaley, 1989, p. 98).

[36]'A production box fitted with an angled mirror to provide a concealed load chamber occupying half of the volume of the box, which can be shown apparently empty' (Whaley, 1989, p. 451).

A magician also attempts to make his/her sleight-of-hand appear perfectly natural, going to great lengths in order to do so. For example, Dai Vernon has noted how one well known sleight-of-hand performer, Charlie Miller would:

> ...sit up twenty hours if necessary, just to make a movement look natural - and that's after he has learnt how to do that actual sleight (Ganson, 1958, p. 34).

In addition, Ascanio (1982), an Italian master of magic, notes that:

> Naturalness..is the normal way people behave in their gestures, postures and actions...if the magician, who is keeping a card palmed, achieves this naturalness of gestures, postures and actions, the palm will not be suspected. The attentive eye of the spectator will not see anything, it will slide over the palming hand, like the look of a warlike observer over a well hidden gun: nothing unusual is seen as the eye rests its look on it. (p. 5).

In support of his argument, Ascanio advises magicians to create both static[37], and dynamic[38], actions that appear natural. Part of such naturality entails the magician appearing to have a logical reason for carrying out an action. For this reason, magicians often employ the concept of the 'ruse', defined by Fitzkee (1945) as:

> ...disguising purposes rather than things. It supplies a false reason for doing something, for example, and thus conceals the true purpose of the action. It is a crafty expedient, devised and contrived to divert attention from one's real intent. (p. 152).

For example, a magician may appear to place a ball from his/her right hand into his/her left whilst, in reality, retaining the ball in his/her right hand. He/she then reaches into his/her pocket with his/her right hand (containing the concealed ball), apparently to fetch a magic wand. However, the real reason for moving his/her right hand to his/her pocket is to enable him/her to ditch the concealed ball into the pocket. The magician then taps his/her left hand with the magic wand, both hands can be shown empty, and the ball has apparently vanished. To help magicians structure their performances in this way, Ascanio advises performers to perform sleight of hand as 'in transit actions' (see section 3.3.2.2).

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[37]The stationary postures, and stances, utilised by magicians during their performances.

[38]The gestures, and movements, made by a magician during his performance.

Also, whilst performing any type of trickery, magicians make their speech appear as natural as possible. For example, one of the most basic rules of conjuring dictates that one should never describe a piece of faked apparatus as 'ordinary'. As noted by Sharpe, (1988):

> Many teachers of conjuring warn their students against describing articles as 'ordinary' knowing that such assertions are more likely to raise doubts then if no comment had been made. (p. 55),

whilst Fitzkee (1945), in agreement, writes:

> One naturally stresses that a thing is ordinary only when there is a reason to suspect that it isn't. (p. 44).

Fitzkee also warns magicians against altering the delivery of speech when engaging in any form of trickery. Fitzkee notes that the rate of delivery, style of enunciation, pitch and tempo must all remain natural, noting:

> It does not take the spectator long to realise that these variations from the norm 'telegraph' the approach of some crisis for the magician. It is an indirect way for the performer almost to say to the spectator, 'I am now approaching the critical phase in the accomplishment of this trick. If you are alert and observing, you may catch me'. (p. 95-96).

In a similar vein, many manuals of magic advise the magician not to engage in any action which might 'telegraph' when any form of trickery is taking place. This entails a magician being able to control a large range of verbal, and non-verbal, signals. As noted by Leech (1960):

> ...never permit yourself to get yourself into that very bad habit...that of making some facial contortions at the moment of the sleight. Some blink, some twitch their face, some stick out their tongue, some clench their teeth...such involuntary movements gives away what they are doing. (p. 8).

In short, this section has described how a fake claimant may overcome controls enforced against the incorrect counter-explanation. The section first noted that controls were often absent as the trickery occurred at the wrong moment in time, that is, either before or after the observer expected some form of deception. The section then noted that incorrect counter-explanations may also cause the observer to implement inappropriate controls. This point was illustrated by describing the various ways in which magicians, and pseudo-psychics, strive to ensure that their actions, and speech, appear perfectly natural, even when performing some type of trickery.

3.5.3 Controls based upon the correct counter-explanation

The observer may have developed the correct counter-explanation (i.e., the hypothesis which the magician, or pseudo-psychic intends to employ, or has employed, during the demonstration). If this is the case, the fake claimant must attempt to surmount controls designed to counter this hypothesis. This section will discuss the way in which this is achieved during both active, and retrospective, analyses.

3.5.3.1 Active analysis

First, the observer may have developed the correct method, but ineffectual controls to counter this method. If this is the case, the fake claimant may engage in trickery without fear of hinderance, or detection. The conjuring, and pseudo-psychic, literature contains many examples of this stratagem.

First, the fake claimant may be able to anticipate the controls which will be used during a demonstration, and thus be able to secretly overcome them. For example, the magician may say he/she will tear up, and then restore, a napkin. The observer may correctly realise that one method would involve the magician secretly swapping the torn napkin for a duplicate, whole, napkin. In an attempt to prevent the magician using this method, the observer may take note of some identifying mark on the original napkin. However, the magician can overcome this measure by marking the duplicate napkin in an identical way as the original.

Second, the fake claimant may, whilst the demonstration is occurring, identify which controls are being applied and be able to secretly overcome them. For example, magicians have realised that, after they have made a small object (e.g., a coin) apparently vanish, the observer may be suspicious that they have the object concealed in their hands. If the observer is correct, the magician has to show his/her hands as apparently empty whilst, in reality, concealing the presence of the object. Magicians have devised several different sleight-of-hand movements for exactly this purpose, labelling them 'acquitments' (Whaley, 1989, p. 34). Most of these entail shifting the object between various locations within the hands, as the hands are apparently shown

empty (see, for example, Galloway, 1969).

Third, controls may also be ineffective because they can be removed. In the case of physical controls, this can occur when the controls are obvious, or can be identified from close inspection. For example, when describing some of the trickery involved in 'Project Alpha', Randi (1986) notes how:

> [the two pseudo-psychics]...were also given small, transparent, sealed plastic boxes to take home with them, containing various objects they were asked to affect paranormally. The sealing was done by drilling holes into the box and lid, passing fine wire through the holes so as to secure the lid, and sealing the joining of the wire loop with sealing-wax impressed with a symbol. The subjects found no difficulty in popping off the seal, opening the box, 'affecting' the contents, and replacing the seal...All three of us were astonished that the impression was formed by means of a standard 39 cent stationary-store seal...For less than a dollar, we were able to defeat the security of a half-million-dollar project! (p. 162).

In another example from Project Alpha, Randi notes that:

> During one type of telepathy test, a subject would be given a sealed envelope containing a picture drawn from a target pool. Left alone with the envelope, the subject would subsequently surrender the envelope to an experimenter, who would examine it for signs of tampering. The subject would then announce his selection from the target pool. This series of tests was quite successful...The method was easy. Since the envelopes were 'sealed' only with a few staples, they [the pseudo-psychics] removed them, peeked, then replaced the staples through the original holes![39] (p. 159-160).

Both magicians, and pseudo-psychics may also be able to remove, or lessen, observational controls. This often entails the fake claimant manipulating the intensity, or direction, of the observer's attention. Each of these stratagems will be discussed in turn. Both magicians, and pseudo-psychics, employ a wide range of techniques designed to lower the intensity of an observer's attention. For example, Fuller (1975) advises pseudo-psychics to take a long time before attempting any form of trickery. This large time lag is designed, in part, to lower an observer's overall vigilance.

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[39]Although this example relates to a test of telepathy, it is easy to imagine how the task could have been one of macro-PK. For example, the experimenters may have asked for the order of the ESP cards to be re-arranged, as opposed to divined.

Fitzkee (1945) has labelled this strategy 'monotony'. Alternatively, magicians reduce an observer's intensity of attention by causing the observer to laugh at a specific point in time. Thus Leech (1960) notes:

> Amusement itself is a weapon in the magician's psychological armoury. When people are amused, their perceptions are relaxed and they are less analytical. (p. 12).

Second, a fake claimant may manipulate the direction of an observer's attention, steering it away from areas in which the observer is likely to detect trickery. Magicians refer to this stratagem as 'physical misdirection'. Fitzkee (1945) has presented a good overview of some of the techniques used to misdirect an observer's attention. For example, Fitzkee labels one category 'diversion', and includes any technique that diverts an observer's attention via the substitution of a new and stronger interest, providing that it 'lures away the attention in such a manner that the change in course seems to the spectator to be voluntary'. Nelms (1969) outlines how a magician may utilise movement, brightness, colour or sound to attract an observer's attention to one location. Also, Ascanio (1982) has proposed a 'law of priority of movement', noting that:

> ...when two bodies start moving almost simultaneously within the visual field, the spectator look always follows the object which started to move. Thus...when separating the hands after having palmed a card, the hand which conceals the card should not move, while the other hand (the free hand) withdraws. (p. 5).

The magician may also divert an observer's attention via the exploitation of 'social'[40], as opposed to 'physical', cues. For example, Dessoir (1897) notes that:

> A specially successful method of diversion is founded on the human craze for imitation. We are inclined to imitate all action which we have witnessed. The conjurer counts on this in many cases. He always looks in the direction where he wants the attention of the public, and does everything himself which he wants the public to do. (p.28-29).

This point has been noted by a number of writers, and has been developed to near perfection by two highly respected magicians, namely Tony Slydini and Albert

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[40]That is, cues which dictate where one individual should attend, on the basis of another individuals behaviour.

Goshman. The magician may also divert an observer attention by the use of body language. For example, Nelms (1969) outlines how the positions of the magician's feet, and hands, can help 'point' an observer's attention to certain locations. Leech (1960) has also noted that the magician can misdirect by the use of 'negative misdirection', or 'the deliberate casting of suspicion on something which is innocent'. Fitzkee categorises other methods of physical misdirection as 'distractions'. Thus, whereas diversion involved the observer not realising that his/her attention has been removed, 'distraction':

> ...forces the attention from the significant thing. Often it is violent. (Fitzkee, 1945, p. 166).

For example, the magician may suddenly instigate a loud noise, or flash of light, on one part of the stage, whilst performing some type of trickery in another location. Also, magicians may arrange for some type of intentional, or prearranged, mishap. As noted by Leech (1960):

> There can be no stronger misdirection than the carefully planned accident. Blackstone has been using this principle for years in his duck vanish. The ducks are shooed into a little house near one wing of the stage. One of the ducks, however, waddles away and a uniformed assistant dashes after it. He clips and falls as he makes a flying tackle for the recalcitrant duck...While all this has been going on, an assistant offstage slides the rest of the ducks out of the house. The misdirection is perfect. What normal human being could resist watching a man chase a duck? (p. 74.).

Finally, Fitzkee also notes the use of 'confusion', in which:

> ...so many varied individual interests are presented for the spectator's observation that it is impossible for him, in the limited time available, to select the significant from the insignificant. (p. 166).

For example, Fuller (1945) recommends the use of this technique in his manual of pseudo-psychic trickery, noting:

> When you're working for a group, keep talking and moving fast. Create maximum chaos. Flit from one task to another. Fail on one thing, put it aside, try something else, then go back and try again, and so on. (p.15).

For any of these stratagems to be successful, the observer must not realise that his/her attention has been lessened, or directed to a specific location. As such, the manipulation of attention must appear natural, and, to this end, Hugard & Braue

(1974) advise magicians that:

> It is always advisable to invent your own misdirection, for the ruses which are suitable for one personality are rarely natural when used by another. (p. 429).

Fake claimants may be skilled at both creating, and utilising, the exact moment that observational controls are either relaxed, or removed. For example, Maven (1986) describes how he observations of a faith healer named Philip Malicdon led him to believe Malicdon was skilled at noting exactly when observers were not paying full attention to the demonstration, and performing crude sleight of hand at this point in time. Also, fake claimants may not perform any trickery before being quite sure that they will not be caught doing so. For example, when discussing the magician Max Malini, Vernon (1975) noted:

> One of Malini's greatest secrets is contained in a statement he made to Charlie Miller. Miller asked him, 'Suppose you have a card palmed and you see that a spectator is keeping his eye on the hand that holds the card. What do you do Max?'
> 'Wait' was the answer.
> 'How long do you wait?' Charles said.
> 'A week!' was the answer.
> In other words, Malini would not make a move until he knew his misdirection was covering any secret action the mechanics of a trick forced him to make. (p. 151).

3.5.3.2 Retrospective analysis

As noted in section 2.5.3.2, during a retrospective analysis, the observer has to reconstruct, and assess, the controls used in a past demonstration. This may involve, for example, the observer piecing together the construction, and working, of objects used as physical controls. If a past study used observational controls, the observer may wish to reconstruct the physical, and psychological, state of such observers, as well as the conditions under which observation took place.

One stratagem, employed by both magicians and pseudo-psychics, involves deceiving an observer into believing that past controls would have countered trickery when, in reality, this was not the case. Thus a fake claimant may deceive an observer into reconstructing controls that appear more effective than they actually were. The issues

involved in this stratagem are similar to those outlined in section 3.3.2.2. For example, the observer may be basing a reconstruction upon his/her own recollections of a past demonstration. Such recollections may be biased in several ways. A pseudo-psychic may, in part, use 'verbal recapping' (see section 3.3.2.2) to distort the observer's recall of the controls present at the demonstration. For example, towards the end of a demonstration a fake medium may increase the amount of lighting in the seance room. After a short while the medium may erroneously announce that the lighting conditions have been good for most of the seance. Such a statement may be made in the hope that, when reconstructing the seance, the observer will erroneously believe that the lighting was high enough to make certain types of trickery (e.g., the use of accomplices) impossible. In addition, after a demonstration has terminated, the observer may be suspicious that the demonstration was faked in a certain way, and that incriminating evidence of trickery can be discovered. However, the sophisticated fake claimant may have already modified this evidence, such that it is no longer incriminating. As noted by Sharpe (1988):

> A simple and frequently used example of this principle consists of switching a prepared card, or pack of cards, for normal ones before the conclusion of a magical experiment, so that they may then...be examined...should any suspicious character want to inspect them. (p. 62).

Additional sources of bias may be encountered by the observer who reconstructs past controls upon the testimony of other individuals. For example, if an eyewitness watches a pseudo-psychic, and believed the claimant to be a genuine psychic, that eyewitness may not wish the observer to 'debunk' (i.e., produce a counter-explanation) the demonstration. If this were the case, when relating the event to the observer, the original eyewitness may unintentionally omit, or distort, information, such that past controls appear more effective than they actually were.

The observer may also reconstruct information from photographs, or diagrams. Such evidence may be biased in several ways. For example, a fake medium may have successfully deceived a researcher into believing that a display of fake macro-PK was genuine. During the demonstration, the medium may have been constrained by being

tied to a chair. However, such tying may have been ineffectual, such that the medium was able to free a limb, and fake telekinesis. The researcher may wish to take a photograph of the controls (i.e., the tying up of the medium) used during the demonstration. However, the pseudo-psychic may realise that this photograph may, to certain observers (e.g., magicians), contain clues as to the type of trickery used in the demonstration. To overcome this problem, the medium may ensure that the type of restraint shown in the photograph is more effective than that used in the actual demonstration.

An observer may reconstruct controls based on 'secondary sources' of information (see section 2.3.2.2). The information, upon which these secondary sources are based, may be biased by any of the factors outlined above. In addition, secondary sources may be vulnerable to extra sources of bias. For example, the secondary source may distort the original information upon which it is based, such that past controls appear more effective than they actually were. For example, the secondary source may not contain important information that was included in it's primary source. Thus film footage may be edited such that important information has been omitted. Alternatively, the secondary source may have mis-interpreted information contained within the primary source.

In addition, even if controls that have been accurately reconstructed, the observer still has to assess the effectiveness of these controls, and thus may be deceived by any of the stratagems outlined in section 3.5.3.1.

3.6 EXPLOITING THE CONDITIONS APPARENTLY NEEDED TO ELICIT MACRO-PK

3.6.1 Introduction

Section 2.6 noted how the assessment process may be influenced by whether the conditions under which a demonstration will take or, has taken, place are regarded as psi conducive. This section will note how a fake claimant may be able to exploit this process during both an active, and retrospective, analysis.

3.6.2 Active analysis

Section 2.6.2 noted how, before carrying out an active analysis, an observer may ensure that the conditions, under which the demonstration will occur, are psi conducive. However, a pseudo-psychic may believe that he/she will be unable to fabricate macro-PK under such circumstances. If this is the case, the fake claimant may attempt to alter such circumstances by stating that such conditions are not psi conducive. The observer may be unwittingly manipulated into accepting these conditions, not realising that such alterations aid the deception process. For example, Randi (1986) describes how in Project Alpha, the two pseudo-psychics complained about electronic equipment putting out 'bad vibes', such that the researchers were not able to videotape the demonstrations. In addition, Burger (1986) outlines how fake mediums insist that all of the sitters must link hands during a seance. The fake medium may state that this is necessary to bring forth spirit communication. In reality it is designed to prevent curious sitters from reaching out into the seance room, and possibly discovering various forms of trickery (such as reaching rods and accomplices).

3.6.3 Retrospective analysis

During a past demonstration, a fake claimant may have been unable to fabricate macro-PK. If this were the case, the claimant may attempt to explain away such failure by stating that the conditions of the demonstration were not psi conducive. For example, Burger (1986) notes that, if a fake medium is unable to fabricate phenomena, he/she can state:

> 'Well, my friends, conditions sometimes are just not right for this sort of thing'. You see...there's always an 'out' - a non-humiliating, non-embarrassing, perfectly reasonable (given the folk-accepted assumptions about seances and how they 'work'), perfectly acceptable out for a failure. (p. 107).

Also, Harris (1985) accuses Geller of using this strategy when he writes:

> ...[Geller] gave the impression that the experiment would not be successful without the audience mentally willing it to be so...This approach gave Geller a perfect 'out' or 'asylum'. If the experiment failed, rather than accept the blame himself he could pass it on to the spectators via the excuse that they weren't concentrating hard enough.

Or possibly that there were 'negative' forces present. (p. 8-9).

Such a strategy manipulates the observer into discounting the demonstration, rather than concluding that the claimant has failed.

3.7 ERRONEOUS ASSESSMENT OF THE RUNNING, OR RESULTS OF A DEMONSTRATION

3.7.1 Introduction

Section 2.7 noted the stages involved when an observer assesses the running, and results, of a demonstration. This section will outline how this process may be disrupted by both magicians and pseudo-psychics.

3.7.2 Erroneous running of a demonstration

Section 2.7.2 noted how, when running an active analysis, an observer has to assess if the controls, used in a study, were properly implemented during that study. Fake claimants may deceive the observer into believing that certain controls were properly implemented when, in reality, this was not the case. A pseudo-psychic may secretly tamper with physical controls before, or during, a demonstration and render them ineffective. For example, Randi (1986) discusses how the two pseudo-psychics involved in Project Alpha were able to gain overnight access to the McDonnell Parapsychology Laboratory, and tamper with the test equipment. In addition, a pseudo-psychic may be able to discover the nature of 'hidden' controls, and thus be in a better position to overcome such measures.

3.7.3 Erroneous assessment of results

Section 2.7.3 noted how an observer assesses the outcome of a demonstration. A vital part of this process involves judging if any apparent evidence of fraud could be accounted for by 'non-fraud' hypotheses. Fake claimants use two stratagems aimed at exploiting this process.

First, the fake claimant may manipulate the observer into selecting controls which are likely to produce evidence of fraud that can be explained away in such a way that the

claimant doesn't appear to be a trickster. It has often proved problematic to unambiguously accuse a claimant of fraud based on a photograph. For example, In 1933 Harry Price accused Rudi Schneider of fabricating the apparent psychic movement of a handkerchief by freeing an arm during a seance. Price supported his allegations with a single photograph, taken at the seance, and which apparently showed Schneider's arm to be free of his controllers. However, whether or not this photograph does show Schneider engaging in fraud has been the topic for a long debate, with proponents of Schneider arguing, for example, that a photographic flash may have caused Schneider to jerk his arm away from his controllers (for a detailed overview of this entire episode, see Gregory, 1977). Given the difficulties involved in accusing an individual of fraud on the basis of a still photograph, a pseudo-psychic may encourage an observer to use such a control.

Second, the fake claimant may create several excuses to 'explain away' evidence of fraud discovered by an observer. This may entail the pseudo-psychic quickly thinking of an hypothesis during the demonstration itself. For example, Baggally, Johnson, Feilding, Taylor and Lobb (1906) report how, during a seance given by the pseudo-medium Christopher Chambers, a false moustache (used to fabricate materialisations of spirits) was discovered in the seance room. Chambers attempted to explain away such evidence by telling sitters that it was difficult to materialise whiskers and moustaches, so the 'guide' had made a false moustache, and left it as a souvenir!.

Indeed, the fake claimant may make such excuses part of the 'lore' which govern his/her psychic ability. For example, Randi (1982a) has reported that one researcher, Dr P. J. Lincoln (a specialist in blood group serology and forensic medicine at London Hospital Medical College), investigated the claims being made by Filipino psychic surgeons. Lincoln surreptitiously obtained some of the apparently 'bad tissue' removed from a patient, by an alleged psychic surgeon, and analyzed it. Lincoln discovered that the blood sample was from a cow, and that the 'tumour' was a piece of chicken intestine. However, the surgeons attempted to explain away this evidence stating that it was a well known fact that 'supernatural forces' convert the tumours

into innocuous substances once they have left the patient's body.

3.8 SUMMARY

This chapter discussed how the proto-model, outlined in the previous chapter, can be used to categorise the stratagems employed in the fabrication of macro-PK. The chapter first discussed how a pseudo-psychic may deceive an observer into misframing a fake demonstration as genuine. This included a discussion of the way in which a pseudo-psychic manipulates the cognitive, motivational and social processes involved in the framing of a demonstration. The chapter next outlined how both magicians, and pseudo-psychics, may deceive an observer into not forming the correct counter-explanation to account for the way in which trickery will be, or has been, used to fabricate macro-PK. These stratagems centred around the exploitation of the observer's claim schemata, causal schemata, and perceived adequacy of prior counter-explanations. The chapter also noted how, even if such an explanation is developed, it may erroneously be rejected by an observer as implausible. The chapter next discussed the ways in which an observer can be deceived into erroneously believing that a demonstration will contain, or has contained, effective controls against deception. The following section outlined how a fake claimant may manipulate the conditions, apparently needed to elicit psi. In an active analysis, such manipulation may increased the possibility for trickery. In a retrospective analysis, such manipulation can persuade an observer to reject an unsuccessful demonstration (i.e., one at which fake macro-PK could not be performed) as non-evidential. Finally, the chapter noted how a fake claimant may be able to exploit or affect the running of a study, and 'explain away' evidence of fraud which might be uncovered during, or after, a demonstration.

The following chapter will elaborate upon, and experimentally assess, just one portion of the proto-model outlined in both this chapter and chapter two, namely; the way in which an observers belief in psi effects their recall of pseudo-psychic demonstrations.

CHAPTER FOUR

THE OBSERVATION, AND RECALL, OF PSEUDO-PSYCHIC TRICKERY: AN EXPERIMENTAL ANALYSIS[41]

4.1 INTRODUCTION

This chapter describes the experimental examination of one section of the proto-model outlined in the previous two chapters.

Section 2.3.2.2 noted how observers often use information recalled from memory to reconstruct a past demonstration of ostensible macro-PK. Section 3.3.2.2 then discussed how this reconstruction process may be biased by a number of factors, such as 'verbal recapping', and 'in transit actions'. The section also noted that it is difficult to judge the true effect that these factors have on recall, primarily because so little previous research has examined this issue. This section will first briefly review this small amount of research, and then outline the rationale for undertaking the studies described in the remainder of the chapter.

4.1.1 Previous research

Within parapsychology, only three studies have experimentally investigated the observation, recall and assessment of ostensibly psychic demonstrations. The first of these, carried out by Hodgson & Davey (1887), examined the reliability of testimony relating to fake slate writing phenomena. Davey held several fake seances for unsuspecting sitters, requesting that each sitter should write a description of the seance after it had terminated. Davey then published these accounts, carefully noting all of the errors made by sitters (e.g., the fact that many events were omitted completely, recalled in an incorrect order etc.). Although, this study was pioneering, its usefulness is limited because the authors made no real attempt to isolate the conditions affecting reliability. The second paper, written by Besterman (1932), drew results

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[41]The experiments described in this chapter were presented in a paper at The Parapsychological Association 34th Annual Convention, Heidelberg, 1991.

from forty-two sitters, who attended one of six seances. Sitters sat facing a table, on which a number of objects (mostly musical instruments) were placed. The lights were lowered, and the 'seance' began. During the seance, the medium moved (by 'normal' means) various objects on the table, and a flash photograph was taken. After the termination of the seance, the sitters were asked questions relating to the various phenomena that had occurred. Besterman reports that sitters had a slight tendency to underestimate the number of persons present in the seance room, often failed to report major disturbances which took place (e.g., the movement of the experimenter to, and from, the seance room), were unable to recall the conditions under which given phenomena took place, and occasionally experienced the illusionary movements of objects. Also, many sitters were unable to correctly report the scene when it was briefly lit up by the photographic flash. In addition, Besterman examined individual differences in recall among the sitters. He found little differences when comparing the scores of experienced to inexperienced sitters, or those that experienced illusions during the seance, to those that did not. The third study (Singer & Benassi, 1980), focused upon the assessment, as opposed to the recall, of a pseudo-psychic demonstration. Singer & Benassi had a pseudo-psychic perform to two groups of students. The experimenter informed one group that they were about to see a magician, and told the other group they were about to see a 'demonstration of psychic abilities'. After the demonstration, all Ss were asked to note whether they believed the performer was a genuine psychic, or a magician. A high percentage (approximately two thirds) of both groups stated they believed the performer to be a genuine psychic. In a follow-up experiment the researchers added a third 'strong magic' condition, wherein the experimenter stressed that the performer was definitely a magician. However, fifty eight percent of the Ss in this group still stated they believed the performer to be a genuine psychic. This lack of research within parapsychology is surprising, especially given the potential benefits which the area may gain through such work. For example, it is vital for parapsychologists to minimise the effects of bias on the observation, and recall, of a demonstration of ostensible psychic ability. Also, it is important for them to be able to accurately assess the affect that such bias may have on eyewitness testimony relating to these types of

demonstrations which have occurred in the past. In short, parapsychologists need to fully understand the factors, both psychological and environmental, that can interfere with observation.

Within cognitive psychology, researchers have devoted much of their time to examining the biases which influence the observation, and recall, of a wide variety of complex stimuli (see Matlin [1989] for a general overview of this work). Many studies have employed verbal stimuli, often in the form of narrative. For example, Greene (1981) asked Ss to read unsolved crime stories, and examined how the recall of that story was distorted by Ss judgement as to which of two suspects were guilty. Other research has employed short descriptive passages as stimuli. For example, in 1977, Anderson, Reynolds, Schallert & Goetz (described in Wilson & Anderson, 1984) asked two groups of Ss to read a short passage describing an individual planning his escape from some form of restraint. Ss in one group were not pre-selected on any specific criteria, and, for the most part, interpreted the passage as pertaining to a convict trying to escape from prison. Ss in the second group were all preselected for their interest in the sport of wrestling, and perceived the passage as pertaining to a wrestler caught in a 'hold'. When asked to recall the passage, theme-related distortions appeared, even though instructions emphasised reproducing the exact words of the original text. Other research has employed visual stimuli. For example, in a now 'classic' study (described in Buckhout, 1974), Gordon Allport asked Ss to look at a drawing of several people sitting on a subway train, including a white man (holding a razor) arguing with a black man. Allport discovered that fifty per cent of Ss later reported that the razor was in the hand of the black man. Massad, Hubbard & Newtson (1979) asked Ss to watch an animated film which showed various shapes (e.g., a large triangle, a small triangle and a circle) moving, and interacting, with one another. Before viewing, Ss were asked to perceive the movement of the shapes as symbolising either the large triangle guarding treasure from, or as a bully harassing, the other two shapes. Ss recall of the film was influenced, in part, by the instructive set under which they viewed the film. As reflected in the above examples, much of the research concerned with observational bias has focused on how

individuals' expectations can induce them to interpret stimuli in a certain way, and, in turn, bias their recall of such stimuli. However, one of the major problems faced by this line of research has been the construction of stimuli which can be interpreted in more than one way, but does not appear too contrived (see Wilson & Anderson, 1984). Given that pseudo-psychic demonstrations can be perceived as either a genuine psychic occurrence or as trickery, and are clearly naturalistic phenomena (see section 1.5), they seem ideal candidates to act as stimuli in this type of research. As such, it is perhaps surprising that only two studies have employed pseudo-psychic phenomena in this way. Jones, Russell & Nickel (1976) had both believers in psi (Sheep[42]) and disbelievers (Goats) watch a demonstration of ESP. In one condition the demonstration was successful (i.e., ESP appeared to occur), in the other it was unsuccessful. All Ss were then asked to recall the study. Sheep who saw the unsuccessful study distorted their memories of it, and often stated that ESP had occurred. Goats correctly recalled the study, regardless of its success. In a follow up study, Russell & Jones (1980) showed both Sheep and Goats a report of an ESP experiment. Ss in one condition were told that the results showed no ESP, Ss in the other condition were told exactly the opposite. All Ss were then asked to recall the report. In the 'ESP disproven' condition Goats recalled more of the report than Sheep. In the 'ESP proven' condition, their was no difference in recall between Sheep and Goats. In short, pseudo-psychic phenomena seem ideal candidates to act as stimuli in experimentation examining the factors which interfere with the observation, and recall, of complex events. However, despite such promise, very few studies have been carried out in this area.

4.1.2 Rationale for present experimentation

Given the small amount of previous work in this area, it was decided to undertake a

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[42]This chapter will adopt the convention, often used within parapsychology (see, e.g., Schmeidler & McConnell, 1958), of referring to individuals who express a belief in psi as 'Sheep', and individuals who express a disbelief in psi as 'Goats'. However, it should be noted that experiments in this area often employ quite different measures of belief/disbelief in psi (see section 4.2.2.3).

number of studies which further investigated the observation of pseudo-psychic phenomena. The studies concentrated upon how just one factor (namely; observers' belief in psi) affects the observation, and recall, of a pseudo-psychic demonstration. This factor was chosen for three reasons. First, previous research has demonstrated that observers' beliefs can influence the observation, and recall, of complex stimuli. For example, Hastorf & Cantril (1954) asked Ss to view, assess, and recall, a film of an important American football game. The recall of Ss' supporting one team differened in many ways from the recall of Ss supporting the opposing team. Second, the two previous studies which have examined the way in which belief in psi interacts with the observation, and recall, of pseudo-psychic phenomena (i.e., Jones, Russell & Nickel, 1976, Russell & Jones, 1980) have found it to be an important factor. Third, previous research suggests that an individuals' belief in psi may correlate with their performance on certain measures of cognitive ability. For example, Alcock & Otis (1980) report finding that Goats score significantly higher than Sheep on Watson & Glaser's Critical Thinking Appraisal Inventory. Also, Blackmore & Troscianko (1985) have reported differences in Sheep/Goats performance on tasks which involve assessments of probability. For example, in one question, relating to the well known 'birthday question' (i.e., How many people would you need to have at a party to have a 50:50 chance that two people have the same birthday?), Goats gave the correct answer (twenty-two) significantly more often than Sheep. Given all of the above, it seemed reasonable to expect an individual's belief in psi to interact with his/her observation, and recall, of a pseudo-psychic demonstration. An understanding of how belief/disbelief in psi influences such observation/recall, could help parapsychologists wishing to accurately observe psychic claimants during active investigations, and assess testimony relating to past demonstrations of ostensibly psychic phenomena. In addition, the findings from such studies may help cognitive psychologists understand more about the way in which an individual's belief interacts with the observation, and recall, of a novel type of complex event.

4.2 PILOT STUDY 1

4.2.1 Introduction

This pilot study examined how observers' belief in psi influences the observation, recall, and problem solving performance, of a videotaped pseudo-psychic demonstration.

Ss first completed a questionnaire regarding their belief in the existence of genuine psychics. All Ss then watched a videotape of a pseudo-psychic demonstration. After watching the videotape, all Ss were asked to assess the videotape for paranormal content. It was assumed that Ss would perceive the demonstrations in accordance with their own beliefs in psi. Thus Goats would view the demonstrations as magic tricks, whilst Sheep would see them as genuine paranormal phenomena. For this reason, it was hypothesized that Sheep would rate the demonstrations as significantly more paranormal than Goats.

Next, Ss were asked to postulate either 'paranormal', and/or 'normal', explanations for the demonstrations on the videotape. It was assumed that Goats would offer hypotheses pertaining to trickery, whilst Sheep would offer hypotheses which involved genuine psychic functioning. These protocols were scored with regard to the actual method of trickery used by the pseudo-psychic on the videotape. Thus, it was hypothesised that Goats would score significantly higher than Sheep on the problem solving task.

Ss were then asked to recall two categories of information from the videotape: 'important' information (i.e., information central to the methodology of the tricks on the videotape) and 'unimportant' information (i.e., information that was inconsequential to the methodology of the tricks). As noted in the beginning of this chapter, a number of studies concerned with the effect that expectation has on the recall of complex material have found that information which is relevant to a Ss' expectancy is better recalled than information which is irrelevant (for a brief review of this 'importance effect', see Alba & Hasher, 1983). It was assumed that Goats would frame the demonstrations as magic tricks, and would correctly recall significantly more 'important' information than Sheep. Sheep and Goats were

expected to recall the same number of 'unimportant' information.

If this differential occurred, it could be interpreted in several ways. One possibility is that the differences in belief primes the Ss to encode[43]/store qualitatively different types of information from the videotape. A second possibility is that the processes involved at the encoding/storage stages are quite similar, but that different 'retrieval sets' (i.e., attempting recall whilst believing the demonstration to be either a genuine psychic event, or a magic show) may lead to the recall of different types of information. To tease apart these explanations, Ss were then told that the videotape did not contain genuine psi, but magic tricks. Without seeing the videotape for a second time, Ss were then asked to complete a second set of recall questions (half of which were 'important', half 'unimportant'). If the differential recall, assumed to be present in the first recall period, was due to differences in the encoding/storage stages of memory one would expect the Sheep still to show a deficit for the recall of 'important' information. If this differential recall was due to differences in retrieval set one would expect the Sheep and Goats to recall equivalent amounts of 'important' information. Previous research on this problem (see Taylor & Crocker, 1981, for a brief review of the literature) has found 'encoding effects' to play a larger role in influencing recall than 'retrieval effects'. Thus it was hypothesised that Goats would still recall significantly more 'important' information than Sheep. Again, differential recall for 'unimportant' information was not expected.

4.2.2 Method

4.2.2.1 Design

This study was a 2x2 mixed design. The between factor (grouping Ss with regard to their belief in genuine psychic ability) had two levels (Sheep and Goats). The within factor (whether or not the Ss were explicitly informed that the videotape contained trickery) had two levels (i.e., Ss attempted recall both before, and after, they were

[43]The term 'encode' is being used to include cognitive processes such as attention and perception, as well as the memorial processes involved in the actual encoding of a trace.

told that the videotape did not contain genuine psychic phenomena).

There were three dependent variables. First, Ss rated each of the demonstrations for 'paranormal content'. Second, Ss completed a problem solving task. Third, Ss attempted to recall specific features of the videotape.

4.2.2.2 Subjects

Ss (N=28) were recruited from the undergraduate population of the psychology department of Edinburgh University. They were recruited via a poster simply asking for Ss for an experiment being run within the Koestler Chair of Parapsychology.

4.2.2.3 Materials

Belief in the Paranormal Questionnaire (BPQ)

Many questionnaires measuring belief in the paranormal have been constructed for studies investigating how such belief in psi may effect scoring on an ESP, or PK, task (see, e.g., Palmer, 1986, Rush, 1986a). As noted by Palmer (1972), these questionnaires often contain components relating to issues outside of simple belief in psi, asking, for example, if the S believes that he/she possesses psychic ability. As such, these questionnaires were deemed unsuitable for this present study, and instead the 'Belief in the Paranormal Questionnaire' (BPQ) was constructed. This consisted of six questions, each asking about the possibility that certain individuals may possess different types of paranormal ability (e.g., clairvoyance, telepathy etc.). Ss responded to each question on a five point scale, indicating the degree to which they believed such individuals to exist. This questionnaire was scored by allotting a score between 1 (strong agreement) 5 (strong disagreement) to each of the six questions. All Ss fell onto a continuum between 6 (strong Sheep) and 30 (strong Goat). To sub-divide the Ss into 2 groups, those scoring between 6-17 were classified as Sheep, and those scoring between 19-30 as Goats. Ss scoring exactly 18 were omitted from the data. A copy of this questionnaire, along with further details, concerning the inter-correlations of questions on this scale, are contained in Appendix B.

Stimuli videotape

The stimuli videotape lasted eight minutes and contained a magician (who performed the tricks), and an interviewer (who guided the magician from one trick to another). Both interviewer and magician were seated at a table throughout the videotape.

The videotape contained three magic tricks. Two of the tricks fabricated macro-PK (i.e., key bending, and cutlery bending/breaking), whilst the other trick fabricated ESP (i.e., the divination of ESP cards). All three tricks were selected to fulfil a number of criteria. First, they did not require more than two individuals (i.e., one performer, one spectator) for their performance. Second, none of the tricks required either individual to leave the table. Third, the procedures which had to be openly carried out by both magician and spectator (e.g., choosing of cards, choosing of cutlery) were easily seen and understood. Fourth, the videotape had to hold the interest of the observer, and thus some parts of the tricks (e.g., the bending of the fork as it is rubbed by the magician) were visually dramatic.

The videotape was filmed from a single camera position (approximately seven foot from the performers) and was made in one take, such that there was no editing of the footage. The videocamera did not cut away from the magician when he performed any form of trickery, and thus each of the tricks could be 'solved' (without extensive knowledge of conjuring, or psychic fraud) from the information contained on the videotape. A brief description of this videotape is contained in Appendix C.

'Paranormal content' rating

All Ss were asked to rate each demonstration for paranormal content. The rating scale ranged between 1 (definitely paranormal) to 7 (definitely not paranormal). For each S, all four ratings (i.e., one per. demonstration) were summed to provide an overall rating score which ranged between 4 and 28.

Problem solving material

The free response problem solving task entailed Ss writing down any suggestions as to how the ostensible psychic phenomena on the videotape may have been achieved.

To score the resulting protocols, the methodology of each trick was broken down into a general principle, and a number of more specific elements. Ss were given one mark for correctly noting the overall method of the trick, and a further half-mark for each correct specific detail of method. This method of scoring had been pretested during a previous pilot study, and found to be practical. The scoring system for each trick is contained in Appendix D.

Recall material

For each of the two recall periods (i.e., before and after being told that the videotape contained trickery), there were three sets of recall questions, one set for each demonstration and four questions in each set. Each question consisted of a statement about the videotape, followed by a five point scale on which the S could indicate the degree to which she/he felt the statement to be true, or false. The questions were constructed such that, for each set of four questions, two of the questions were (in the opinion of the author) 'important' to the methods of the tricks in the demonstration. The two other questions were seen as 'unimportant' on the same criteria. These 'important', and 'unimportant', questions were counter-balanced with regards to the number of correct 'true' verses 'false' answers required. To score these questions, Ss were given one mark if they indicated the correct answer to a question. For example, if the correct answer to a question was 'true', Ss were given one mark if they had responded either 'definitely true' or 'probably true'. All other responses were marked incorrect, and no marks awarded. A copy of these recall questions is presented in Appendix E.

4.2.2.4 Set-up

Ss (N=28) were group tested in two groups, with each group containing 14 Ss. Both groups were tested, in a small lecture room in the Psychology Department of Edinburgh University, at identical times (10 a.m.), on consecutive days. Ss watched the videotape on a single 26 inch colour monitor connected to a Panasonic D80 videotape player. All Ss sat at separate tables, in two rows of approximately 14 Ss per row. The front row of Ss sat approximately six feet away from the monitor,

whilst the back row sat approximately three feet behind the first row, thus giving all participants a good view of the television screen.

4.2.2.5 Procedure

Ss were first asked to complete the 'Belief in the Paranormal' Questionnaire. E then carefully explained that the videotape which was about to be shown contained an individual claiming to have psychic ability. E also explained that the videotape was taken as a first step in assessing this claim, and that the Ss should watch the videotape as carefully as possible. E stated that there was absolutely no collusion between the interviewer and claimant, and that all objects used in the videotape were supplied by Edinburgh University. Ss were shown the videotape, and were then asked to rate the 'paranormal content' of each demonstration. Ss were then given five minutes to complete the free response problem solving task. Ss then completed the first set of recall questions. E collected these booklets (to prevent Ss changing their answers after being told the tape did not contain a psychic) and handed out the second booklet. E explained that the videotape did not contain a psychic, but rather a magician skilled at faking psi phenomena. Ss were then asked to complete the second set of recall questions.

4.2.3 Results

4.2.3.1 Belief in the Paranormal Questionnaire

The mean score on the BPQ (min=6, max=30, mid-point=18) for Sheep (N=17) was 14.88 (sd=2.2), and for Goats (N=9) was 22.77 (sd=4.21).

4.2.3.2 Paranormal content rating

It was hypothesised that Sheep would rate the demonstrations as significantly more paranormal than the Goats. This hypothesis proved correct, and Table 7.1 contains the summarised data for this analysis.

Table 7.1: Means and standard deviations (in brackets), t- score (unpaired) and probabilities for rating of demonstrations by Sheep and Goats. (Min rating=3, max rating=21, mid-point=12).	
	Rating
Sheep N=17	11.0 (4.96)
Goats N=9	15.2 (5.97)
t-score (1 tailed, df=24)	-1.92
p	0.03

4.2.3.3 Problem solving

It was hypothesised that the problem solving scores of the Goats would be significantly higher than that of Sheep. Although Goats did score higher than Sheep, the difference was not significant. Table 7.2 contains the summary data for this analysis.

Table 7.2: Means, standard deviations (in brackets), t- scores (unpaired) and probability of problem solving scores for Sheep and Goats. (Min score=0, max score=10).	
	Problem Solving Scores
Sheep N=17	0.53 (0.9)
Goats N=9	1.66 (2.7)
t-scores (1 tailed, df=24)	-1.59
p	0.06

4.2.3.4 First recall period

In the first recall period, it was predicted that Goats would recall significantly more 'important' items that Sheep. Sheep and Goats were not expected to differ in their recall of 'unimportant' questions. Goats did recall more 'important' information than Sheep but this difference was not significant. Sheep tended to recall more 'unimportant' information than Goats, but again this difference was not significant.

Table 7.3 contains the summary data for these analyses.

Table 7.3: Means, standard deviations (in brackets), t- scores (unpaired) and probability of 'important' and 'unimportant' questions recalled (first recall period). (Min score=0, max score=6).

	Important	Unimportant
Sheep N=17	4.47 (0.80)	3.59 (1.06)
Goats N=9	4.89 (0.60)	3.0 (0.71)
t-scores (df=24)	-1.37 (1 tailed)	1.48 (2 tailed)
p	0.09	0.14

4.2.3.5 Second recall period

In the second recall period it was hypothesised that Goats would recall significantly more 'important' items than Sheep. Goats and Sheep were not expected to differ in their recall of 'unimportant' information. There were no significant differences, between groups, for the recall of either 'important', or 'unimportant', information. Table 7.4 contains the summary data for these analyses.

Table 7.4: Means, standard deviations (in brackets), t- scores (unpaired) and probability for 'important' and 'unimportant' questions recalled (second recall period). (Min score=0, max score=6).

	Important	Unimportant
Sheep N=17	4.65 (0.93)	3.94 (1.29)
Goats N=9	4.67 (0.87)	3.89 (1.45)
t-scores (df=24)	-0.05 (1 tailed)	0.94 (2 tailed)
p	0.48	0.92

In summary, Sheep rated the demonstrations as significantly more paranormal than Goats. Goats scored higher than Sheep on the problem solving task, but the difference was not significant. In the first recall period, Goats did recall more 'important' items than Sheep, and Sheep more 'unimportant' items than Goats.

However, neither of these differences reached significance. In the second recall period, there were no significant differences, between Sheep and Goats, for the recall of either 'important', or 'unimportant', items.

4.2.4 Discussion

Goats rated the demonstrations as significantly less paranormal than Sheep. This indicates that Sheep are more likely than Goats to erroneously attribute psychic ability to a psychic claimant.

As predicted, Goats performed better than Sheep in both the problem solving task, and the recall of 'important' items during the first recall period. However, despite these differences being fairly large, they failed to reach significance. This lack of significance may be due to the small number of Goats (N=9) in this study. Future research should provide a more complete test of these hypotheses, by employing a larger subject pool.

In the second recall period, there were no differences, for recall of either 'important', or 'unimportant', information. This is suggestive that the differences, found in the first recall period, were due to Sheep and Goats employing different 'retrieval sets', as opposed to differences in encoding/storing strategies. Once these differences in retrieval set are removed (i.e., both groups told that the videotape contains trickery), the Sheep seemed able to recall as much 'important, and 'unimportant', information as the Goats. Again it should be noted that this pilot study employed a small number of Goats, and thus the above result may be unreliable.

Two methodological points should also be noted for future research.

First, recall questions were not counterbalanced between first, and second, recall periods. This makes clear cut interpretation of any results problematic, simply because any difference in recall between the first, and second, recall period could be due to difference in recall conditions (e.g., the fact that the Sheep now knew the

demonstrations to be fake), or the fact that the first set of 'important' recall questions were different to the second set (i.e., those employed in the second recall period). Future research should control for this by counterbalancing questions across both the first, and second, recall periods.

Second, as noted in section 4.1.1, Singer and Benassi (1980) discovered that some Ss, when told that an apparent psychic is really a magician, choose to ignore this information, and still believe the individual to be psychic. If this is the case, it seems possible that Sheep, when told that the videotape contained trickery, simply ignored this information and went on believing the magician to be psychic. Future research should control for this problem by having the experimenter stress that the individual on the videotape is a magician.

In short, this investigation found that Goats rated the demonstrations as significantly less paranormal than Sheep. In the first recall period, Goats recalled more 'important' information than Sheep, and scored higher on the problem solving task. These differences ~~was~~ were large, but not significant. This lack of significance was attributed to the small number of Goats in the study. In the second recall period, no difference, for the recall of either 'important', or 'unimportant', information was discovered. This result suggests that the difference in recall, during the first recall period, might be due to Sheep and Goats employing different 'retrieval sets'. However, such an interpretation should be made with caution, again because of the small number of Goats in the study. Two methodological suggestions were also made. First, future experimentation should counter balance recall questions across both first, and second recall periods. Second, the E should provide a stronger disclaimer, as to any psychic powers possessed by the magician, to decrease the possibility that Sheep continue to believe the magician is a psychic, during the second recall period.

4.3 EXPERIMENT 1:

4.3.1 Introduction

There were four main differences between the design of this first experiment, and the

initial pilot study.

First, the experiment used a larger number of Ss. Second, due to the limited time available for each session, Ss did not complete a problem solving task. Third, recall questions were counterbalanced across both first, and second, recall periods. Finally, after the first recall period, the E strongly emphasised that the individual in the videotape was a magician, and not a genuine psychic.

The hypotheses remained identical to those in the previous pilot study. It was hypothesized that Sheep would rate the demonstrations as significantly more paranormal than Goats. In the first recall period, it was hypothesized that Goats would recall significantly more 'important' information than Sheep. In the second recall period, it was hypothesised that Goats would recall significantly more 'important' information than Sheep. Sheep and Goats were expected to recall the same amount of 'unimportant' information in both first, and second, recall periods.

4.3.2 Method

4.3.2.1 Design

This study was a 2x2 mixed design. The between factor (grouping Ss with regard to their belief in genuine psychic ability) had two levels (Sheep and Goats). The within factor (whether or not the Ss were explicitly informed that the videotape contained trickery) had two levels (i.e., Ss attempted recall both before, and after, they were told that the videotape did not contain genuine psychic phenomena).

There were two dependent variables. First, Ss rated each of the demonstrations for 'paranormal content'. Second, Ss attempted to recall aspects of the videotape in both first, and second, recall periods.

4.3.2.2 Subjects

Ss (N=35) were recruited from the undergraduate population of Aberdeen University via a poster advertising an experiment, and lecture, concerned with parapsychology.

4.3.2.3 Materials

Stimuli videotape

The videotape used in this experiment was an edited version of the videotape used in the pilot study described above. Due to the limited time available for each session, the videotape contained only two, of the three, original demonstrations (i.e., divination of ESP cards and fork breaking). These two were chosen as the third demonstration (the key bending) was the longer of the three. The resulting videotape lasted approximately six minutes and, although edited, still contained all of the information needed to solve both of the remaining tricks.

The 'Belief in the Paranormal Questionnaire', and rating scales, remained identical to those employed in the previous pilot study.

Recall material

The recall questions used were identical to those used in the previous pilot study. As before, each recall question consisted of a statement about the videotape, followed by a five point scale on which Ss indicated the degree to which they believed the statement to be true or false. The questions were rated (by two independent magicians) as either being 'important', or 'unimportant', to the tricks methodology (inter-rater reliability=0.94). Recall questions were counter-balanced across the first, and second, recall periods. This counter balancing was performed in such a way that no S received the same questions in the second recall period, as he/she had received in the first recall period. The marking of the recall questions was identical to that outlined in the previous pilot study.

4.3.2.4 Set-Up

Ss (N=35) were group tested in a single session. The group was tested in a large lecture room in the Psychology Department of Aberdeen University, at approximately 5.30 p.m.. Other students who were attending the lecture, but not taking part in the

experiment, were located at the back of the lecture hall. Ss taking part in the experiment were sat at the front of the lecture hall, in three rows of approximately 11 Ss per row. All Ss watched the videotape on a single 26 inch colour monitor connected to a Panasonic D80 videotape player. All Ss sat at separate tables, with the front row of Ss sitting approximately six feet away from the monitor. The second row was approximately three feet behind the first row, and the third row approximately two feet behind the second row.

4.3.2.5 Procedure

Ss first completed the Belief in the Paranormal Questionnaire. Next, Ss watched the videotape and then rated the 'paranormal content' of each of the demonstrations. Ss then completed the first set of recall questions, and, after these questions were collected, the experimenter stressed that the demonstrations were the result of trickery. Finally, Ss were asked to complete the second set of recall questions.

4.3.3 Results

4.3.3.1 Belief in the paranormal questionnaire

The mean score on the BPQ (min=6, max=30, mid-point=18) for Sheep (N=22) was 13.09 (sd=3.29), and for Goats (N=13) was 22.61 (sd=3.04). Thus, the Goats in this study were approximately as sceptical as the Goats in the previous pilot study. The Sheep in this study exhibited a slightly stronger belief in psi than those in the previous pilot study.

4.3.3.2 Paranormal content rating and first recall period

The first hypothesis, namely that Sheep would rate the demonstrations as significantly more 'paranormal' than Goats, was confirmed, as indicated by the rating column of Table 7.7. In the first recall period, it was predicted that the Goats would recall significantly more 'important' information, than Sheep. This was not confirmed. There were no significant differences between the number of 'unimportant' questions correctly recalled by Goats and Sheep. Table 7.5 contains the summary data for these analyses.

Table 7.5: Means, standard deviations (in brackets), t-scores (unpaired) and probability for rating and first recall period.			
	Rating (min=2, max=14)	**Important (min=0, max=4)**	**Unimportant (min=0, max=4)**
Sheep N=22	7.45 (2.52)	2.23 (1.02)	2.59 (1.05)
Goats N=13	10.30 (2.59)	2.31 (1.12)	3.15 (1.68)
t-scores (df=33)	-3.20 (1 tailed)	-0.22 (1 tailed)	-1.22 (2 tailed)
p	0.001	0.42	0.24

4.3.3.3 Second recall period

In this second recall period, it was predicted that Goats would recall significantly more 'important' information than Sheep. This hypothesis was confirmed. There were no significant differences between the number of 'unimportant' questions correctly recalled by the Goats and Sheep. Table 7.6 contains the summary data for these analyses.

Table 7.6: Means, standard deviations (in brackets), t-scores and probability for second recall period. (min=0, max=4).		
	Important	**Unimportant**
Sheep N=22	2.64 (1.00)	2.45 (1.10)
Goats N=13	3.31 (0.75)	2.15 (0.99)
t-scores (df=33)	-2.09 (1 tailed)	0.81 (2 tailed)
p	0.02	0.42

In short, Goats rated the demonstrations as significantly less paranormal than Sheep. In the first recall period, there were no significant differences, between Sheep and Goats, for the recall of either 'important', or 'unimportant' information. In the

second recall period, Goats recalled significantly more 'important' information than Sheep, and there was no significant difference in the recall of 'unimportant' information.

4.3.4 Discussion

Sheep rated the demonstrations as being more paranormal than Goats. Again, this supports the notion that an observer's belief system can significantly influence the attribution of psychic ability. These results support the notion that Sheep are more likely than Goats to erroneously attribute psychic ability to a psychic claimant.

The fact that there were no significant differences for recall of 'important' questions in the first recall period, could be explained in a number of ways. First, it could be that the hypothesis proposed in the introduction is incorrect, and that there is no significant difference in the amount of 'important' information encoded, stored or retrieved by Sheep and Goats. Second, it may be that the hypothesis was correct but that an unexpected factor has meant that it has not received proper testing. For example, it could be hypothesized that, because the recall questions were asked very soon after the videotape had been seen, the Sheep had not yet lost access to 'surface' memory for 'important' information on that tape. Two factors provide circumstantial support for this notion. First, the predicted difference in recall of 'important' items appears after Ss were told that the tape contains trickery. Second, in the pilot study, the predicted difference (although not significant) was found. It could be speculated that the problem solving task, located between recall periods, helped Sheep to loøse 'surface' memory for 'important' information. This notion should be tested in future experimentation.

Methodologically, there is an additional alternative explanation of the above result. It is possible that Sheep/Goat differences are not stemming from recall per se., but rather from differences in 'response set'. Thus Goats may be looking out for questions which hint at trickery (e.g., questions involving 'target' items, such as the fork, going out of sight on the videotape) and then answering those questions in a way

compatible with the idea that trickery was afoot (e.g., the Goat might infer that the fork probably did go out of sight, thus allowing it to be secretly bent by the pseudo-psychic, regardless of whether these details can actually be recalled). If Goats were responding in this way, and Sheep were not, differential recall of 'important' items might be obtained. Although the idea of the 'response set' is important in it's own right (in that it might give insight into how best to quiz observers who have experienced anomalous events), it is important that this factor is controlled for in future research.

Finally, the marking system employed in this study was fairly crude, in that it did not take account of the Ss confidence in recall. For example, if the answer to a recall question was 'true', Ss responding both 'probably true' and 'definitely true' were both given one mark; future research should perhaps employ a more refined marking system.

In summary, it appears that Sheep and Goats processed the information about the pseudo-psychic demonstration in different ways. First, Sheep rated the demonstrations as paranormal, Goats rated them as not being paranormal. Second, it appears that Goats may be able to recall more 'important' information than Sheep. However, in this experiment, such differential recall was found in the second, but not the first, recall period. It was hypothesised that this may be due to a 'window' of time in which Sheep can still gain access to 'surface' memory and thus recall important information. However, once the access to this surface memory has been lost, Sheep can no longer access it, despite being told the tape contained trickery. Finally, the methodological problem of 'response set' should be tackled in future studies.

4.4 EXPERIMENT 2

4.4.1 Introduction

There were three main differences between the design of this second experiment, and the first experiment.

First, after watching, and rating the videotape, Ss were asked to spend a little time noting down any explanations that they might have for the demonstrations on the videotape. This was designed to provide time for Ss to lose 'surface' memory of the videotape. Second, in addition to 'important' and 'unimportant' questions, the recall period contained 'pseudo-important' questions which were constructed to control for the problem of response set. 'Pseudo-important' questions were worded such that one might assume that they referred to aspects of a tricks methodology, but would be answered incorrectly by anyone making this assumption (see the method section, below, for more detail concerning the construction of these questions). Third, to help provide a more detailed picture of the results, Ss scores for pseudo-PK demonstrations were analyzed separately from those of pseudo-ESP demonstrations.

Based on previous research, a number of hypotheses were made. First, it was predicted that Sheep would rate the demonstrations as significantly more paranormal than Goats. Also, it was predicted that Goats would score significantly higher than Sheep on the problem solving task. In the first recall period it was expected that Goats will recall significantly more 'important' items than Sheep. Sheep and Goats were expected to recall the same number of 'unimportant' items. If the above hypotheses are true, then the recall of the Goats and Sheep on the 'pseudo-important' questions (for the first recall period) can be compared. If the differential recall was due to accurate remembering one would expect there to be no significant difference between Goats and Sheep recall of 'pseudo-important' questions. If however, the differential recall was due to a 'response set' one would expect the Goats to recall significantly less 'pseudo-important' questions than the Sheep. In the second recall period it is hypothesized that Goats will still recall significantly more 'important' items than the Sheep, and there will be no significant difference for the recall of 'unimportant' or 'pseudo-important' items.

4.4.2 Method

4.4.2.1 Design

This study was a 2x2 mixed design. The between factor (grouping Ss with regard to

their belief in genuine psychic ability) had two levels (Sheep and Goats). The within factor (whether or not the Ss were explicitly informed that the videotape contained trickery) had two levels (i.e., Ss attempted recall both before, and after, they were told that the videotape did not contain genuine psychic phenomena).

There were three dependent variables. First, Ss rated each of the demonstrations for 'paranormal content'. Second, Ss completed a problem solving task. Third, Ss attempted to recall various aspects of the videotape.

4.4.2.2 Subjects

Ss (N=29) were recruited from the University of London (N=15) and Edinburgh University (N=14), via posters advertising an experiment in parapsychology.

4.4.2.3 Materials

Stimuli videotape

The videotape lasted nine minutes and contained footage of a magician performing four pseudo-psychic effects. Two of the effect consisted of pseudo-PK, two of pseudo-ESP. The two pseudo-PK consisted of the fake key bending and fork breaking, as used in previous studies. The two pseudo-ESP effects were especially filmed for this experiment, and had not been used in previous studies. They, two tricks were fulfilled the same criteria set-out in section 4.2.2.3. A brief description of the pseudo-ESP demonstrations is contained in Appendix F.

Although each of the demonstrations, of both pseudo PK and ESP, appeared to be very similar (i.e., the divination of a chosen card and the influence of metal) different methods of trickery were employed for each trick. For example, in the first demonstration the pseudo-psychic 'forced' the interviewer to select a certain card, whereas in the second demonstration the pseudo-psychic gained access to the design drawn by the interviewer. For the pseudo-PK, the bending of a key was achieved by the magician secretly switching a straight key for a bent one, whilst the bending of the fork was achieved by the using a pre-stressed fork. Each demonstration was

filmed in such a way that the first demonstration could not be accounted for by the second explanation, and vice versa.

The Belief in the Paranormal Questionnaire, and rating scales, remained identical to those used in the first experiment.

The problem solving material, for the two pseudo-PK effects remained identical to that utilised in the pilot study. A similar marking scheme was constructed for the two pseudo-ESP effects (see Appendix G).

Recall material

For each of the two recall periods, there were three recall questions per demonstration. The recall questions for the two pseudo-ESP demonstrations were identical, and likewise for the questions concerning the two pseudo-PK demonstrations. Each of these sets of questions were structured such that they contained one item concerned with an event important to the particular trick's methodology (labelled 'important'), a second question concerned with an event unimportant to the tricks methodology, but important to the other trick in question (labelled 'pseudo-important') and finally, a third question concerned with event unimportant to either tricks methodology (labelled 'unimportant'). All recall questions were counter-balanced as explained in the first experiment. All of the recall questions are contained in Appendix H.

The scoring procedure was slightly different to that utilised in the first experiment, in that it took account of Ss confidence in recall. For each question, Ss recall was given a score between 0 and 4. If, for example, the answer to a recall question was 'True', Ss were awarded no marks for responding 'Definitely False', 1 mark for 'Probably False', 2 marks for 'Cannot Recall', 3 marks for 'Probably True' and 4 marks for 'Definitely True'.

4.4.2.4 Set-Up

Ss from the University of London were group tested in a single session in a small lecture room at the Psychology Department of University College London. Ss sat in two rows of approximately 7 Ss per row. All Ss watched the videotape on a single 26 inch colour monitor connected to a videotape player. All Ss sat at separate tables, with the front row of Ss sitting approximately six feet away from the monitor. The second row was approximately three feet behind the first row. Ss from Edinburgh University were tested individually. All Ss watched the videotape on a 26 inch colour monitor connected to a Panasonic D80 videotape player. All Ss sat at separate tables, approximately six feet away from the monitor.

4.4.2.5 Procedure

Ss first completed the BPQ. Ss next watched the videotape and were then asked to rate the 'paranormal content' of each demonstration. Ss then spent approximately five minutes noting down any explanations for the phenomena, and then completed the first set of recall questions. These responses were collected, Ss were clearly told that the demonstrations were fake, and asked to complete the second set of recall questions.

4.4.3 Results

Results for the two pseudo-PK demonstrations were analyzed separately from the two pseudo-ESP demonstrations. For the former analysis Ss were grouped according to their responses on the first three questions on the BPQ (regarding their beliefs about telepathy, clairvoyance and precognition), whilst in the latter analysis they were grouped according to responses on the latter three questions (regarding their beliefs about micro, and macro, PK).

4.4.3.1 Pseudo-PK

Belief in the Paranormal Questionnaire

The mean score on the last three questions of the BPQ (min score=3, max score=15, mid-point=9) for Sheep (N=15) was 6.07 (sd=1.38), and for Goats (N=14) was 11.57 (sd=1.87).

Rating and first recall period

The first hypothesis predicted that Sheep would rate the demonstrations as significantly more 'paranormal' than Goats. Although the difference was in the predicted direction, it was not significant and thus the hypothesis was not confirmed. In this first recall period, it was predicted that Goats would correctly recall significantly more 'important' questions than Sheep. This hypothesis was confirmed. The difference between Sheep and Goats recall of 'unimportant' information just missed significance. There was no difference in Sheep/Goat performance for the recall of 'pseudo-important' questions. Table 7.7 contains the summary data for these analyses.

Table 7.7: Means, standard deviations (in brackets), t-scores (unpaired) and probability for rating and recall (first recall period) of the pseudo PK demonstrations.

	Rating (min=2, max=14)	**Important (min=0, max=8)**	**Unimportant (min=0, max=8)**	**Pseudo-important (min=0, max=8)**
Sheep N=15	8.60 (3.60)	5.27 (2.09)	4.47 (2.33)	4.33 (2.16)
Goats N=14	10.00 (3.37)	6.64 (2.3)	6.01 (2.30)	4.07 (2.16)
t-score (df=27)	-1.08 (1 tailed)	2.07 (1 tailed)	-1.86 (2 tailed)	0.33 (2 tailed)
p	0.14	0.02	0.06	0.75

Problem solving

It was hypothesised that Goats problem solving score would be significantly higher than that of Sheep. Although Goats did score higher than Sheep, the difference was not significant. Table 7.8 contains the summary data for this analysis.

Table 7.8: Means, standard deviations (in brackets), t- scores (unpaired) and probability for problem solving scores. (min=0, max=6.5).	
	Problem Solving Scores
Sheep N=15	0.67 (0.97)
Goats N=14	1.28 (1.27)
t-scores (1 tailed, df=27)	-1.48 (1 tailed)
p	0.07

Second recall period

In the second recall period, it was predicted that Goats would recall significantly more 'important' questions than Sheep. This hypothesis was confirmed. There was no significant differences between Goats and Sheep, for the recall of 'unimportant' questions. Also, there was no difference in the Sheep/Goat performance for the recall of 'pseudo-important' questions. Table 7.9 contains the summary data for these analyses.

Table 7.9: Means, standard deviations (in brackets), t-scores (unpaired) and probability for recall (second recall period) of the pseudo PK demonstrations. (min=0, max=8).			
	Important	**Unimportant**	**Pseudo-important**
Sheep N=15	5.64 (1.69)	4.00 (2.63)	4.00 (2.28)
Goats N=14	6.64 (1.39)	4.42 (2.56)	3.28 (2.26)
t-score (df=26)	-1.70 (1 tailed)	-0.44 (2 tailed)	0.83 (2 tailed)
p	0.05	0.66	0.42

4.4.3.2 Pseudo-ESP

It should be noted that all of the following data is exploratory, as the subject sample contained only four individuals who were sceptical of the possible existence of ESP.

Belief in the Paranormal Questionnaire

The mean score on the last three questions of the BPQ (min score=3, max score=15, mid-point=9) for Sheep (N=24) was 6.12 (sd=1.70), and for Goats (N=4) was 13.25 (sd=2.06).

Rating and first recall period

The first hypothesis predicted that Sheep would rate the demonstrations as significantly more 'paranormal' than Goats. Although the differences was in the predicted direction, it was not significant and thus the hypothesis was not confirmed. In this first recall period, the hypothesis that Goats would correctly recall significantly more 'important' questions than Sheep, was not confirmed. There were no significant differences between the number of 'unimportant', nor 'pseudo-important' questions correctly recalled by Goats and Sheep. Table 7.10 displays the summary data for these analyses.

Table 7.10: Means, standard deviations (in brackets), t-scores (unpaired) and probability for rating and recall (first recall period) of the pseudo ESP demonstrations.

	Rating (min=2, max=14)	**Important (min=0, max=8)**	**Unimportant (min=0, max=8)**	**Pseudo-important (min=0, max=8)**
Sheep N=24	7.66 (3.88)	5.12 (2.15)	3.58 (2.10)	4.41 (2.22)
Goats N=4	10.20 (2.63)	4.50 (3.42)	4.25 (1.26)	5.00 (2.58)
t-score (df=26)	-1.27 (1 tailed)	0.49 (1 tailed)	-0.61 (2 tailed)	0.48 (2 tailed)
p	0.11	0.31	0.55	0.64

Problem solving

It was hypothesised that Goats' problem solving score would be significantly higher than that of Sheep. Although Goats did scores higher than the Sheep, the difference

was not significant. Table 7.11 contains the summary data for this analysis.

Table 7.11: Means, standard deviations (in brackets), t- scores (unpaired) and probability for problem solving scores. (min=0, max=4).

	Problem Solving Scores
Sheep N=24	0.21 (0.51)
Goats N=4	0.50 (1.00)
t-scores (df=26)	-0.92 (1 tailed)
p	0.18

Second recall period

In the second recall period, the hypothesis that there would be a significant difference between the number of 'important' questions correctly recalled by Goats and Sheep, was not confirmed. The hypothesis that there would not be a significant difference between the number of 'unimportant' questions correctly recalled by Goats and Sheep, was confirmed. Also, there was no difference in Sheep/Goat performance for the recall of pseudo-important questions. Table 7.12 contains the summary data for these analyses.

Table 7.12: Means, standard deviations (in brackets), t-scores (unpaired) and probability for recall (second recall period) of the pseudo ESP demonstrations. (min=0, max=8).

	Important	**Unimportant**	**Pseudo-important**
Sheep N=23	5.29 (1.41)	4.61 (1.11)	4.43 (2.17)
Goats N=4	5.25 (2.22)	5.50 (1.73)	5.50 (1.73)
t-score (df=24)	0.17 (1 tailed)	-1.36 (2 tailed)	-0.93 (2 tailed)
p	0.43	0.18	0.36

In short, for the pseudo-PK demonstrations, the results were almost exactly as

predicted. Goats rated the demonstrations as less paranormal than Sheep, although not significantly so. In the first recall period, Goats recalled significantly more 'important' information than Sheep. There was no significant difference for the recall of 'unimportant', or 'pseudo-important' information. This suggests that the differential recall of the 'important' items could not have been due to Sheep and Goats employing different 'response sets'. Goats scored higher than Sheep in the problem solving task, although not significantly so. In the second recall period, Goats recalled significantly more 'important' information than Sheep. There were no significant differences for the recall of 'unimportant', or 'pseudo-important' information. Again, this suggests that the differential recall of the 'important' items could not have been due to Sheep and Goats employing different 'response sets'. For the pseudo-ESP demonstrations, there were no significant differences, between Sheep and Goats, for any of the rating, recall or problem solving tasks. This last result was not surprising, given the low number of individuals sceptical of ESP.

4.4.4 Discussion

The results for pseudo-PK and pseudo-ESP will be discussed separately.

4.4.4.1 Pseudo-PK

Although Goats rated the pseudo-PK demonstrations as less paranormal than Sheep, the difference between the groups was not significant and overall, neither group believed the demonstrations to be paranormal. This result was not in agreement with previous experimentation.

In the problem solving task, Goats scored higher than Sheep, with the difference almost reaching significance. This result is in accordance with the results of the second pilot study. The result is not particularly surprising, given that more of the Goats believed the demonstration to be based around trickery, and could recall more 'important' information than Sheep.

In the first recall period, as predicted, Goats recalled significantly more 'important', but not 'unimportant' information, than Sheep. There was a very small, and non

significant, difference in the recall of 'pseudo-important' information between the groups. As such, the differential recall of 'important' information cannot be accounted for in terms of Sheep and Goats utilising differing 'response sets' toward the wording of the questions. However, given that both Sheep and Goats did answer some 'pseudo-important' items incorrectly (with Goats scoring lower than Sheep), it appears that both group were, to a small degree, basing their replies upon a somewhat sceptical response set, with Goats more so than Sheep. However, overall these findings support the notion that Goats are significantly more effective than Sheep at either encoding, storing or retrieving 'important' information during the first recall period before they have been told that the pseudo-psychic is fraudulent.

In the first recall period of the previous experiment, there was not a significant difference between Sheep and Goat recall of 'important' information. Yet, this difference was obtained in the present experiment, and, to a lesser extent, in the pilot study. Thus both of the studies which placed a problem solving task, between Ss viewing the video and attempting recall, obtained differential recall in the first recall period. In contrast, the previous experiment, which did not include a problem solving task after Ss had viewed the video, did not obtain such a finding. The above data supports the hypothesis that there may be a 'window' of time in which Sheep (as well as Goats) retain access to a surface trace of the videotape and thus recall the same amount of 'important' information as Goats. Such an hypothesis should be the subject of future research to confirm it and explore the factors responsible, perhaps by varying the duration of, and activity during, the interval between observation and recall.

In the second recall period Goats recalled significantly more 'important', but not 'unimportant', information than Sheep. Again, there was a very small, and non significant, difference in the recall of 'pseudo-important' information between the groups. As such, the differential recall of 'important' information cannot be accounted for in terms of Sheep and Goats utilising differing 'response sets'. However, given that both Sheep and Goats did answer some 'pseudo-important' items incorrectly (with Goats scoring lower than Sheep), it appears that both group were,

to a small degree, basing their replies upon response sets, with Goats more so than Sheep, just as they were doing during the first recall period. Also, given that, at the time of recall both Sheep and Goats knew the videotape to contain trickery (and were, therefore attempting this recall under roughly equivalent retrieval sets), this finding lends support to the notion that the differential recall of 'important' information is due to factors acting at the encoding/storage stage of the memorial process, as opposed to the retrieval stage.

4.4.4.2 Pseudo-ESP

There were no significant findings from either the rating or recall data pertaining to the pseudo-ESP demonstration. This could be due to one of a number of factors. First, the observed results may be due to the fact that there were very few Ss who fell into the 'Goat' category. Second, the results may reflect a difference in the way in which individuals process and structure information pertaining to demonstrations of ESP, as opposed to PK phenomena. Again, this area is deserving of future research.

4.5 GENERAL DISCUSSION

The studies described in this chapter have examined the way in which observers' belief in psi influences the observation, and recall, of videotaped pseudo-psychic demonstrations.

Five findings have emerged from these studies.

First, Sheep tended to rate the demonstrations as significantly more paranormal than Goats. This finding was obtained both in the initial pilot study, and the first formal experiment. In the second experiment, the differences in rating were in the predicted direction, but not significant. This finding suggests that Sheep are more likely than Goats to erroneously attribute psychic ability to a pseudo-psychic. This effect could be interpreted in several ways. For example, it is possible that when assessing the validity of a psychic claimant, Goats are superior to Sheep, regardless of which decision is the correct one (e.g., Goats are more likely to avoid both false positives

and false negative errors). It is also possible that Goats' disbelief in psi caused them to correctly view the claimant as a pseudo-psychic, and framed them accordingly without necessarily considering the actual data. Future research should aim examine these issues. For example, a future experiment could present Ss with a videotape of a claimant performing phenomena which could not be explained by pseudo-psychic trickery[44]. Ss would then be asked to rate the claimant's psychic ability. Such an experiment may discover that Goats rated the claimant as a genuine psychic, or at least were puzzled by his apparent abilities. This result, when combined with the results of the studies described in the chapter, would indicate that, when assessing psychic claimants, Goats can go against their natural bias, whereas Sheep cannot. Further research could then examine why disbelief in the paranormal correlates with the accurate assessment of psychic claimants. Such research could, for example, examine how the cognitive abilities, and styles, of Goats might cause the accurate attribution of psychic ability. Alternatively, the results from this hypothetical study may reveal that Goats erroneously rate the claimant as a pseudo-psychic. Such a finding would indicate that accurate attribution of psychic ability depends, in part, on observers' belief in psi conforming to the validity of a claimant's actual psychic ability.

A second finding centred around the results of the problem solving task, used in both the pilot study, and the second experiment. On both occasions, Goats scored higher than Sheep on this task, but neither difference was significant. These findings were not surprising, given that, when the problem solving task was administered, the Ss had not been told that the videotape contained trickery, and thus many more Sheep, than Goats, would have believed the magician to have been a genuine psychic.

A third finding concerned the differential recall between Goats, and Sheep, in the first

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[44]The resulting videotape would contain footage of the type which would be obtained from a genuine psychic. In the case of macro-PK, this could be achieved by carefully using some form of camera trickery. Film footage of ostensible ESP and micro-PK could be obtained by continually filming tests of these abilities, and waiting for an unlikely coincidence to occur.

recall period. The initial pilot study and the second experiment, both found that Goats recalled more 'important' information than Sheep[45]. This difference proved significant in the second experiment, and this experiment demonstrated that the effect was not accounted for by Sheep and Goats employing different 'response sets'. This result could be interpreted in several ways. For example, it is possible that, when recalling a demonstration of ostensible psi, Goats are superior to Sheep, regardless of whether that demonstration is genuine or not. Alternatively, it is possible that Goats' disbelief in psi caused them to either encode, store or retrieve more 'important' information than Sheep. Future research should aim to tease apart these explanations. For example, such research could show Ss a videotape that contain a claimant performing ostensible psychic phenomena which could not be explained by pseudo-psychic trickery (see above). Ss would then be asked to recall 'important', and 'unimportant' information (judged with respect to the trickery which could have been used to fabricate the phenomena on the tape, even though the demonstrations were not actually performed in this way). In addition, the experiment could also include 'pseudo-important' questions to examine the role played by response sets. Such an experiment may discover that Goats correctly recalled more, or the same amount, of 'important' information as Sheep. If this result was not due to a response set, it would, when combined with the findings of these present studies, indicate that Goats are superior to Sheep at either encoding, storing or retrieving information from an ostensibly psychic demonstration, regardless of whether that demonstration if genuine, or fake. Further investigation of differences in cognitive abilities between Goats and Sheep might lead to an understanding of why disbelief in psi correlates enhances this accurate recall. Alternatively, the results from this hypothetical experiment may reveal that Goats' natural bias caused them to misremember trickery which did not occur on the tape, and thus score lower than Sheep on the recall of 'important' questions. If this result was not due to response sets, it would indicate that accurate recall of a demonstration depends, in part, upon a Ss' belief in psi conforming to the

[45]It should be noted this result should be treated with caution, given that in the first experiment, although the Goats recalled more important items (in the first recall period) than the Sheep, this difference was not significant.

validity of the psychic phenomena being observed.

Fourth, differential recall for 'important', and 'unimportant', information only occurred when a problem solving task had been inserted between the observation of the videotape, and the first recall period. This supported the notion that there may be a 'window' of time in which Sheep could still gain access to a 'surface' memory trace, and thus still recall relatively large amounts of 'important' information. This result could also be the subject of future research. Such research could vary the time delay, between viewing of the video and first recall period, to ascertain when differential recall starts to be obtained. Alternatively, such research could examine the types of task which, when placed between observation of the videotape and initial recall, either act to disrupt, or enhance, recall performance.

Fifth, the first and second experiment found that Goats still recalled significantly more 'important' information than Sheep during the second recall period. This result suggests that the recall differences were due to factors acting at the encoding/storage, rather than the retrieval, stage of the memorial process[46]. This finding lends tentative support to the notion that encoding factors play a more important role in influencing recall retrieval factors. This is in agreement with the majority of studies which have compared the effects of encoding, verses retrieval, bias (see Taylor & Crocker, 1981).

In addition, this set of studies has developed a methodology which provides researchers with a flexible, straightforward, and easy to apply, way of accurately assessing various issues involved in the recall of complex material. This methodology could be used to carry out some of the future work proposed above. In addition, this methodology could be used to examine the observation, and recall, of other types of ostensible psychic events (e.g., psychic surgery), and by different types of observers (e.g., parapsychologists who have observed a large number of ostensibly psychic demonstrations, magicians etc.). Also, the above studies could be repeated with

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[46]It should be noted that this finding was not obtained in the initial pilot study and as such, should treated with caution.

'live', instead of videotaped, demonstrations. This type of research has already been carried out in other areas of eyewitness testimony. For example, Yuille and Cutshall (1984) compared recall of 'live' and 'videotaped' crimes. They discovered that the live event resulted in witnesses reporting more action details, but not more descriptive details, than did the video version of the event. In this way, it would be possible to further assess how different frames, schemata, and scenarios affect the reconstruction of a pseudo-psychic demonstration. This information could then be used both to further elaborate on the proto-model outlined in this thesis, and, in turn, enhance both the accurate observation of present ostensibly psychic demonstrations, and the reassessment of past demonstrations. Finally, the methodology could be extended to examine the observation, and recall, of other types of deception, such as shoplifting, and gambling scams.

CHAPTER FIVE

RECOMMENDATIONS FOR THE ANALYSIS OF OSTENSIBLE MACRO-PK

5.1 INTRODUCTION

This chapter will outline recommendations for researchers wishing to carry out, and report, an active, or retrospective, analysis of ostensible macro-PK. These recommendations are based upon the previous three chapters, and relevant literature from parapsychology (e.g., Lewis, 1886, Dingwall, 1927, Morris, 1986a, 1986b, Hansen, 1990).

Two points should be noted. First, given that these recommendations require researchers to have a relatively large amount of control over the running of their studies, they apply more to laboratory, as opposed to field, investigations. Second, the recommendations in this chapter are more conceptual than pragmatic. Thus the chapter identifies general suggestions to minimise subject fraud, as opposed to describing detailed procedures by which these suggestions can be implemented.

5.2 ASSESSING A CLAIMANT'S POTENTIAL FOR FRAUD

5.2.1 Introduction

Section 3.2 noted how pseudo-psychics may exploit various cognitive, motivational and social factors to deceive researchers into believing that he/she is unlikely to cheat during experimentation. This section will first discuss measures which help counter this stratagem. Second, the section outlines how this assessment can affect whether researchers work with the claimant, and the level of security employed, should they decide to do so.

5.2.2 Assessing a claimant's potential for fraud

5.2.2.1 Cognitive factors

Section 3.2.2 outlined how a pseudo-psychic can deceive researchers into believing that he/she is unable and/or unwilling to engage in psychic fraud. The same section also noted how a pseudo-psychic may consciously construct a claim that the observer will believe plausible. Researchers should attempt to counter both of these stratagems.

First, researchers should evaluate a claimant's ability to successfully engage in psychic fraud. This should involve assessing a claimant's knowledge of conjuring, and psychic fraud. Researchers should establish if the claimant has been, or is, a member of any conjuring or pseudo-psychic organisations such as The International Brotherhood of Magicians (IBM), The Magic Circle, or the Psychic Entertainers Association (PEA). In addition, researchers should discover if the claimant has any informal contacts within the magical, and pseudo-psychic, communities. Researchers can use several techniques which maximise the likelihood of discovering such information. For example, all claimants could be asked to complete a form which explicitly requests them to state any connections they may have with the conjuring, or pseudo-psychic, fraternity[47]. Also, researchers could check the membership lists of both local, national and international conjuring organisations. Finally, researchers should also attempt to develop informal contacts within the conjuring, and pseudo-psychic, communities. This could be achieved in several ways, including forming friendly links with local magic clubs, and attending some of the larger magic conventions. Also, researchers should attempt to assess if a claimant possesses, or has access to, the resources needed to fabricate the type of psychic phenomena which he/she claims to possess. Researchers may wish to assess a claimant's sleight of hand ability. This may involve, for example, informally observing the skill with which the claimant manipulates small objects. Also, researchers may wish to assess the amount, and sophistication, of apparatus that a claimant could employ in order to deceive researchers. This could be achieved, in part, by informally asking a claimant about

[47]Researchers should ensure that such forms are not worded in such a way as to put off any honest claimants (i.e., individuals who do not intend to deceive researchers) from becoming involved in an investigation.

his/her background, financial well being etc. Although these techniques may help researchers detect some tricksters, the sophisticated pseudo-psychic can overcome these methods by, for example, concealing any contacts or large amounts of finance, he/she intends to employ during an investigation.

Second, researchers should decide if a claimant is likely to be motivated by any of the factors which encourage pseudo-psychic trickery (see section 3.2.2.1). Again, the sophisticated pseudo-psychic may bias this assessment by concealing certain information. For example, a fake faith healer may assure an observer that he/she never accepts payment for his/her services, insinuating that he/she has no motive to deceive. However, as noted by Thomas (1989):

> Apparent lack of financial inducements is no guarantee against fraudulent practise. Randi reports that 'psychic surgeons' did not charge a fee for their services: they received a registration fee and donations. (p. 382).

Third, researchers should also attempt to discover if the claimant has been caught, or been accused of, cheating during previous testing. All claimants could be asked to fill out a form which explicitly requests them to state any previous situations in which their alleged psychic ability has been assessed or investigated. Researchers could also undertake a literature search (e.g., of parapsychology journals, popular magazines etc.) for any articles which mention previous testing of the claimant. Researchers should be aware that a pseudo-psychic could attempt to bias such a search by using false names. Also, when evaluating reports which are discovered, researchers should remember that some writers have been, and are, reluctant to report evidence of possible subject cheating[48]. For example, Hansen (1990) notes how some researchers protested at publishing discoveries of potential fraud by the well known medium, Eva C. (e.g., see Lambert, 1954). To overcome this problem, researchers could establish informal contact with other researchers, thus increasing the chances of discovering possible evidence of fraud which has not been committed to print. In addition, a

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[48]The motivation behind such reluctance may be complex and include, for example, fear of being sued for defamation of character, given that anything less than well documented evidence of fraud is unlikely to prove conclusive in a court of law.

claimant should not be trusted simply because of his/her age, and/or social standing. Instead, researchers should remember that claimants of all ages, and from all socioeconomic groups, have shown themselves capable of psychic fraud (see, e.g., Nicol, 1979, Feilding, 1963, p.1-8).

Finally, section 3.2.2 also noted how a pseudo-psychic may consciously construct a claim such that researchers believes it plausible. To help counter this stratagem, researchers should try to prevent themselves from viewing certain claims as any more, or less, plausible than others.

5.2.2.2 Motivational factors

Section 3.2.3 noted how researchers may want (either consciously or unconsciously) to believe that a claimant possesses genuine psychic ability. The section also noted how these types of wants and needs may cause researchers to underestimate a claimant's potential for fraud. Researchers should attempt to counter such bias by preventing themselves from having any strong needs associated with the outcome of an experiment. For example, researchers with a serious physical illness should not investigate an alleged psychic healer who, if genuine, could cure them. Alternatively, a researcher who possesses a strong need to believe in life after death should not investigate Spiritualist mediums. However, this may prove problematic, given that most researchers will have some level of emotional commitment, however small, associated with the outcome of a study. As such, it may be more realistic for researchers to make a conscious effort to prevent such factors influencing way in which a claimant is assessed.

5.2.2.3 Social factors

Section 3.2.4 noted that researchers may also be deceived into trusting a pseudo-psychic if he/she appears to be honest, and/or likable. However, as noted by Delanoy:

> ...researchers may feel that they have gotten to know their subjects well, and a genuine friendship may develop...[but]...this should not blind researchers to the possibility that they may be more trusting of subjects whom they like or feel they know well. [emphasis mine] (p.

255).

In short, researchers should not trust a claimant, even if they believe they have developed a genuine friendship with that individual.

5.2.3 Working with 'high' and 'low' risk claimants

After completing the assessments outlined above, researchers will have a rough measure of the degree to which a claimant has the ability, motivation and willingness to cheat. All claimants will fall on a high risk/low risk continuum.

Researchers faced with a 'high risk' claimant have to decide whether they wish to work with such an individual. There are several disadvantages associated with such an endeavour. Obviously, the likelihood of facing subject deception is increased. If such cheating goes undetected, researchers could face many of the negative consequences outlined in the introduction to this manual. Second, researchers may believe that working with known tricksters encourages such behaviour. This view was clearly possessed by Eleanor Sidgwick (1909), who noted:

> So long as the fees of investigators...flow with unabated abundance into the pockets of mediums who have been detected in deliberate trickery, this trickery will also remain unabated. (p. 307).

However, there are a number of advantages associated with such subjects. First, as noted by Beloff (1991) refusal to work with a high risk subject may result in missing the opportunity to obtain, and record, genuine psychic phenomena. Beloff illustrates his argument with a resume of the career of Eusapia Palladino. Second, Beloff (1984) has also noted that researchers should perhaps seek out 'high risk' subjects, given that some writers (e.g., Von Lucadou & Kornwachs, 1983, Batcheldor, 1966) have suggested that a certain amount of trickery may be needed to act as a catalyst to genuine psi. Obviously, researchers must decide for themselves whether the advantages of working with a high risk claimant outweigh the disadvantages. However, if researchers do decide to work with such individuals, it is vital that maximum safeguards are enforced to counter potential trickery.

Alternatively, researchers may discover that a claimant appears to have little

motivation, ability or willingness to engage in trickery. When investigating such 'low risk' subjects, researchers may be tempted to employ few safeguards against trickery. However, such temptation should be resisted, and researchers should design, and run, their investigation assuming cheating will be attempted. As noted by Collins (1983):

> A subject with a completely innocent history must be treated, as far as experimental design is concerned, in exactly the same way as the most notorious cheat.(p. 929).

This measure serves two purposes. First, it helps protect researchers from being the victim of subject cheating, should they have underestimated the claimant's potential for fraud. Second, this measure also helps protect the honest claimant from unfair, and possibly hurtful, accusations of cheating. However, the implementation of such measures may prove troublesome. For example, an honest claimant may be troubled by researchers who does not appear to trust him. Also, researchers may feel awkward when not trusting a claimant whom they do not expect to engage in fraud. Either of these factors could serve to make researchers/claimant interaction socially difficult, as well as possibly inhibiting genuine psi. These problems may be overcome, in part, by both researchers and claimant reminding themselves, and each other, that critics may fault a study unless such steps are taken.

5.3 CORRECT DEVELOPMENT OF COUNTER-EXPLANATIONS

5.3.1 Introduction

Section 3.3 outlined how a pseudo-psychic could mislead an observer into not developing the counter-explanation that correctly accounts for the trickery that will be, or has been, used in a demonstration. The section noted that the development of such an hypothesis may be hindered by three factors. First, researchers' claim schemata (i.e., schemata regarding the intended psychic influence, target, and target system) may be either incomplete, or inaccurate. Second, researchers' causal schemata (i.e, schemata relating to the methods used to fabricate macro-PK) may be inappropriate. Third, researchers may erroneously believe one counter-explanation to be correct, and thus refrain from developing additional hypotheses. This section will outline how researchers may counter such stratagems.

5.3.2 Claim schemata

This section will discuss recommendations which help researchers form an accurate representation of a claim, during both an active, and a retrospective, analysis.

5.3.2.1 Active analysis

Section 3.3.2.1 noted two stratagems which may influence researchers' claim schemata during an active analysis. Each of these stratagems will be discussed in turn.

First, the claimant may state his/her claim in very general terms, perhaps noting that he/she will attempt to demonstrate some form of macro-PK, on some type of target, at some point in time. This may be the case, for example, when a claimant states that his/her macro-PK ability is not at all predictable, and thus he/she is unsure exactly when, and what, will occur. If this is the case, researchers should realise that they could be dealing with a pseudo-psychic who consciously avoids making a specific claim to prevent researchers forming specific counter-explanations before the investigation takes place. To counter this stratagem, researchers should ensure that the claimant specifies a detailed claim, in advance of formal experimentation. This entails researchers, and claimant, coming to an agreement as to the specific psychic ability, target and conditions that constitute the claim. This may be achieved in several ways. First, if a claimant states that he/she is unsure as to the factors that are conducive to his/her psi ability, researchers should help identify such factors. This may include asking the claimant to note the conditions under which he/she believes his/her psychic ability has occurred in the past. This dialogue between claimant and researcher may help both parties develop a fuller picture of a claim. Also, researchers could run several very informal sessions (i.e., with no controls present), in which the claimant may attempt to produce psi under a variety of circumstances (perhaps concentrating on factors that, in the past, have proved successful). On other occasions a claimant may approach researchers with a specific claim. If this were the case, the various steps described above would be unnecessary.

Once a specific claim has been developed, researchers should run a number of pilot studies. These studies could be designed with several aims in mind.

First, early pilot studies could maximise the opportunity for the claimant to produce ostensible psi. Researchers would simply conform, as far as is practically possible, to the conditions that the claimant believes to be psi conducive. If, under such circumstances, the claimant was unable to produce ostensible psi, researchers may decide not to invest resources on more formal experimentation.

Second, pilot studies could be designed, and recorded, to aid in the development of more formal experimentation. For example, some writers (e.g., Morris, 1986b, Hansen, 1990) have noted that the design of an experimental protocol may be aided by researchers interacting with magicians. Morris (1986b) has noted how this interaction may be helped by magicians either observing the claimant in person, or viewing a videotape of the claimant. Pilot studies could act as an opportunity for magicians to witness the claimant. Alternatively, such studies could be carefully recorded on videotape, which could then be sent to various 'consulting' magicians. Before filming a pilot study, researchers should interact with the magician/consultant, in order to help discover the best way for the demonstration to be recorded (e.g., when filming should start/stop, the distance between claimant and camera, what part of a room needs to be in shot etc.).

Third, pilot studies may also give researchers an opportunity to assess some of the controls that might be used in more formal experimentation. For example, researchers may wish to film a target during future experiments. If this is the case, pilot studies may be an ideal opportunity to explore the use of such controls (e.g., filming the target from different distances, at different angles, analysing the resulting videotape etc.). The introduction of potential controls may also help the claimant appreciate some of the conditions under which formal experimentation will occur. This, in turn, may act to sharpen a claim, should certain controls inhibit the production of ostensible psi. When carrying out this stage of an assessment process,

researchers should be aware of two points. First, the pseudo-psychic may try to prevent the later application of effective controls by failing to produce any ostensible psi during a pilot study, and stating that the conditions of this study was not psi conducive. As such, researchers may decide to run some pilot studies without the claimant being aware of the controls which are in place during these studies. Second, researchers should also ensure that the use of certain controls during a pilot study does not alter their effectiveness in a formal experimentation. For example, if hidden controls are used in a pilot study, the claimant may discover the nature of such measures, thus increasing the likelihood that these controls will be ineffective during later experimentation.

Section 3.3.2.1 also outlined a second stratagem, in which the pseudo-psychic states that he/she intends to produce a certain demonstration, whilst, in reality, intending to produce another. This section outlined how this stratagem may bias the development of counter-explanations. This stratagem may be countered by researchers, and claimant, agreeing that only phenomena predicted before a formal experiment will be viewed as potentially evidential.

Before undertaking the studies outlined above, both the claimant and researchers should have a clear understanding of some ground rules. For example, both researchers and claimant could agree that neither party can discuss such studies with the media, until a specified time after their completion. This may help avoid the 'media circus' that has dogged some past investigations. In addition, such a condition may help prevent a claimant gaining media attention by stating that he/she has been 'tested' by a respected university when, in reality, he/she has only taken part in very informal pilot studies. Second, the document could help both researchers and claimant agree how upon the wording of the conclusion which will be drawn, should the claimant successfully produce some form of inexplicable phenomena. Third, the claimant and researchers should have a clear understanding of how the results of pilot studies may affect the assessment process. For example, there may be an agreement that, should the claimant completely fail to produce any ostensible psi in such pilot

studies, further assessment would be deemed unnecessary. If, however, the claimant did manage to produce ostensible psi in these studies, the claimant could be assured that more formal experimentation would follow. Fourth, researchers and claimant should also agree that the results of such studies will not be seen as evidential. The agreements outlined above should take the form of a written contract, ideally signed by both researchers and claimant.

5.3.2.2 Retrospective analysis

Section 3.3.2.2 noted that researchers may be deceived when reconstructing a past claim, thus hindering the development of counter-explanations. The section noted ways in which the reconstruction of both primary material (i.e., information obtained first hand), and secondary material (i.e., information obtained second hand), may be biased. In addition, the section noted how different types of evidence (such as researchers's own recollections of an experiment, testimony obtained from other eyewitnesses, and photographic material) may be either fabricated, or biased. Chapter four then elaborated upon one small part of this process, experimentally examining how individuals' belief in psi may influence their observation, and recall, of a pseudo-psychic demonstration. This section will outline a number of measures which minimise these stratagems.

First, to avoid a reconstruction being incomplete, researchers should collect as much relevant information, from as many sources (such as eyewitness testimony, photographs, videotape, and diagrams), as possible.

Second, to minimise some of the biases discussed in section 3.3.2.2, researchers should always attempt to access to primary, as opposed to secondary, material. For example, researchers should attempt to interview the actual eyewitnesses themselves, as opposed to accepting 'second hand' testimony. In addition, researchers should access the original copies of written testimony, photographs, film, or videotape, as opposed to working with material that may have already been edited, or modified.

Third, once such material has been amassed, it should be assessed for completeness and reliability. On some occasions it maybe difficult to assess the degree to which the source maybe incomplete. For example, a researcher may include vital information in a paper but, as the paper is referred and edited for academic consumption, this information may be omitted. To help discover unreliable material, all sources of information could be compared for consistency. Such an assessment may take many forms, depending upon the type, and amount, of material available. If a reconstruction is being based upon more than one source, sources could be compared with one another. For example, a number of sitters may have been present at a seance, and each may have offered an eyewitness account of that seance. It may be discovered that testimony given by one sitter differs from that given by other sitters. Also, eyewitness testimony may conflict with photographic, or videotaped, evidence. For example, Randi (1982a) notes how he believes John Fuller's written account of an 'operation' by an alleged psychic surgeon (Ze Arigo) disagreed with film footage of the same event. Randi notes:

> 'As usual', writes Fuller, 'he [Arigo] plunged the knife in brutally, cut deeply into the flesh of the small of the back - a sector heavily served with blood vessels and therefore inclined to bleed profusely. Very little blood flowed out, but the abscess was drained..the patient was totally calm and without pain'. Nonsense. Arigo merely lanced a boil. It hurt and it bled. That's all. (p. 175).

Alternatively, researchers may also compare information derived from a single source. For example, Hanlon (1974) notes how:

> Bryan Silcock, the science correspondent of the Sunday Times, reported on Sunday 25 November last year: 'In a taxi on the way to London airport yesterday Uri Geller bent the very tough key to my office desk without even touching it. The key was lying flat in the palm of photographer Bryan Wharton's hand at the time'. But the next Sunday, 2 December, Silcock admitted error on the two most critical points: Geller had handled the key, and it was in fact concealed in Wharton's hands when it was supposed to have bent. (p. 172).

Such inconsistency is indicative of some of the information collected by researchers being unreliable. However, even when material does not contain conflicting evidence, it may still be unreliable. For this reason, all of the material obtained should be assessed for reliability. This may be achieved in a number of ways. First,

researchers may wish to discover if certain evidence has been fabricated. The processes involved in such an assessment depend upon the material being judged. In the case of photographic evidence researchers may need to consult with individuals who understand the various ways in which such material can be faked (e.g., Sharpe, 1985), and the techniques which can be used to detect such fakery (e.g., image enhancement and enlargement). When interviewing an eyewitness, researchers may consider using some of the interview strategies designed to detect prevarication (see, e.g., Comer, Ardis & Price, 1990). In addition, researchers could evaluate the credibility of an eyewitness, and his/her testimony. The procedures involved with such an assessment are well established within the legal profession (see, for example, Stone, 1984). For example, to assess an eyewitnesses's credibility, researchers may assess that individual's character, personality and possible motivation for deceit. Similarly, an eyewitness's testimony may be assessed for the qualities often discovered in fabricated material (such as lack of factual detail and lack of personal involvement).

Evidence may still be unreliable, even if not fabricated. For example, section 3.3.2.2 noted how eyewitness recall may be biased by 'time misdirection, 'verbal recapping' and 'in transit actions'. Researchers need to be aware of research into this area (see, e.g., Hodgson & Davey, 1887, Besterman, 1932, Jones, Russell & Nickel, 1976, and the experiments presented in chapter four) and take account of the results of such work. Unfortunately, as noted in chapters three and four, this is difficult to do, in part, because very little work has been carried out in this area In addition, researchers may find it useful to examine how some of the research concerned with eyewitness testimony may be germane to this problem (see, e.g., Loftus, 1979, Wells & Loftus, 1984), particularly that which concerns the observation of anomalous events (e.g., Hall, McFeaters & Loftus, 1987). The content of a photograph, film or videotape may be more reliable than eyewitness testimony. However, such evidence may be misleading if it is incomplete. For example, as noted in section 3.3.2.2, the pseudo-psychic may ensure that trickery occurred outside the camera's field of vision, or during any breaks in the recording process. Thus, researchers should find out if the

claimant (or his/her accomplices) were in a position to engage in trickery outside of the area being filmed by the camera. In addition, when analysing film or videotape, researchers should determine if such filming was continuous and, if this was not the case, obtain a description of any events which occurred during breaks in recording.

5.3.3 Causal schemata

Section 3.3.3 described how inappropriate causal schemata (i.e., schemata containing the methods used to fabricate macro-PK) may hinder the development of counter-explanations. The section also noted that such schemata may be inaccurate at both the strategic, and tactical, level. For this reason, researchers should aim to develop appropriate causal schemata at both of these levels. The first part of this section outlines strategies by which macro-PK may be fabricated. The second part of the section outlines ways in which researchers may develop, or access, the tactics used to implement these strategies.

5.3.3.1 Strategic fabrication

This section describes six strategies involved in the fabrication of macro-PK. These strategies have been culled from a number of sources within both the conjuring (e.g., Sharpe, 1932, Fitzkee, 1944) and parapsychology (e.g., Marks & Kammann, 1980, Morris, 1986c) literature. It should be noted that these six methods are not ~~extortive~~ naustive, but instead aim to cover the majority of the strategies used to fabricate macro-PK.

5.3.3.1.1 Erroneous initial measurement of target/target system

Pseudo-psychics can deceive researchers into incorrectly measuring the initial state of the target. The pseudo-psychic later reveals the true nature of the target, and researchers believe that genuine PK has taken place.

Appearances

To fabricate appearances, the pseudo-psychic may conceal an object within, or near to, the area in which it will later be produced. Such concealment may be achieved in several ways. First, the pseudo-psychic may conceal an object by placing it behind

some form of physical screen. For example, before the start of a seance the fake medium may conceal several objects under his/her clothing. During the seance the medium secretly removes these objects, and states that he/she has apported then into the seance room (see, for example, Bell, 1935). Second, an object may be concealed by being disguised as another object. Corinda (1958) describes how this technique can be used to fabricate the production of ectoplasm. Before the seance, the fake medium prepares a handkerchief by coating all but one corner of it in luminous paint. This handkerchief is then tucked into the medium's breast pocket, with only the 'normal' corner showing. During the seance (and once the lights have been lowered), the fake medium slowly pulls the handkerchief from his/her pocket (possibly with his/her teeth, if his/her hands are secured) to give the impression that ectoplasm is slowly forming from his/her body. Finally, the object may be concealed via camouflage (i.e., having it blend in with a background pattern, such that researchers cannot detect the target against the backdrop). Conjurers employ this technique when performing 'black art' magic. This is a method of camouflage in which the object to be hidden is covered in black material such that, when placed against a carefully lit black background, appears to be invisible. This black covering can then be removed in order to make the object suddenly 'appear'.

Vanishes

Vanishes are the opposite of appearances, and are often fabricated by reversing the methods used to make an object apparently materialise. The pseudo-psychic may fabricate the 'vanish' of an object by first simulating the presence of that object, and then discontinuing this simulation. For example, Sharpe (1985) describes a whole host of optical equipment (such as plane mirror reflection, two-way mirrors, convex mirrors, and concave mirrors) which are used by both fake mediums, and stage magicians, to visually simulate the presence of both objects and people. This simulation is then terminated to make the object apparently vanish.

Modifications

To fabricate modifications, the pseudo-psychic may deceive researchers into believing

that an object is initially in one state when, in reality, it is in another. For a 'modification' to occur, the pseudo-psychic merely has to reveal the true state of the object. For example, Harris (1985) outlines how PK metal bending may be fabricated by the prior pre-weakening of a spoon (e.g., by repeatedly bending it back and forth). At the start of the trick, the spoon appears, to the casual researchers, to be completely unprepared. In reality, the spoon is already modified (i.e., greatly weakened) and only requires a little pressure to break into two pieces.

Transpositions

To fabricate transpositions the pseudo-psychic may deceive researchers into believing that an object is in one location when, in reality, it is in another. To create a 'transposition', the pseudo-psychic reveals the true position of the object. This strategy (which is essentially the combination of an appearance, and vanish) may also be used to fabricate penetrations, wherein the observer is deceived into believing that an object is one side of a barrier when, it is on the opposite side of the barrier. For a 'penetration' to occur, the pseudo-psychic reveals the true position of the object.

Levitations, suspensions and animations

To fabricate levitations, suspensions and animations the pseudo-psychic may conceal, or disguise, the presence of a force that acts on an object. Later in the demonstration, the action of this force is revealed. For example, in the 'Three Sword Suspension' the magician's assistant initially appears to be laying across the tips of three swords that have been embedded, handles downwards, into the stage. One at a time, two of the swords are removed and the assistant magically remains suspended horizontally from the last remaining sword. This illusion is accomplished by the assistant initially wearing a harness that connects her to the remaining sword, the handle of which is firmly embedded in the stage.

5.3.3.1.2 Concealed influence before controls are applied

The pseudo-psychic may access the target object, after researchers have measured that object, but before any controls, designed to counter subject cheating, are

implemented. This strategy can be used to fabricate a wide range of phenomena.

Appearances

To fake appearances, the pseudo-psychic may secretly move the object into the area in which it will later 'appear'. For example, a fake medium may suggest that he/she is searched. After this search has taken place, he/she then suggests that one of the sitters should carefully observe him, to ensure that he/she is not able to secrete any objects upon his/her person. In reality, the fake medium secretes such objects in the moment of relaxation which occurs between the end of the search, and him suggesting that he/she should be observed by a sitter. Alternatively, the pseudo-psychic may openly move an object into the area in which it will later be produced, but only simulate it's removal from that area. For example, one technique used by stage magicians to fabricate the continuous appearance of playing cards, is the 'spilt fan' production. This consists of the magician showing a fan of playing cards. Next, the magician appears to discard all the cards into some form of container (e.g., a upturned top hat, or box). In reality, the card fan is slit into two. Approximately half of the cards are discarded into the container, the remaining half are back palmed[49]. The magician then indicates that the audience should pay careful attention, and then 'magically' produces the palmed playing cards.

Vanishes

Vanishes may be fabricated by reversing the techniques described directly above. Thus, before appropriate controls are in place, the pseudo-psychic may secretly remove the target object out of the area from which it will later 'vanish'. The presence of that object is then simulated, and later, this simulation is terminated. For example, the stage magician may lay on a table, and apparently be covered by a cloth. In reality, the magician climbs into a secret hiding place within the table, and the cloth (containing a wire frame) gives the impression that he/she is still lying on the table. The table (and magician) are then wheeled offstage, whilst two assistants hold

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[49]A sleight which conceals a small object behind the back of the hand (see Whaley, 1989, p. 58).

the cloth (and frame) between them as if they held the magician. To make the magician suddenly vanish, the assistants crush the cloth (and wire frame) into a small ball. Alternatively, the pseudo-psychic may openly remove the object from the area, and only simulate it's movement back into that area.

Transportations

To fabricate transportations the pseudo-psychic may, before any controls are in place, secretly move an object from one position to another. For example, a magician might be placed inside a cabinet, which is on the right of the stage. A second cabinet is then shown empty and placed on the left of the stage. After a few moments, the magician emerges from the cabinet on the left of the stage. This trick may be achieved by having the cabinets constructed with fake bases. These boxes are then placed over two trap doors, allowing the magician to quickly drop down one trap, walk under the stage and climb through the second trap, into the second cabinet. Such movement may occur before the boxes are lifted above the stage, a measure designed to show that the magician could not be using trap doors. To fabricate penetrations, the pseudo-psychic may, before any controls are in place, move an object either around, or through, a barrier. Alternatively, the pseudo-psychic may fabricate both transportation and penetrations, by simulating the placement of the object into one location whilst, in reality, retaining the object in it's original location. For example, a magician may have a spectator examine his/her hands, and a coin. The magician then apparently places the coin into his/her right hand but, in reality, retains it in his/her left hand. The magician then instructs his/her audience to watch closely, before showing his/her right hand empty, and his/her left hand holding the coin.

Modifications

To fabricate modifications the pseudo-psychic may, before any controls are in place, secretly alter some aspect of the target. For example, to fabricate PK spoon bending the pseudo-psychic may secretly bend the spoon after it has been examined by researchers, but before the demonstration 'proper' begins. The pseudo-psychic then holds the spoon 'face on' to the researchers, such that they cannot see it is bent. The

researchers are then instructed to watch closely, and the pseudo-psychic reveals the bend, by slowly turning the side of the spoon such that it faces the researchers. Second, the pseudo-psychic may only simulate the modification of an object. For example, one method for the 'torn and restored banknote' involves the magician taking a banknote and only pretending to tear it into many pieces (in reality, the note remains intact). The magician merely has to reveal the true nature of the bank note for an apparent restoration to occur.

Levitations, suspensions and animations

Levitations, suspensions and animations can also be fabricated via the secret application of force before any controls are implemented. For example, to make a small object move across a surface, the pseudo-psychic may secretly blow onto the object. When this has occurred, the pseudo-psychic may turn his/her head away, to prove that he/she couldn't be blowing on the object. Exactly this stratagem was used by pseudo-psychic, James Hydrick (see, Korem, 1982). In addition, such force can secretly be applied by both 'invisible' thread, and the use of strong magnets.

5.3.3.1.3 Concealed influence whilst controls are being applied

This third strategy involves the pseudo-psychic secretly accessing the target after it has been initially measured, and whilst controls are being applied. The actual techniques used to fabricate each type of PK are identical to those discussed in the section above. However, wherein the above techniques were used before controls were in place, these strategies are used whilst the controls are being applied.

This strategy may be successful if researchers has failed to realise all of the ways in which a target can be influenced by a pseudo-psychic. For example, Morris (1986a) has outlined a variety of ways in which certain targets can be influenced in more ways than is generally realised (e.g.,stopped watches can be started by the melting of congealed lubricants through the heat of the hand). Second, researchers may have thought of a way in which the claimant could surreptitiously influence the target, but failed to use effective control against such trickery. Third, a pseudo-psychic may be able

to negate the controls by, for example, removing some of the seals used to secure the target, and carefully replacing these seals, or providing substitute seals after the interaction with the target is complete.

5.3.3.1.4 Concealed influence after controls have been removed

This stratagem involves the pseudo-psychic secretly influencing the target after any controls have been removed. When using this stratagem, the pseudo-psychic may have the added advantage of researchers having relaxed their attention in the belief that the experiment has terminated. This relaxed attention may be caused by the pseudo-psychic stating that a demonstration has terminated, and/or been unsuccessful. In addition, the pseudo-psychic may ask for a rest period. Also, magicians often act as if a trick has successfully finished, concealing the fact that the proper end to the trick has yet to happen. For example, at the conclusion to 'The Miser's Dream'[50], the magician may produce a flurry of coins, and then bow to the audience. As such, the audience may assume that the trick has finished, and relax their vigilance. The magician may utilise this lapse in attention to steal[51] a final load of coins. These coins can then be suddenly produced as the audience are applauding.

5.3.3.1.5 Lack of knowledge concerning the properties of the target

The section above noted that researchers may not realise all of the ways in which a pseudo-psychic can secretly influence a target. However, researchers may also be deceived if they do not fully understand how the target behaves, even when not subjected to any concealed influence. This may be the case when the properties of a target are not yet fully understood within science. For example, Hasted (1981), in discussing the relative merits of different types of target systems, notes:

> ...bimolecular systems and living organisms are...difficult to maintain

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[50]A classic stage production routine in which a seemingly endless supply of coins are plucked from the air and dropped into some form of receptacle (see Whaley, 1989, p.454).

[51]Any sleight used by magicians to secretly gain possession of an object, or number of objects (see Whaley, 1989, p. 645).

> in a completely stable state. Gases, liquids and especially plasma are subject to various instabilities. For example, 'Kirlian photography' of high frequency discharges around the body can show interesting effects, but such discharges are complex and difficult to understand quantatively even in the absence of possible psychic influences. (p. 4-5).

5.3.3.1.6 Erroneous remeasurement

This fifth strategy entails the pseudo-psychic deceiving an observer during the remeasurement of the target, or target system. Many of the techniques described in section 5.3.3.1.1 can be used to implement this strategy.

First, the pseudo-psychic may also fool researchers by having them measure a different target/area to that initially measured. For example, to fabricate a vanish, the pseudo-psychic may construct a second target system, identical to the first, but that does not contain the target object. Researchers are then deceived into believing that this system is actually the one they originally measured, and that the object has apparently vanished. The pseudo-psychic may also make use of duplicate objects when fabricating modifications, transportations and penetrations. For example, some stage illusions, involving the apparent transposition of an assistant from one position to another, employ 'twin' assistants. One twin is concealed at one location, whilst the other is revealed at a second location. Also, versions of the torn and restored newspaper involve the switch of a torn up newspaper for a second, duplicate but intact, newspaper.

Second, researchers may be deceived, even when assessing the same target, or area, measured at the start of the experiment. The methods used to implement this stratagem are conceptually similar to the techniques already described in section 5.3.3.1.1. To fabricate appearances, the pseudo-psychic may deceive researchers into believing that an object has actually appeared when, in reality, the presence of this object has merely been simulated. For example, Fraser-Harris (1935) has outlined how the dim red lighting (used during many seances) may cause ~~an~~ researchers to experience various retinal illusions that could be mistaken for spirit

entities. To fabricate vanishes the pseudo-psychic may deceive researchers into believing that the object has disappeared when in reality, the object is concealed. Such concealment may be achieved via occlusion, disguise or camouflage. To fabricate transportations, and penetrations, the pseudo-psychic may deceive researchers into believing that an object is in a new location, when the object has not changed locations. For example, Randi (1982a) has described how a fake psychic healer can hold his fingers in a certain position, such that they appear to have penetrated a patient's stomach. To fabricate modifications the pseudo-psychic might deceive researchers into believing that the object is in a modified state, when it is still in an initial state. For example, in the 'Boomerang illusion', the magician may show two pieces of wood (cut in the shape of boomerangs) to be the same size by placing them on top of one another. However, when the boomerangs are separated, one of them appears to be much larger than the other. This apparent difference in size is the result of an optical illusion. Such simulation may also be created by verbal suggestion. For example, in discussing various methods of fake spoon bending, Fuller (1975), notes:

> I always tell people that the spoon will keep on bending for two or three weeks. Of course it won't...but people are so anxious to believe that they'll imagine it really does keep bending (p. 20).

Levitations, suspensions and animations may be fabricated by researchers being deceived into believing that an object has an additional force acting on it, when it has not. This might be achieved in several ways. For example, Fraser-Harris (1935) notes:

> We should always remember the difficulty of pronouncing on the movements of feebly illuminated objects in the dark. At those dark seances where the purpose is to observe the movement of objects (levitation or telekinesis) one has to stare steadily and for long periods at spots or bands of luminous paint...The result of this staring at a small, not very bright white spot or band against a black background is to produce an after-image of the white spot (or band) which on outward projection will appear to be oscillating slightly. Thus we may easily imagine that a stationary spot is in slight movement. (p. 141).

5.3.3.2 Fabrication at the tactical level

Researchers should also discover the various tactics that may be employed to implement the strategies outlined above. Such information may be obtained in a

number of ways.

First, researchers may find it helpful to search previous literature within psychical research, and parapsychology, to discover if past investigators have assessed the type of claim currently being evaluated. The discovery of relevant literature may help researchers generate ideas as to the specific types of trickery/controls, which they may encounter/employ in their investigations.

Second, a recent statement by the Parapsychological Association (1984) has recommended that parapsychologists consult with magicians when assessing psychic claimants. However, such interaction has both advantages and disadvantages. On the positive side, researchers clearly stand to gain from magicians' familiarity with the tactics of conjuring, and psychic fraud. Also, as noted by Hansen (1990), magicians may be able to help researchers develop controls which effectively counter such trickery. In addition, some writers (e.g., Gardner, 1985, Hansen, 1990), have noted that magicians may be more skilled than lay observers at identifying novel forms of trickery. However, researchers should be aware that there such consultation has it's limitations. For example, many writers (e.g., Hyman, 1964, Hansen, 1990) have emphasised that magicians may themselves be fooled by certain kinds of magic tricks[52]. As such, they cannot be relied upon to design a completely fraud proof experiment.

If researchers do decided to consult with magicians, they can take several steps to ensure the consultation is as productive as possible. When selecting a magician with which to consult, researchers should be aware that the range of conjuring techniques is huge, and most magicians necessarily specialise in certain types of magic (such as close-up magic, stage magic and spirit magic). As a result their expertise may be confined to these areas. As Dingwall (1921) writes:

> The word of an ordinary magician is not to be wholly trusted. An

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[52]There is an entire branch of magic which aims only to fool magicians. This has come to be labelled 'magic for magicians' (see Whaley, 1989, p. 416).

> expert in billiard-ball manipulation...may know nothing of the methods of the sealed letter reading or of concealing fakes for materialisation. (p. 28).

Also, researchers should attempt to overcome some of the barriers which may hinder effective magician/investigator communication. For example, Hansen (1990) has noted that such barriers include; parapsychologists' lack of knowledge of conjuring, the clandestine nature of magical literature, no established network of researchers/magician communication and the false belief of many scientists that magicians are hostile to parapsychology. Third, researchers should familiarise themselves with previous studies which have employed magicians as consultants (see, e.g., the list of such studies in Hansen, 1985a). This may help them learn lessons from the ways in which such consultation has proceeded in the past.

Third, researchers should also study some of the publications which outline the relevant tactics of conjuring, and psychic fraud. It is not necessary that researchers become expert in all areas of psychic fraud. Instead they should aim to form a good general understanding of the topic. In addition, researchers should develop a more detailed knowledge of the types of trickery that are more relevant to the ostensible psi they wish to assess. Researchers could discover relevant literature by consulting some of the bibliographies of magic books, and indexes to magic magazines. This literature can then be obtained from book dealers specializing in conjuring, and pseudo-psychic, publications. In addition, researchers may also find it helpful to subscribe to some of the magazines which are regularly produced for, and by, both magicians and pseudo-psychics. Of particular interest may be magazines which specialise in describing methods for mentalists, and fake mediums.

Fourth, if possible, researchers should attempt to develop informal contact with both the magical, and pseudo-psychic, communities. This can be achieved in several ways. For example, researchers should attend some of the major magic conventions regularly held in both Europe and the USA. Second, researchers could also join both international, national, and local, magic societies.

Fifth, researchers should also consider interacting with individuals involved in the security industry. Such individuals may ~~be~~ possess useful information relating to the way in which criminals access supposedly secure systems, and can advise researchers on commercial products which are designed to counter such subterfuges. For example, Hansen (1990) advises researchers to study the 'CIA Flaps and Seals Manual' (Harrison, 1975) to appreciate the diversity of techniques that may be used to enter various types of packaging without leaving any signs of tampering. In addition, security firms manufacture products which can be used to counter such deception. Many of these products are easy to use, are unobtrusive and have been fully assessed for effectiveness[53]. For example, many firms specialise in the production of 'tamper evident' envelopes which are designed to show any attempts at illicit entry.

Sixth, on occasion researchers may have to work with target systems without fully understanding the properties of those systems. If this is the case, they should attempt to discover how such systems behave without any form of normal, and/or paranormal, influence, and also how they can be secretly influenced by a pseudo-psychic. For example, researchers may wish to assess a claimant who can apparently cause strange physiological effects within his/her own body (e.g., the slowing down/stopping of his/her own heart beat). If this were the case, these researchers could first consult literature which describes how such effects could be produced by normal means alone (see, e.g., Fisher, 1979). In addition, such researchers could also interact with individuals (e.g., medical practitioners, physiologists, etc.) who understand such systems more fully.

Seventh, researchers should also consider using some of the techniques designed to enhance lateral thinking (e.g., DeBono, 1970), and creative problem solving (for a brief review of relevant courses, see Frederiksen, 1984). This procedure may

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[53]It should be noted that some of these envelopes are more effective than others. For example, one well known manufacturer uses a tamper evident seal to secure the top flap of its envelope, but ordinary (water soluble) glue to secure its bottom flap!

increase the likelihood of developing tactics that may be absent, or little known, even within the magic and pseudo-psychic communities and, as such, could be used when researchers are confronted with an effect which is not well known within these communities.

5.3.4 Adequacy of prior counter-explanations

Section 3.3.4 noted how researchers may decide not to develop additional counter-explanations after forming one, or more, hypothesis(es) which he/she believes to be adequate. To counter this stratagem, researchers should develop a large range of hypotheses, despite the adequacy of the explanations that have already been developed. For example, researchers should consider organising informal 'brainstorming' sessions with other individuals (such as fellow researchers, and magicians), which would be designed to develop, rather than assess, as many counter-explanations as possible.

5.3.5 Reporting recommendations

When reporting an active analysis, researchers should describe their initial interactions with a claimant. This may include how the claimant contacted researchers (or vice versa), and details of the initial claim. Researchers should then describe any informal sessions, and pilot studies, undertaken with the claimant. This description should include details of how a claim may have been modified during this period. To help this procedure, researchers should attempt to record initial interactions with a claimant as they occur (e.g., by keeping an experimental diary, openly recording conversations etc.). In addition, reports should also include verbatim copies of any signed agreements between claimant, and researchers.

When reporting a retrospective study researchers should describe how a claim was reconstructed. This should include a description of: the material upon which the analysis is based, the way in which this material was located, material which was discovered but not used, how such material was assessed for reliability, and the outcome of this assessment.

Researchers undertaking both active, and retrospective, analyses should also describe the processes involved in the development of counter-explanations. This might involve outlining the individuals, and literature, consulted to help form such hypotheses. In addition, researchers should describe briefly the explanations themselves.

5.4 ACCURATE ASSESSMENT OF PLAUSIBILITY

5.4.1 Introduction

Section 3.4 outlined various methods by which an observer may be deceived into erroneously assessing a plausible counter-explanation as implausible. This section will outline measures designed to counter such stratagems.

5.4.2 Fraud capability

Section 3.4.2 noted how researchers may overestimate the physical strength, manual dexterity, conjuring knowledge, and motivation required to engage in certain types of trickery. The section also noted how researchers may underestimate a claimant's capability, and motivation, to engage in deception. Either of these stratagems may result in researchers rejecting a plausible counter-explanation as implausible. As such, researchers should aim to counter both stratagems.

First, researchers should, as accurately as possible, determine the level of expertise, knowledge, and motivation needed to engage in certain types of trickery. To do so, researchers may have to consult with experts who can perform the type of trickery being assessed. For example, to determine how much practise is required to fake 'sleeving'[54], researchers may consult with magicians who are proficient in this technique. Alternatively, researchers may be able to discover such information by personal experience. For example, Marks & Kammann (1980) note:

> The next little Geller incident occurred after lunch. I took my room key from my pocket to discover that it was so bent I couldn't get it in

[54]A sleight-of-hand technique wherein the magician secretly disposes of objects up his jacket sleeve (see Whaley, 1989, p. 616).

> the keyhole....I remembered how I'd shown the key to Geller when he wanted the room number. I was halfway up the hall on the way back to the reception desk to ask for another key,...when I thought I'd test my own skill at bending it back. Although quite a thick key, by giving it a firm tweak in both hands, I easily bent it straight again...I, like most people, assumed that keys are impossible to bend in the hands, but this little assumption turned out to be false. (p. 83-84).

Second, researchers should form an accurate perception of the claimant's capability, and motivation, to engage in fraud. The issues involved in such an assessment have already been discussed in section 5.2.

When undertaking the above assessment, researchers should allow themselves a safe margin of error by consciously underestimating the capability, and motivation, required to perform certain trickery. Researchers should also overestimate the claimant's capacity, and motivation, for deception. This may appear as if researchers ~~is~~ are taking unnecessary precautions against trickery. However, at a future date it may be discovered that a certain type of trickery is far easier than supposed by past researchers. Alternatively, new evidence may reveal that a past claimant was indeed a more sophisticated trickster than assumed at the time of testing. Unless researchers underestimate the capability required for trickery, and overestimate the claimant's ability to perform such trickery, their resulting controls may, in retrospect, be seen as inadequate.

5.4.3 Simplicity/obviousness of explanation

Section 3.4.3 noted how a pseudo-psychic may deceive an observer into viewing an explanation as implausible because it appears too obvious, or simple. For example, the section noted how Hanlon (1974) did not consider some of the simpler methods by which Geller could have attempted to fake some of his demonstrations (outlined, for example, by Randi, 1982b), instead proposing far more complex methods (e.g., the use of a radio receiver concealed within Geller's tooth, and a faked 'radio die' which electronically signals which of it's faces is uppermost). To counter this stratagem, researchers should not reject a potential counter-explanation on the grounds of simplicity or obviousness.

5.4.4 Past methods

Section 2.4.4 noted that researchers may reject an explanation if it involves trickery that the claimant has not, in the past, used, or been accused of using. Section 3.4.4 noted that a sophisticated trickster may exploit this process by deliberately changing his/her methods both within, and between, demonstrations. To counter this stratagem, researchers should not allow a claimant's apparent preference for certain types of trickery to influence the way in which explanations are assessed for plausibility. Section 3.4.4 also noted how a pseudo-psychic may attempt to discover the counter-explanations being developed by an observer, and employ a method not under consideration. To counter this stratagem, researchers engaged in an active analysis should ensure that a claimant cannot gain access to material (e.g., written progress reports) that describes the counter-explanations under consideration.

5.4.5 Reporting recommendations

When reporting an analysis, researchers should note if any counter-explanations were rejected as implausible. If one, or more, counter-explanation was rejected as implausible, researchers should note why this was the case.

5.5 ACCURATE (RE)CONSTRUCTION OF CONTROLS

5.5.1 Introduction

Section 3.5 noted how an observer could be deceived into underestimating the true effectiveness of certain controls, believing that a set of ineffective controls are effective. This section will discuss how researchers can counter this stratagem during both active, and retrospective, analyses.

5.5.2 Active analysis

Before the start of an experiment researchers should develop, and assess, the controls that will be used to test the claim under consideration. This could be achieved in several ways.

First, researchers should examine literature, and/or interact with certain individuals

(e.g., magicians, security experts), to discover if a control will be effective. For example, when using observational controls, researchers should discover any factors that bias an individual's attention, perception, and recall. This may involve researchers familiarising themselves with relevant literature within psychology, conjuring and the legal profession (e.g., Wells & Loftus, 1984, Fitzkee, 1945, Stone, 1984). In addition, researchers should consider interacting with individuals who are experienced at observing deception (such as magicians, customs officials, prison officers, and law enforcement agents). Additionally researchers may decide to counter potential deception by filming, or videotaping, an experiment. If this is the case, researchers should consult literature which discusses the problems involved in filming psychic claimants (Singer & Ankenbrandt, 1980, Hansen, 1990), and perhaps other examples of human deception (e.g., Farrell & Farrara, 1985, discuss the filming of shoplifting). Researchers should attempt to understand how various factors (such as lighting conditions, angle of filming, distance of camera from event to be filmed, use of multiple and/or concealed cameras) can maximise the effectiveness of such controls. Physical controls can be assessed in a similar way, with researchers examining past studies which may have used the same, or similar, controls. In addition, researchers should consult individuals who manufacture, or have previously employed, such controls. Researchers wishing to use commercial security devices may discover that manufactures have already invested considerable time, and effort, into assessing such products. If this is the case, researchers should ensure that the product will be effective under the specific circumstances which will be present during experimentation.

Second, researchers should consider running a 'dummy' experiment, in which all of the controls which will be, or have been, used in the experiment proper are in place. However, instead of asking the actual claimant to psychically interact with the target, a skilled trickster (e.g., a magician, security expert) could be asked to try and overcome the controls employed. This 'dry run' has two advantages. First, it could help to prevent wasting the time of the actual claimant, as it reduces the likelihood of him taking part in an experiment with inadequate controls against cheating. Second,

it may help researchers identify general problems with an experiment (e.g., certain controls may be difficult to implement etc.). However, in some circumstances, this dummy experiment may prove problematic especially if, during such pre-testing, 'hidden' controls may be exposed, thus increasing the likelihood that a pseudo-psychic could learn about such controls. This problem can be overcome in several ways. First, researchers could only use 'dummy' claimants that were as trustworthy as the consultants who suggested the controls in the first place. Second, researchers may decide to evaluate a set of controls after the experiment proper has taken place. Hansen (1982) has suggested a post-experimental procedure for assessing the physical controls designed to counter surreptitious tampering of a small target. Hansen advises researchers to construct a number of identical 'test items' (i.e., targets protected by their physical controls) before the experiment. One of these items is then selected and given to the claimant. If the claimant proves successful, and no signs of cheating are discovered, one of the other test objects is randomly selected and given to a trickster to attempt to duplicate the phenomena. Unfortunately, this approach could result in researchers only discovering that their controls were ineffective after the experiment proper has already taken place. As such, this second procedure should be used if researchers do not have access to 'dummy' claimants which are considered as trustworthy as their consultants.

5.5.3 Retrospective analysis

Section 2.5.3.2 noted how researchers may wish to reconstruct the controls used in a past study. This may involve, for example, researchers piecing together the construction, and working, of objects used as physical controls. If a past study used observational controls, researchers may wish to reconstruct the physical, and psychological, state of observers, as well as the conditions under which observation took place. Section 3.5.3.2 outlined how researchers can be misled during this process, reconstructing controls that appear more effective than they were during a past experiment. The section noted various ways in which pseudo-psychics bias the reconstruction of both primary (i.e., information obtained first hand), and secondary (i.e., information obtained second hand), material. In addition, the section noted how

different types of evidence (such as researchers's own recollections of controls, testimony obtained from other eyewitnesses, and photographic material) may be either fabricated, or biased.

The steps that should be taken to counter these stratagems are conceptually identical to those outlined in section 5.3.2.2.

First, researchers should collect as much relevant information, from as many sources, as possible (such as eyewitness testimony, photographs, videotape, and diagrams) as possible. Second, to minimise some of the biases discussed in section 3.5.3.2, researchers should, whenever possible, gain access to primary material. For example, researchers should attempt to interview eyewitnesses, or at least gain access to an original copy of the testimony provided by such individuals. In addition, researchers should attempt to access original photographs, film, or videotape. Third, once such material has been amassed, it should be compared for reliability. To help discover unreliable material, all sources of information could be assessed for consistency. Such an assessment may take many forms, depending upon the type, and amount, of material available. If a reconstruction is being based upon more than one source, sources could be compared with one another. It may be discovered that sources differ in their description of past controls. For example, in discussing the security precautions in his mini-lab experiments[55], Cox (1983) notes that:

> I should note that for all of my own experiments...a special string was tied, in addition to the lock...This was synthetic, varicoloured, and was purchased by me in Europe in order to preclude matching it here. Whenever I locked up the ML [mini-lab] I would as an extra precaution tie a bit of this string, and with a match I would melt the ends together. Richards [the individual in whose house the ML was stored] had no access to any remnant of it, which I would always take away along with my key. [emphasis mine] (p. 4).

Yet Hansen (1985b) in his critique of these experiments, notes:

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[55]A 'mini-lab' consists of a sealed container (e.g., an aquarium inverted over a wooden base, secured by mental strips and locks) into which various small items (such as toys, balloons, and leather rings) are placed by the experimenters.

> ...in his paper Cox states that, for some of his experiments (the ones in which he did not employ a locksmith), he used synthetic, varicoloured string, in addition to a lock, to seal his mini-labs. He claims that Richards had no access to any of it. What is not mentioned in this paper is that Cox would take the roll of string to the Richard's home, unwind a considerable length, and then turn his back on it to attend to some other detail. I observed him do this a number of times; sometimes he turned his back for half a minute. (p. 21).

For observational controls, researchers may wish to reconstruct the physical state, and psychological capabilities, of the observer, as well as the conditions under which such observation took place. For example, Panati (1976), discussing the observational abilities of parapsychologist Ed Cox, notes:

> Cox...is also a semiprofessional magician, an associate of the Society of American Magicians, and formerly a member of the International Brotherhood of Magicians...[he] has been active in the fields of both magic and parapsychology for over forty years, and is the author of numerous parapsychology research papers, as well as an advisory booklet for magicians on ESP. (p. 139).

Thus giving the impression that Cox would be likely to detect pseudo-psychic trickery, should it occur. Yet Couttie (1988), in discussing Ed Cox's description of his investigation into Uri Geller, notes:

> ...[Cox] claims that a true psychic would be able to allow himself to be filmed making a drawing of a hidden target, while a magician would not. He makes no allowances for different methodologies, and there are numerous methods, even without a tip-off from an accomplice. Cox is so wrong that there is no need to even wonder whether or not he can spot fraud. <u>If he knows so little about magician's techniques, then he clearly cannot, despite his forty years' experience in magic and parapsychology.</u> [emphasis mine] (p. 18).

Such inconsistency is a clear sign that some of the information collected by researchers must be unreliable. However, even when material does not contain conflicting evidence, it may still be unreliable. For this reason, all of the material obtained should be assessed for reliability. As noted in section 5.3.2.2, this may be achieved in a number of different ways. First, researchers should discover if certain evidence has been fabricated. The processes involved in such an assessment may depend upon the type of material being judged. Researchers may have to consult with individuals who are knowledgable about techniques involved in faking photographs,

film or videotape. When interviewing an eyewitness, researchers may use interview strategies designed to detect prevarication, and possibly evaluate the credibility of an eyewitness, and his/her testimony. Finally, evidence may still be unreliable, even if not fabricated. The issues involved in assessing the reliability relaying to the reconstruction of controls are identical to those discussed in section 5.3.2.2.

After researchers believe that they has accurately reconstructed a set of past controls, they must assess the effectiveness of those measures. Such an assessment may use some of the techniques outlined in section 5.5.2. Thus researchers may attempt to physically reconstruct a past set of controls, and ask a skilled trickster to attempt various types of deception. For example, Feilding (1922) describes how he and William Marriott (a conjurer) was able to fabricate 'spirit photographs' under the same conditions as had been previously used to test the alleged medium, Mr Hope. As a result, Feilding concludes that the conditions originally used to test Hope were ineffective. However, such an approach is problematic, given that a simulation can never truly duplicate the controls used in past experimentation. Thus the simulation may contain controls that were not present in a past study, and vice versa.

5.5.4 Reporting recommendations

When reporting an active analysis, researchers should describe how the controls, intended to be used in an experiment, were developed, and tested. This may involve researchers describing the different types of expertise employed during the development of controls, and the processes involved in their assessment. In addition, to aid future researchers, a report should mention any controls which were developed, but rejected as ineffective.

When reporting a retrospective study researchers should describe how past controls were reconstructed. This may include a description of the material upon which the reconstruction is based, with a summary of how such material was discovered, and assessed for reliability. In addition, researchers should report the way in which the efficacy of a past set of controls was evaluated, and the outcome of this evaluation.

5.6 ADDITIONAL DESIGN CONSIDERATIONS

5.6.1 Introduction

This section will outline two additional factors which should be taken into account when designing a study.

5.6.2 Implementation of controls

Section 3.7 noted how a pseudo-psychic may attempt to ensure that certain controls are not properly implemented during an experiment. For example, a pseudo-psychic may secretly tamper with physical controls before a demonstration, and render them ineffective. In addition, a pseudo-psychic may be able to discover the nature of 'hidden' controls, and thus be in a better position to overcome such measures. To counter this stratagem, researchers should design an experiment to minimise the likelihood of a pseudo-psychic preventing the correct implementation of controls. For example, it should include measures to prevent the claimant gaining unsupervised access to any equipment which will be used during the experiment. Attempts should be made to prevent such access both before, and after, the experiment has taken place. This may be achieved in several ways. The claimant should not be informed where such equipment is being housed. In addition, certain equipment could be placed in an area that is especially secure (e.g., protected by a professional security system). Such security may prove problematic, especially when the claimant has access to the inside of these buildings during pilot studies, and formal experimentation. For example, Randi (1986), in discussing Project Alpha, notes:

> One device developed at the laboratory for testing the Alpha subjects consisted of an overturned aquarium bolted and padlocked to a stout table. Objects would be put inside and left overnight. Since the locks on the doors were of excellent quality, and Phillips wore the padlock and door keys around his neck, security was thought to be absolute. It was not. Edwards and Shaw [the two pseudo-psychics] simply left a window unlocked, and returned to the premises at night. There were several ways to open the sealed aquarium, and they were free to do anything they pleased with the contents...[emphasis mine]. (p.163).

The design of an experiment should also contain measures designed to counter a pseudo-psychic discovering the nature of 'hidden' controls. In addition, researchers should design measures that eliminate any information, regarding the nature of such

controls, being available to the claimant. For example, Hansen and Broughton (1982) note that, when investigating the claims of SORRAT (the Society for Research into Rapport and Telekinesis), documentation concerning security measures were hidden in the home of one of the experimenters, rather than stored in a laboratory.

5.6.3 Evidence of fraud

Section 3.7 also noted how a pseudo-psychic may explain away evidence of fraud. For example, given the difficulties involved in accusing an individual of fraud on the basis of a still photograph, a pseudo-psychic may encourage an observer to use such a control. Researchers should attempt to counter this stratagem. This can be achieved in several ways. First, researchers should only use controls which produce relatively unambiguous evidence of cheating (e.g., a good quality videotape of an individual clearly engaging in trickery, or some form of alteration to a tamper evident product which cannot be explained away as being due to other causes). Second, researchers should try to figure out all of the ways in which apparent evidence of trickery could be produced by non-fraudulent causes. In this way the honest claimant will not suffer the indignity of unfairly being labelled a cheat, and the pseudo-psychic will not be able to explain away evidence of actual trickery. However, this may be problematic. First researchers have to predict the evidence that is produced by a control and second, figure out how such evidence might be 'explained away'. This task may be eased by researchers examining past studies that have either tested the same claim, employed similar controls, or assessed the claimant in question. Such studies may give an insight into some of the 'outs' that have arisen in these situations.

5.6.4 Reporting recommendations

When reporting an active investigation, researchers should mention the steps taken to ensure that all controls were correctly implemented. In addition, the report should also describe the steps taken to try to eliminate a pseudo-psychic explaining away evidence of fraud which might be obtained.

5.7 DEVELOPING AN EXPERIMENTAL PROTOCOL AGREEMENT

5.7.1 Introduction

Section 3.6 noted how a pseudo-psychic may exploit the conditions apparently needed to elicit ostensible macro-PK. In an active analysis, the pseudo-psychic may state that such conditions are not psi conducive, in order to negotiate away controls that prevent trickery. In a retrospective analysis, a pseudo-psychic may explain away a failure to produce ostensible macro-PK, by stating that the experimental conditions were not psi conducive. This section will outline how researchers can counter both stratagems.

5.7.2 Active analysis

When running an active analysis it is vital that researchers do not run a formal study before the claimant has stated that he/she believes the experimental conditions to be psi conducive. The importance of this step has been emphasised by Randi (1982a), who writes:

> In my thirty five years of looking into these matters, I have found that the most common reason for failure to come to any firm conclusion in such testing procedures is the lack of a firm understanding of the conditions and parameters in the beginning. Thus I insist that the subject [claimant] must know in advance that conditions are satisfactory for the demonstration of whatever miracle is to be shown, must know exactly what will be accepted as proof, and must finally agree to abide by the decisions reached under these conditions. (p. 256).

However, as noted in section 2.6.2, developing such a protocol may be problematic. For example, researchers may be unwilling to inform the claimant as to the nature of certain 'hidden' controls. As such, the claimant may not know the exact conditions under which he/she will be expected to perform. To overcome this problem, researchers could secretly introduce such controls into various pilot studies, to determine if they are noticeable, or inhibit the production of ostensible psi. Also, the objection ~~of~~ to certain conditions by the claimant may effectively mean that he/she is altering the very nature of his/her claim. If this is the case researchers may have to modify the counter-explanations being considered, and develop additional controls. For this reason, the process of protocol development can entail a considerable amount of back and forth communication between claimant and researchers. However, despite such difficulties it is vital that both researchers, and claimant, understand and

are satisfied with, the conditions of the experiment. To help this process researchers may find it helpful to 'walk' a claimant through the experiment. In addition, researchers should ask their claimants to agree to (ideally, by signing) a form which clearly outlines the conditions of the forthcoming experiment. This document could serve a number of functions. For example, it should clearly set out the experimental conditions. Second, it may help clarify that the claimant believes these conditions to be psi conducive, and emphasise that the claimant must not cheat during the experiment. This document could also contain information pertaining to the dissemination of the results of the study. Such an agreement will help the assessment process in several ways. First, it will help ensure that, if the claimant fails to produce any ostensible psi, he/she cannot say he/she didn't fully understand the experimental conditions, or that such conditions were not psi conducive. Second, the protocol may help avoid any confusion which arises after a study, concerning when, where and how the results of that study can be communicated to others.

5.7.3 Retrospective analysis

Section 3.6.3 noted how a pseudo-psychic may explain away a past failure to produce ostensible macro-PK, by stating that the experimental conditions were not psi conducive. If this is the case, researchers should attempt to discern if the claimant understood, and agreed to, the experimental conditions, prior to the experiment. Such a decision may be difficult to make, especially given that such understanding may only come from actual participation in research, which may not have been the case if the claimant had not taken part in any form of pilot work. In addition, even if such conditions were agreed upon, it is possible that they became altered during the experiment in way that had not been anticipated by researchers and//or claimant. However, if the experimental conditions were understood, agreed upon and correctly enforced, researchers should conclude that the claimant has failed. If such conditions were not agreed upon, researchers should attempt to assess if the experimental conditions should be seen as antagonistic to the elicitation of psi. This assessment may be complex, and involve, for example, examining the conditions of previous experiments in which the claimant did manage to produce ostensible macro-PK.

5.7.4 Reporting recommendations

A report of an active analysis should include a full description of the stages involved in developing a mutually agreed protocol, with a verbatim copy of the resulting document.

When reporting a retrospective analysis, in which the claimant didn't produce macro-PK, researchers should discuss any evidence relating to whether the claimant understood, and agreed with, such conditions in advance of the experiment. If this was not the case, researchers should report any information relating to whether the conditions of the experiment should be considered conducive to psi.

5.8 ASSESSING THE RUNNING, AND OUTCOME, OF AN EXPERIMENT

5.8.1 Introduction

Section 2.7 noted the procedures involved when researchers run an experiment, and assess its outcome. Section 3.7 then outlined some of the ways in which a pseudo-psychic may disrupt these processes. This section will outline measures designed to counter such stratagems.

5.8.2 Running an experiment

When running an experiment, researchers should attempt to ensure that all of the controls, and measures, outlined above, are correctly implemented. This may entail, for example, the observer ensuring that the claimant will not be able to tamper with controls before, and while, they are used in a demonstration. Also, the observer may wish to ensure that the nature of any hidden controls are effectively concealed from the claimant.

Clearly, this section is not applicable to researchers carrying out a retrospective analysis, in that the running of a past experiment will have already been assessed at an earlier stage of the analysis (see section 5.5.3).

5.8.3 Assessing the outcome of an experiment

Section 2.7 noted the various stages involved in assessing the outcome of a demonstration. A vital part of this procedure hinged upon researchers assessing any apparent evidence of fraud. Section 3.7 noted how this assessment may be biased by the pseudo-psychic explaining away such evidence via a 'non-fraud' hypothesis. To counter this stratagem researchers should attempt to objectively assess any 'non-fraud hypothesis'. However, researchers should not underestimate the potential difficulties which can arise during such an assessment. For example, Collins and Pinch (1982) ran a study to assess the PK metal bending ability of several young children. They believed that they had obtained still photographs showing some of their subjects bending the target material by physical force alone. However, when Collins and Pinch made this evidence public, they discovered that other individuals (e.g., their subjects, other scientists not present at the original experiment) were able to produce 'non-fraud' explanations to account for the photographs. For example, one subject was accused of cheating because she was photographed holding the target (a spoon) in both hands, with each hand at one end of the spoon. The subject argued that this photograph did not show signs of cheating, but instead was taken as she swapped the spoon from one hand to the other.

5.8.4 Reporting recommendations

When reporting an active analysis, researchers must note if the experiment proceeded according to plan. If this was not the case, researchers should note any deviations away from the intended procedure, and comment upon the effect that these deviations may have on the assessment procedure. In addition, researchers obviously need to report the outcome of the experiment. If apparent evidence of fraud was discovered, researchers must describe such evidence, as well as assessing the various ways in which such evidence may be 'explained away' by non-fraud hypotheses.

Researchers should also attempt to help individuals, who at a later date, may wish to assess the investigation. For example, researchers could figure out all of the information needed to reconstruct the controls used in an experiment, and ensure that this information will be available to future researchers. In the case of physical

controls, the researcher should record the construction of such apparatus (e.g., via the use of technical descriptions, diagrams and photographs) as fully as possible. In addition, the researcher may try to ensure that future researchers are able to inspect the actual equipment used during the experiment. This may entail retaining such apparatus for a considerable period after the experiment. When describing observational controls, researchers should note relevant information relating to the researcher's psychological condition (e.g., knowledge of conjuring, level of stress, etc.), physical condition (e.g., short sightedness), and the physical conditions under which observation was made (e.g., lighting conditions, distance from claimant etc.). Researchers should attempt to record the controls used in a study via as many different types of media (e.g., still photographs, film, videotape, verbal descriptions, drawings and plans) as possible. This has a number of advantages. First, the possibility of such evidence containing ambiguities, and unreliabilities, which cannot be resolved, is minimised. Second, when reporting a study researchers can base their descriptions upon evidence obtained at the time of the study, and not have to depend upon their own memories, which are more likely to be influenced by the effects of bias, and decay. Also, all primary sources used to record controls (e.g., unedited film, untouched photographs, unabridged verbal descriptions) as well as, where possible, the actual controls themselves (e.g., material used to seal target material etc.), should be retained by the investigator for a considerable period after the termination of the study, such that it can made available to future researchers. Finally, to assess if a report contains enough information researchers may find it helpful to ask other individuals, not directly involved in the study, to reconstruct the experiment from the report. This procedure may help researchers appreciate the quantity of information, and amount of detail, needed by a reader to accurately reconstruct a past experiment.

When undertaking a retrospective analysis, researchers should note the outcome of the demonstration being assessed. In addition, researchers must report the assessment of all 'non-fraud' hypotheses which might explain away any apparent evidence of fraud obtained in that experiment.

5.9 SUMMARY

This chapter briefly outlined recommendations for researchers wishing to carry out, and report, an active, or retrospective, analysis of ostensible macro-PK. The chapter first noted various strategies aimed at countering the cognitive, motivational and social biases which encourage researchers to underestimate a claimant's potential for fraud. Next, the chapter outlined ways in which researchers can maximise the development of counter-explanations (i.e, hypotheses which account for the way in which the ostensible macro-PK, under examination, may be fabricated). The chapter next noted recommendations for assessing the plausibility of these hypotheses, to help ensure that a plausible explanation is not erroneously rejected as implausible. Next, the chapter outlined recommendations for the (re)construction, and assessment, of experimental controls. The chapter then noted some of the difficulties in minimising a pseudo-psychic being able to exploit the conditions apparently needed to elicit psi. Finally, the chapter made a number of recommendations relating to the actual running, and reporting, of a study. Each section of the chapter also contained recommendations as to the type of information which should be reported in a write-up of either an active, or retrospective, analysis of ostensible macro-PK.

CHAPTER SIX

TESTING THE ESP CLAIMS OF SORRAT[56]

We often fail, of course.
Personal communication, the 'entities' to Wiseman,
January, 1992.

6.1 INTRODUCTION

Chapter five outlined recommendations for researchers wishing to carry out, and report, active analyses of ostensible macro-PK. This chapter will describe how these recommendations were used to assess a strong ESP claim made by The Society for Research in Rapport and Telekinesis (SORRAT).

6.2 AN INTRODUCTION TO THE SORRAT

SORRAT is interested in the elicitation, and assessment, of major paranormal phenomena. The group claims that these phenomena are not produced by living individuals, but rather by 'spirit entities[57]'. This Missouri-based group were founded in the 1960's by John Neihardt, a respected academic and authority on the Plains Indians. After Neihardt's death in 1973, the leadership of the group was taken over by John Neihardt's daughter, Alice Thompson. In 1977, William Edward Cox (a well known parapsychologist) moved to Missouri, in part to study the SORRAT phenomena. The effects apparently produced by the entities have been reported in many publications (see Duke & Hansen, 1991) and include various apparent phenomena, such as rapping, table movement and levitation, apports and matter through matter. Possibly the best known, and most controversial, of these phenomena

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[56]Parts of this chapter form the basis for a paper accepted for publication in the Journal for the Society for Psychical Research.

[57]This paper will refer to messages apparently received from the 'entities'. However, such messages could have been written by a living person. As such, the term 'entity' has only been adopted for convenience, and does not imply that the author believes in the reality of the SORRAT 'entities'.

are those that have allegedly occurred inside various 'mini-labs[58]' (see, e.g., Cox 1983, Hansen, 1985b, Cox, 1985). Over the last ten years (Hansen, personal correspondence, 11 May, 1992), Cox has claimed that the entities (or psi agency as Cox prefers to call them) are able to divine the order of sealed decks of ESP[59] cards. Cox further claimed that the entities communicated in one of two ways. First, they produced rapping sounds, with the pattern of raps corresponding to the shape, and position, of cards in the ESP deck. Second, the entities have also apparently written the order of ESP cards directly onto paper. Cox claimed that in most of these tests, a large number of cards were correctly divined, including some runs of 100% accuracy. In a letter to John Beloff (letter dated 12 January, 1991) Cox explained that he had contacted several researchers, asking them to supply sealed decks of ESP cards, to help assess the validity of this claim. Cox asked John Beloff (JB) if he too would like to supply such a deck.

Such a study appeared worthwhile because, although SORRAT has generated much anecdotal evidence of ostensible psi (see, for example, Richards, 1982), the group had rarely been subjected to controlled testing (but see Phillips & McBeath, 1983, Hansen & Broughton, 1991, and Stillings, 1991). In addition, the procedures, and results, of the few investigators who have tested SORRAT have often been the subject of controversy. For example, Hansen & Broughton (1991) report trying an experiment to test the entity's claim to be able to alter the order of sealed decks of ESP cards. When one of their ESP decks (sealed in a box) was returned and examined, the authors note:

> It appeared...that the box had been opened by other than paranormal

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[58]A 'mini-lab' consists of a sealed container (e.g., an aquarium inverted over a wooden base, secured by mental strips and locks) into which various small items (such as toys, balloons, and leather rings) are placed by the experimenters. These 'mini-labs' were designed to secure target material under circumstances in which they must remain unattended during an experiment.

[59]A standard 'ESP' deck consists of twenty five cards, with each card bearing one of five possible symbols (i.e., either a cross, star, circle, square or three 'wavy' lines).

> means. It was obvious that whoever undertook the task devoted considerable effort to entering the box with its layered security precautions without leaving a trace. It seemed that unusual care was taken at the beginning but, when breaching the final security measures had resulted in the obvious damage to the box, the opener gave up in frustration and, after opening the card box, had resealed it with less care than when he began. (p. 25).

However, Cox (1986, 1987) has argued that this tampering does not constitute evidence of fraud, but rather could have been caused by ~~either~~ a dishonest postal employee looking for jewelry. Hansen & Broughton (1991) have presented a number of objections to this interpretations of their findings.

6.3 AN ABORTED PILOT STUDY

We first decided to undertake a pilot study. JB shuffled a deck of ESP cards[60], and placed them inside a small (approximately 15cm by 8.5cm) white envelope, the flap of which he then sealed with both glue and adhesive tape. JB's inked fingerprints were placed onto the adhesive side of the tape in an attempt to prevent it being removed, and 'duplicate' tape reapplied. In addition, all four edges of the envelope were covered with adhesive tape that had been similarly marked. Cox had previously stated that we should indicate the direction faced by the ESP cards (Cox had previously noted [letter to Beloff, dated 10 June 1991] that the entities needed to know which way the ESP cards were facing). For this reason, a sticker was placed on the outside of the envelope, stating 'ESP cards face this way'. Both sides of the envelope were photographed to help detect possible signs of tampering upon its return. This deck was then sent to Cox, with a letter (dated 25 June 1991) stating that the deck was designed as a pilot study, and was sealed in such a way as to counter only superficial attempts at tampering. This letter further noted that, if the entities were

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[60]These cards consisted of a standard deck of ESP cards, as supplied by 'Haines House of Cards', Ohio. Each card is the approximate size, and thickness, of a bridge playing card. The face of each card contains a large (approximately 5cm diameter) black symbol on a white background. This type of deck was used in both the pilot study, and formal experimentation. Such a deck can either be 'open' (i.e., containing any number of each of the five symbols) or 'closed' (i.e., containing five duplicates of each of the five symbols). Both of the decks used in both the pilot work, and formal experimentation, were 'closed'.

able to divine the order of this deck, no strong conclusions would be drawn, but a second, more rigorously sealed, deck would be dispatched. If, however, the entities were unable to divine the order of this 'pilot' deck, further testing would be deemed unnecessary, and the assessment terminated. After receiving this deck, both Cox and Tom Richards (a leading member of SORRAT) wrote independently (both letters dated 23 July, 1991) to inform JB that, in view of the large number of successful pilot studies, carried out with other researchers, they felt further pilot work to be unnecessary. Both letters also indicated that they would be happy to proceed with more formal experimentation[61]. JB then asked Richard Wiseman (RW), and Robert Morris, if they would like to run a joint study designed to assess this claim. The nature of the SORRAT claim entailed a deck of ESP cards being secured and sent to the USA, where a pseudo-psychic may have available considerable time and resources to access the deck. As such, the claim clearly presented something of a methodological challenge, and thus seemed an ideal candidate to evaluate some of the recommendations outlined in chapter five[62]. This, combined with the ambiguous nature of the evidence from past assessments of SORRAT (see section 6.2), persuaded both the present author, and Robert Morris, to help in the design, and running, of the following study. As a result, JB wrote to Cox (dated 1 August 1991) stating that we were happy to embark upon the design, and running, of a more formal experiment.

6.4 FORMAL EXPERIMENTATION

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[61]The 'entities' did eventually offer two possible orders for this 'pilot deck'. Cox initially sent these orders to us (letter dated 26 August, 1991) and, a little while later, the sealed deck was returned (letter dated 5 October, 1991). The first of the orders contained three hits, whilst the second contained four hits (see Appendix J). Thus both orders fell slightly below the level of hitting expected by chance alone (i.e. five hits). Although the end of one piece of the adhesive tape had obviously become lifted from the envelope, there were no signs of tampering that would have allowed access to the cards. This envelope is currently stored at Edinburgh University.

[62]Although the recommendations in chapter five concern the analysis of ostensible macro-PK, most of the principles also apply to the assessment of ostensible major ESP. In addition, it should be noted that the SORRAT claim was quite idiosyncratic, having features more common to many macro-PK, and opposed to ESP, claims.

6.4.1 Introduction

The following experimental design was constructed to test the SORRAT claim. First, the experimenters were to randomise two decks of ESP cards and note their resulting order (the documents containing these card orders will be referred to as the 'card lists'). The cards would then be placed inside their respective card cases, and sealed. One of these decks was to be dispatched to Cox, whilst the other was to be housed at Edinburgh University[63]. Cox was then to ask the entities to divine the order of the sealed ESP cards. Cox would then return both this card order, and the sealed deck, to the experimenters. The actual order of the cards will then be compared to the order predicted by the entities. To be successful, the entities must score at least a certain number of hits, to be agreed upon before the experiment.

6.4.2 Developing an experimental protocol

As noted in section 2.6.2 psychic claimants who have failed to produce ostensible paranormal phenomena have often stated, after the fact, that the experimental conditions were not favourable to the production of psi. As also noted in that section, this could be a legitimate complaint due to unfamiliarity with the actual procedure, or an unfalsifiable excuse held in hand in case of such failure. To help prevent this happening, Cox and Richards were asked to approve of, and sign, an agreement that clearly outlined the experimental protocol. An initial draft of this agreement was sent

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[63]As noted in section 5.5.2, this procedure has been recommended by Hansen (1982) for use in macro-PK experiments which use small target objects. Should the entities have been successful, this second package could have been sent to various individuals (e.g., security experts, magicians etc.) to ascertain if it could have been surreptitiously entered without showing signs of tampering. As noted in section 5.5.2, it is necessary for researchers to weigh up the pros and cons of using this method. Obviously, it would have been advantages for this duplicate package to have been distributed, and assessed, before the target package was sent to SORRAT. However, this was not carried out for two reasons. First, before being dispatched to SORRAT, RW spent a considerable amount of time ensuring that the target deck was effectively sealed. Second, the distribution of the duplicate package, prior of the experiment, would have increased the likelihood of other individuals discovering the methods used to seal the deck.

to Cox on 4 September 1991[64]. Cox replied (letter not dated), asking that a small number of minor changes be made to the wording of this agreement. This section outlines the rationale behind the construction of the agreement, as well as containing a verbatim copy of the final document (reproduced below in italics[65]).

It should be noted that some of the types of trickery mentioned in this section (e.g., a pseudo-psychic accessing the experimenters' card lists, or biasing the randomisation of the ESP cards) may seem particularly unlikely, given that most SORRAT members reside in the USA, and the target deck was ordered, and sealed, in Britain. However, such methods are discussed for two reasons. First, as noted above, it is hoped that this report may assist other researchers evaluate similar claims. Such researchers may be faced with a claimant (or his/her confederate) who resides close to the experimenter and, if this were the case, some of these 'unlikely' methods would become more plausible. Second, SORRAT has an international membership, and it was possible in principle (albeit unlikely) that one of their British members could have attempted to interfere with the sections of the experiment carried out at Edinburgh University.

We realised that a pseudo-psychic may discover, by non-psychic means, the procedure used to order the ESP cards, and be able to ascertain the order of some, or all, of those cards. For example, to order the deck, the experimenters may use information contained in the weather reports of that day (e.g., by summating all of the high, and low, temperatures in designated countries) to produce two numbers, which are then used to access a row of figures in a standard random number table. This row of random numbers would then be used to order the ESP deck. If a pseudo-psychic is able to discover the way in which this process took place, he may be able to calculate the resulting order of the deck. For example, the pseudo-psychic may discover how

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[64]A verbatim copy of this initial agreement is contained in Appendix I.

[65]Because the various sections of this agreement have been fragmented in this chapter, additional information (shown in square brackets) has occasionally been added for clarity. This additional information is not present in the original agreement.

information about the weather was being used, and determine the numbers used to access the random number tables. Such an individual could then obtain a copy of the random number tables used by the experimenters, and figure out the order of the ESP deck. To help prevent this, the protocol did not contain any information relating to the method used to randomise the cards, and this method of randomisation was not used.

The pseudo-psychic may also be able to deceive the experimenters into believing that the ESP deck was randomly ordered when, in reality, this process was biased by the claimant. Magicians, and pseudo-psychics, have developed a myriad of methods aimed at deceiving an observer into believing that a certain choice was unbiased, when in reality that observer was unwittingly 'forced' into making a particular decision (for a conceptual overview of these methods, see Sharpe, 1988). For example, the experimenters may depend upon a random number generator (RNG), using a pseudo-random source, to produce a list of twenty-five numbers. These numbers could then be used to order the ESP deck. If, in advance of this ordering process, the pseudo-psychic were able to discover the way in which the cards will be randomised, he might be able to bias this process. For example, the pseudo-psychic may tamper with the RNG that will be used by the experimenters, such that the string of numbers it produces can be determined by the pseudo-psychic. To help prevent this, the protocol did not contain information relating to when, where and by whom the cards were to be ordered. In addition, the cards were not ordered via the output of a RNG.

Additionally, a pseudo-psychic may access the card lists. This could be achieved in several ways. First, the pseudo-psychic may surreptitiously monitor the experimenters whilst these lists are being produced. Second, the pseudo-psychic may access the lists after they have been compiled. Third, the pseudo-psychic may be able to access other locations that contain the order of the cards. For example, one of the experimenters may have listed the card orders on the top page of a pad of paper. If this is the case, the experimenter may have unwittingly left a physical 'impression' of the lists on the pages directly below the top page. If the claimant were able to see the pad in

question, he might be able to discern the order of the cards by inspecting such indentations. This latter technique has a long history in both the magical, and pseudo-psychic, literature. To help prevent this, the protocol did not contain information relating to whether or not the experimenters had noted the card orders, prior to sealing the decks.

Also, a pseudo-psychic may be able to access the ESP cards themselves whilst those cards are apparently sealed. This might be achieved in one of two ways. First, a pseudo-psychic may remove some of the seals used to secure the deck, and carefully replace these seals, or provide substitute seals. Second, the pseudo-psychic may be able to access the card order without removing the seals. This might be the case, for example, if the pseudo-psychic were able to see through the packaging used to seal the cards. The chance of either of these stratagems being successful is increased by the pseudo-psychics knowing exactly how the target deck was sealed. To help prevent this, the protocol contained very little information relating to this issue, simple stating that:

> *We (John and myself) will supply a package containing one standard deck of 25 ESP cards, sealed with any materials, and processes, of our choosing.*

However, the claimant was told that:

> *Before the package is dispatched to Ed Cox, details of the precise sealing procedure will be recorded (by John and myself), and remain at Edinburgh University.*

and:

> *Upon receipt of the package [back from Cox], we may have the package examined (for signs of damage, or tampering) in any way that we feel necessary.*

Thus SORRAT was not informed as to exactly where, or how, these precautions would be secured, nor how the package would be examined for signs of tampering. Also, the protocol noted that there was a time limit of two months on the experiment:

> *The package must be returned, to us, within two months of our posting it to you, otherwise the experiment will be called off.*

This was intended to limit the amount of time available to a pseudo-psychic to

overcome the security measures installed in the package. In addition, it was possible that a pseudo-psychic would attempt to enter the package, realise that it then displayed irreparable signs of tampering, and not wish to return it to the experimenters. If this happened, the two month time limit would prevent the experiment from dragging on forever.

Obviously, the protocol stated that the package should not be tampered with, noting:

> *Anyone is free to touch or hold the package in any manner that he feels necessary, but is not to try and open, or interfere, with its covering, or seals. If such tampering occurs, the experiment will be aborted.*

We also realised that a pseudo-psychic may consciously make his calls ambiguous, such that a single call can be interpreted in a number of different ways. After the card order is revealed, the pseudo-psychic then interprets the ambiguous calls in such a way as to increase the number of hits obtained. To prevent this, the protocol noted:

> *Ed Cox is to complete a 'call sheet' (which will be sent with the package) consisting of twenty five sets of the five ESP symbols, each set corresponding to a position in the ESP deck. This will entail simply circling one of the symbols in each set, indicating the claimant's call for the card in that position of the deck. This procedure is designed to eliminate any ambiguity about the identity of each call. Should any response on the call sheet be missing, or ambiguous, that call will be counted as a miss. During examination, the package will be opened and a comparison made between the call sheet and the order of the respective ESP deck. In order for a single call to be considered a 'hit' the call must exactly match the symbol on the face of the card at the relevant position in the deck.*

A pseudo-psychic may see the card order <u>after</u> it has been revealed by the experimenters. For example, a pseudo-psychic may return the sealed deck with a fake card order, perhaps sealed in an envelope. Once the order of the actual deck is revealed the pseudo-psychic may secretly produce a second card order (sealed in an identical envelope to that containing the 'fake' predicted card order) and secretly switch this for the envelope originally supplied to the experimenters. Alternatively, the pseudo-psychic may secretly make several different sets of 'predicted' card orders. The pseudo-psychic then waits until the actual card order has been revealed, before deciding which card order to disclose. Although both of these stratagems were

unlikely, given the distance between Edinburgh and Rolla, the protocol did state that:

> *Once this is completed [i.e., the deck order divined], the package, must be returned to us, by registered mail, along with the call sheet.*

Neither the target deck, nor the card lists, would be opened before Cox had returned both the target deck and clearly completed call sheet, and both were safely housed at Edinburgh University.

A pseudo-psychic could simply guess the order of the cards, hoping that the experimenters do not realise the likelihood of obtaining a certain number of hits by chance alone. To minimise a pseudo-psychic being successful by chance alone, they were asked to score fifteen, or more, direct hits ($p=0.000014$, 1 tail). This was well within the range of the claim (Cox had claimed that many previous trials had obtained 25 hits), and clearly above chance, yet allowed for some error in any legitimate psychic process that might take place. The protocol clearly stated this condition, noting:

> *In order that the test be considered successful, there must be 15, or more, direct hits.*

We realised that if the deck returned from SORRAT showed signs of damage/tampering, it may be difficult to decide if this constitutes evidence of cheating, or is the result of an innocent cause (e.g., damage caused in transit). For example, previous packages of this kind have often been sent (allegedly by the entities) to other members of SORRAT, who may have unwittingly opened them (see, e.g., Hansen & Broughton, 1991). Also, as noted in section 6.2, Cox (1986, 1987) has claimed that a similar package (sent by Hansen & Broughton, 1991) may have been opened by a dishonest postal employee, possibly looking for jewellery. In addition, the package may be damaged in transit between the experimenters and SORRAT. To help prevent all of the above, the protocol noted that:

> *After sealing the package, we will glue a sticker on the outside of it. This sticker will state that, should the package be found, it should not be opened, but mailed directly back to Ed Cox, at Rolla. This package will then be placed inside an envelope and will be mailed, by registered post, to yourself [i.e., to Cox]. Upon receipt of this envelope, you [Cox] should open the envelope, and check that the outside of the package shows no obvious sign of damage caused in transit. Should*

the package show any serious signs of damage, or tampering, please return the package to ourselves, whereupon this experiment will be aborted, and, possibly, arrangements made, for a second experiment to begin. If the package shows no such sign of serious damage, you should pass it on to Tom Richards.

The protocol also noted that the condition asked for by Cox, regarding an indication of the direction faced by the ESP cards, would be present:

> *The outside of the package will also indicate which way the ESP cards are facing.*

A pseudo-psychic may misreport the experiment to other individuals. For example, the pseudo-psychic may state that he did not agree to, or understand, the experimental conditions prior to the study, when, in reality, this was not the case. The protocol also noted how the results would be disseminated, noting:

> *Once the results are known, John and I will then prepare a full report, describing, in general terms, the security precautions used in the package, along with the results of the examination/judging procedures. It should be noted that, should this experiment be successful (i.e. there are 15, or more, hits, and the package shows no sign of damage, or tampering), we would include in our report a statement that we are impressed by the results, that we have no ready conventional explanation for the results and that we feel further research is warranted. However, we will not issue any statement to the effect that we believe the claimant to have 'psychic' ability.*
>
> *After receiving this report you will be asked if you wish to write up the experiment for either publication, or private circulation. If you decide to write-up the experiment, the above report must be reproduced as part of that write up. The report may not be omitted, paraphrased, or shortened in any manner without written permission from either John, or myself. We reserve the right to both publish, or circulate, a write up of the experiment in whatever manner we feel appropriate, incorporating the full contents of the report.*

Finally, the protocol noted that:

> *Both during, and after, the testing, all packaging remains the property of Edinburgh University.*

To prevent any confusion both Cox and Richards were asked to provide a signed agreement of the above protocol, stating that they accepted all of the above conditions. A copy of the above agreement was sent to Cox on 17 September 1991,

and a signed acceptance was received on 5 October 1991. In addition to returning the signed agreement, Cox asked RW to send a copy of the following letter (written by Cox), which would act as 'instructions' to the entities:

> *Dear Mr Cox,*
> *It was good to hear from you, and we are happy to send you this ESP deck. The cards face the same way as this personal message to the entities producing the calls. Just 15 hits out of 25 would be excellent. Please provide a return envelope addressed to yourself or Tom, which can then be sent by registered mail to us - both the deck and the calls.*
> *Best Wishes*
> *Richard Wiseman*

In our reply to Cox (25 October 1991) we confirmed receipt of the signed agreement, and noted that the sealed deck, and requested letter, would be prepared, and despatched, as soon as possible.

6.4.3 Randomising, and recording, the target decks

This section will outline how the two decks of ESP cards were randomised, and their resulting orders recorded.

As noted above, it was necessary to prevent a pseudo-psychic determining the card order via information regarding the randomisation process. For this reason, it was decided that SORRAT would not be informed how the cards were to be randomised. Second, it was decided that an ordering process be designed such that, even if its nature were discovered by a pseudo-psychic, this information could not be used to calculate the order of the cards. On 30 October 1991 two ESP decks were randomised by two of the experimenters (JB & RW). This randomisation procedure was carried out in JB's office at Edinburgh University. To randomise the ESP cards, each of the experimenters shuffled the decks several times. The cards were not in any identifiable order before shuffling (e.g., ordered by symbol), and both multiple riffle, and overhand, shuffles were carried out.

It was also necessary to counter the possibility of a pseudo-psychic influencing the randomisation of the ESP cards. Given that this experiment did not use any physical

devices (e.g., a RNG) to randomise the cards, it was not necessary to ensure that a pseudo-psychic could not have gained prior access to this type of equipment. However, it seemed possible that a pseudo-psychic could influence, by normal means, the mixing of the cards, if he (or a confederate) were to be present at the time of this shuffling. For this reason, at the time of the shuffling, only the two of the experimenters (JB & RW) were present in the room. Of course, neither Cox, nor Richards, had handled the cards prior to the experiment, and was not informed as to when, or where, the randomisation procedure was carried out.

The section above also noted that a pseudo-psychic should not be able to access the experimenters' card lists. For this reason, the experimenters ensured that they were alone when producing these lists. Also, the experimenters ensured that this information was present in just one location. Thus, the order of the decks were clearly registered on two 'call sheets' (i.e., one call sheet per deck) and the experimenters took care not to leave any 'impressions' of the card orders on any other surfaces. The lists were then secured immediately after they had been written, minimising any opportunity to access these lists before they were sealed. Second, to ensure that the card lists could not be accessed whilst they were sealed, they were placed into a 'tamper evident' envelope. After some research[66], it was decided to use the 'Keepsafe'[67] security envelope. This is a commercially available product that, according to its manufacturer, minimises the likelihood that any tampering will go undetected. The manufacturers state that, as the envelopes are constructed from polyethylene, they cannot be slit and resealed without detection. Second, the edges

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[66]One of the security products assessed was the 'Survivor Pocket Envelope With Tamper Evident Seal'. This was described as being 'ideal for payroll, classified documents, financial statements, medical records or any confidential data'. Although the top flap of this envelope was protected by a moderately secure 'tamper evident' strip, it's bottom flap was sealed with conventional envelope glue. This bottom flap could be easily opened by using a 'wet opening' technique (see Harrison, 1975, p., 11-13), and re-glued, without showing any signs of tampering. Needless to say, this envelope was not used in this present study.

[67]'Keepsafe' is a registered trademark of LMG Cambridge.

of the envelopes are heat sealed, such that they too cannot be slit, and resealed, without detection[68]. The envelope is sealed via a self-adhesive strip which runs along the top of the bag. This strip reveals signs of physical tampering including: attempted peeling off of the strip, the application of heat[69] or cold, and the use of various solvents. Two measures prevent an entire edge of the envelope being cut off, and the envelope being completely resealed along one side. First, both edges of the envelope carry a complex 'chain' pattern. If the edge were completely removed and the envelope resealed, this pattern would have to be recreated. Second, the envelopes are produced in a standard size. The cutting and resealing, of an envelope would significantly lessen its width. Obviously, the envelope could be opened, and then replaced by a second duplicate, but undamaged, envelope. To prevent this, each envelope carries a permanent, and unique, six digit number. This number is also printed on a removable tag, which is initially attached to the envelope. After the bag has been sealed, this flap can be removed and used to check that the bag has not been replaced by a duplicate bag carrying a different number. Finally, a pseudo-psychic may attempt to access the card lists by holding the bag up to a bright light source, and seeing through its sides. To prevent this, the card lists were folded in half, and placed into an A5 brown manilla envelope. This brown envelope was then placed into the Keepsafe envelope. In addition, the inside surfaces of the Keepsafe envelope are printed with solid black such that, once the envelope is sealed, it becomes almost completely opaque. This Keepsafe envelope was then placed inside a filing cabinet located within JB's office. This office was locked when left unattended for any significant periods of time. Finally, a pseudo-psychic could attempt to gain access to the Keepsafe bag before it is used to secure the card order. In this way, a pseudo-psychic might be able to tamper with it's sealing strip, such that the envelope could

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[68]My special thanks to the Edinburgh University Polymer Unit who helped assessed the envelopes, and verified that the sides could not be easily slit, and re-sealed.

[69]It was discovered that the strip could be removed, and replaced, by careful application of heat. However, such a process demands considerable skill and, even then, is prone to result in slight puckering of the top edge of the envelope.

be opened without showing signs of tampering. To counter this, the envelope was carefully checked before use, for any signs of damage/tampering.

6.4.4 Securing the target deck

This section will outline exactly how the target deck of ESP cards was sealed.

We realised that a pseudo-psychic may attempt to see the ESP cards themselves before they are sealed. To help prevent this, the interval between the shuffling, and sealing, the decks was as short as possible (approximately two hours). During this interval the cards were kept on RW's person, who ensured that the cards were not accessed by anyone during this period. The cards were then taken to the home of RW and the first stages of the sealing procedure were completed. This first entailed three pieces of brown self-adhesive plastic packing tape (approximately 2 inches wide) being wrapped around the card case. This tape was not designed to counter a pseudo-psychic accessing the cards, but to prevent the cards moving out of the box during the sealing procedure, and whilst in transit between Edinburgh/Rolla. Second, the decks were then placed inside A5 (approximately 15cm by 21cm) Keepsafe security envelopes. The specifications of these envelopes have already been described above. Next, the A5 Keepsafe envelopes were carefully folded around the card cases, and inserted into thicker transparent plastic bags. This second bag was not designed as a security precaution, but to prevent the Keepsafe envelopes from being attacked by the encapsulating resin (see below). To prevent the resin leaking inside this second bag, these bags were then firmly sealed with plastic tape.

The two resulting packages (i.e., each consisting of a deck of ESP cards sealed in an A5 Keepsafe envelope, and a thicker plastic bag) were then taken to Edinburgh University's Department of Molecular Biology, and were each encapsulated in approximately 500g of industrial embedding resin[70]. This resin (Trylon Embedding

[70]This method of sealing was suggested by the work of Hansen & Broughton (1991) who, in their work with SORRAT, sealed an ESP deck within liquid plastic.

Resin EM306PA) consists of a transparent liquid[71] that is poured over the object to be embedded. A catalyst[72] is then added and, over a period of twenty-four hours, the resin slowly hardens into a solid block. Obviously, parts of the block could be attacked in several ways (e.g., by sawing or drilling), but it would be extremely problematic to conceal signs of such tampering. However, it was necessary to prevent a claimant from breaking up the entire block (e.g., by melting it), and then replacing it with an identical, but undamaged, block. For this reason, as the block was setting, a number of drops of potassium permanganate solution were placed in the resin. These form small purple spots of different shapes and sizes, and which fell to different depths in the resin. The position, diameter and depth of these dots would be difficult to duplicate. In addition, the mould used to contain the resin was chipped away in a complex pattern that would also be difficult to reproduce. Unfortunately, as the resin around Deck 1 was setting, the packaged deck floated to the top of the resin such that a small amount of the bag (approximately 2cm x 2cm) remained uncovered. Deck 2 was completely encapsulated in the resin. The resulting blocks measured 11.4cm x 17.2cm x 3cm.

The decks were then taken to Edinburgh University's Psychology Department and photographed from all six sides. Each of these photographs included both the block, and a ruler, such that the exact placement, and diameter, of the chemical drops can be plotted. The photographs also include the pattern of the mould that has been chipped away around the block itself. The deck that was to be sent to Cox (i.e., Deck 2) was then placed inside an A4 (approximately 30cm by 21cm) Keepsafe envelope that had been checked for any signs of tampering/damage. This envelope was sealed and signed by RW. The security numbers of the Keepsafe envelopes, photographs (and negatives) of the blocks and documentation that outlined the above sealing procedure were securely housed in the home of RW.

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[71]Polyester resin in styrene monomer.

[72]Organic peroxide.

6.4.5 Measures designed to minimise the target deck being tampered with, or damaged, during the experiment

As noted in section 6.3.2, when the deck is returned from SORRAT, it may show signs of damage/tampering. For the reasons outlined in that section, it may be difficult to decide if such damage/tampering constitutes evidence of subject cheating.

For example, the package may be accidentally damaged whilst being handled by either Cox, or Richards. To minimise this possibility, the A4 Keepsafe bag was carefully folded around the resin block, and placed inside an A4 'padded' envelope. This envelope was then firmly sealed with brown plastic packing tape.

Second, the package may be damaged in transit from Britain to the USA, or vice-versa. Several steps were taken to minimise this possibility. First, when being sent from Britain to the USA, the package was surrounded with paper and placed into a strong cardboard box. Second, to help prevent damage whilst the package is travelling from the USA to Britain, Cox was asked to securely repack the parcel before dispatching it to Britain.

Third, either British, or US, customs officials may have wished to examine the package. To minimise this possibility, a strip of paper was placed around the package. This strip asked individuals not to open the package, and explained that it was part of a parapsychology experiment being conducted by Edinburgh University. In addition, the labels carried the addresses of both John Beloff, and Ed Cox, noting that more information about the experiment could be obtained from either of these individuals. Cox was asked to replace this strip of paper around the parcel, when returning it to the experimenters.

Fourth, the package could be opened, and damaged, by an individual other than the claimant. For example, previous packages of this kind have often been 'mismailed' to other members of SORRAT, who may have unwittingly opened them. To

minimise this happening, a label was firmly stuck to the outside of the parcel. This label asked individuals not to open the package, and explained that it was part of a parapsychology experiment being conducted by Edinburgh University. In addition, the labels carried the addresses of both John Beloff, and Ed Cox, noting that the parcel should be sent to either of these individuals.

The resulting parcel, with the requested letter to the entities, was dispatched to Cox on 19 November 1991. In a letter (dated 6 December, 1991), Cox informed us that the package had arrived, and did not appear to have been damaged in transit. Cox also noted that as the package was apparently too large to be 'mismailed', he had deleted last line of RW's letter to the entities[73]. Cox next wrote to Beloff on 13 January 1992, informing him that the letter (written by RW to the entities), but not the deck, had gone missing from the mini-lab into which it had been placed. Cox interpreted this as a good sign, noting that in previous experiments, this had preceded the entities making their calls relating to the order of the target deck. Beloff replied to Cox (letter dated 21 January, 1992), noting that, since the two month deadline had expired, the return of the deck was now overdue. However, on 28 January, 1992, RW received both a completed call sheet, and written letter, allegedly from the entities. These documents had been mailed to another member of SORRAT (resident in California), who had then forwarded them (with the envelope in which they were received[74]) to RW. The call sheet contained 25 unambiguous calls (each circled in black ink). The letter (written on the bottom of the letter originally written by RW to the entities) noted:

> *Friend Richard-*
> *We have tried to rearrange the cards in your packet to approximate the calls we have marked. We often fail, of course.*
> *Shanti-expeditor/Rector/J.K.*

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[73]That is, the line reading 'Please provide a return envelope addressed to yourself or Tom, which can then be sent by registered mail to us - both the deck and the calls'.

[74]This envelope displayed a post-mark showing that it had been posted in 'Spiritwood, North Dakota' on the morning of 13 January, 1992.

To minimise the likelihood of this order being switched for another card list (e.g., after the actual card order has been announced), this call sheet was photocopied, and the copies stored in both the home, and office, of RW. Beloff then wrote to Cox (letter dated 28 January, 1992), enclosing a copy of this call sheet, and asking him if he accepted these calls as authentic. Meanwhile, Cox had received a copy of both the letter, and call sheet, from the same SORRAT member, and wrote to Beloff (letter dated 27 January, 1992) stating that these calls should be taken as genuine. Cox also returned the target package with this letter. This parcel arrived in Edinburgh on 5 February, 1992.

6.5 RESULTS

It was first necessary to discover how the calls, allegedly made by the entities, compared with order of the deck as it had been dispatched from Edinburgh. Second, regardless of the number of 'hits' obtained, it was necessary to examine the target package for any signs of damage, or tampering. To achieve both goals, on 14 February 1992, the card list, and outer layers of the packaging, were examined[75]. To counter the notion that the experimenters may have damaged the package whilst opening it, the opening of the package was filmed by two video cameras. One camera focused on a small area (approximately 16cm by 25cm) of the table on which the examination was taking place (this will be referred to as the 'target area'). The second camera had a wider field of vision and contained both the target area, and surrounding sections of the table. During filming, RW placed the Keepsafe bag (containing the card list) into the target area. All edges, and both sides of the bag, were filmed close-up. RW then carefully cut the envelope open and removed the inner, brown manilla, envelope. This envelope was then opened, and the card list removed. Neither the Keepsafe bag, nor the manilla envelope, displayed any signs of damage, or tampering. The card list was then compared with the calls allegedly

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[75]This examination took place in the Parapsychology Laboratory at Edinburgh University. Both of the experimenters (JB & RW) were present, along with Professor Robert Morris, Robin Taylor (post-graduate student at the Koestler Chair of Parapsychology), David Wilkinson and Jimmy Cuthbert (the two technicians filming the examination).

made by the entities. Eight 'hits' were obtained ($p=0.11$, 1 tailed). The actual order of the target deck, and the calls made by the entities, are shown in Appendix K.

Next, the outer layers of the target package were removed. This was performed in the following manner. First, RW placed the target package into the target area, and all sides, and edges of the outer brown envelope were filmed. The tape around the outer padded bag was then removed, and the bag opened. The inner A4 Keepsafe envelope was removed and placed into the target area. This envelope was carefully filmed on all edges, and sides. The strip that sealed the bag was also filmed close-up. This bag was then carefully cut open by RW, and the resin block removed. The Keepsafe bag was carefully examined, and found to be free from signs of damage, or tampering. The resin block was then placed into the target area and all six sides filmed. Each of these shots contained a ruler (placed alongside the block), to ensure that accurate measurements could be taken from the videotape. Both the placement of the drops of potassium permanganate, and the pattern formed by the chipping away of the sides of the block, were compared to the photographs taken before the block was dispatched from Edinburgh. No discrepancies were discovered. In addition, the block displayed no signs of damage, or tampering. There was only one small difference between the photographs of the block as it left Edinburgh, and the state of the returned block. The glue which secured the sealing strip of the inner, A5, Keepsafe envelope had spread, causing a small yellow stain on the surface of the Keepsafe bag. This is likely to have been caused by the temperatures endured by the Keepsafe bag in transit between the experimenters and SORRAT. The video camera continuously recorded all the examination procedure, and the target package did not leave the camera's field of vision during the whole of this time. A sheet of paper, on which the card list, and the 'entities' calls, were compared, was written by Professor Robert Morris and signed by himself, JB and RW.

After the above examination, all six sides of the resin block were carefully photographed. These photographs contain a ruler, placed alongside the side of the block, such that accurate measurements can be taken from these photographs.

As the entities had stated that they had tried to reorder the target deck of cards, it was decided to open the resin block itself. This procedure took place on 18 February 1992. This examination was filmed from a single camera, which contained a wide angled shot of the bench at which the deck was opened. The camera first contained a close-up shot of the face of the block, with a ruler alongside (such that accurate measurements could be taken from the videotape). The camera slowly zoomed out, ensuring that the deck was always in view on the videotape. The block was then handed to a technician who, using an industrial circular saw, cut off three sides of the block. These cuts removed both the resin, and the sides of the A5 Keepsafe envelope, which held the cards. The block was then prised apart, and the card case removed. RW then peeled off the brown plastic tape that had been placed around the deck, and removed the cards. Each of the faces of these cards were then shown to the camera, as the order of the deck was compared with the deck order made before the cards were dispatched from Edinburgh. All 25 cards were in the same order as they had been when the deck left Edinburgh. The video camera continuously recorded all the above examination procedure, and the target package did not leave the camera's field of vision during the whole of this process.

Finally, as promised in the experimental protocol agreement, a report (containing all of the information in this chapter) was sent to Ed Cox.

To aid other researchers who may wish to reassess this study, most of the material referred to in this chapter is currently stored at Edinburgh University. This includes: all cited correspondence between Beloff and Cox, a copy of the experimental protocol agreement signed by Cox and Richards, duplicates of the material used to seal the target deck, the unused resin block containing the second deck of cards, all packaging used to seal the actual target deck (i.e., brown tape, plastic tape, A5 & A4 Keepsafe envelopes, the thick plastic bag), the target deck of cards and card case, the various pieces of sawn up resin block, the videotapes containing footage of both examination procedures, all photographs and negatives of the target and duplicate block, the call sheet allegedly completed by the entities, the call lists, the letter allegedly from the

entities to RW, and the envelope in which this letter was sent to the Californian SORRAT member.

6.6 DISCUSSION

This study hoped to achieve two goals.

As noted in section 6.3, the nature of the SORRAT claim presented something of a methodological challenge, and thus seemed an ideal candidate to evaluate some of the recommendations outlined in chapter five. These recommendations provided useful guidelines for the design, running, and reporting of this study. For example, many of the guidelines relating to the construction of counter-explanations and controls (see sections 5.3 & 5.5) were incorporated into the general design of this experiment (see section 6.4), especially during the randomisation, and sealing, of the ESP decks. In addition, guidelines relating to the interpretation of possible evidence of fraud (see section 5.6.3), were used to create measures which minimised the difficulty in deciding if any damage to the deck (when it was returned from SORRAT) constituted evidence of cheating, or was the result of an 'innocent' cause (e.g., damage caused in transit). Also, guidelines relating to the construction of an experimental agreement (section 5.7) were used to construct the document reproduced, and discussed, in section 6.4.2. Finally, many of the general reporting recommendations (especially those which aim to help future researchers reassess past studies [see section 5.8.4]) were employed during the write-up of this experiment.

Additionally, the study was designed to assess the card divination claims of SORRAT. SORRAT failed on three counts. First, the target package was not returned to the experimenters within two months of it being dispatched to SORRAT. Second, and most important, when the package and call sheet were returned and examined, the entities obtained only 8 hits. This is not statistically significant at the $p < 0.05$ level, and also falls below the 15 hits required by the experiment and considerably below the 25 hits which Cox claims has occurred on some past occasions. Third, the entities stated that they have tried to rearrange the order of the cards in the target deck.

However, when the deck was opened, all 25 cards were in the same order as when they were dispatched from Edinburgh. This failure does not agree with the results obtained by at least two other experiments reported by Cox, both of which contained a significant number of hits (Cox, 1992). This discrepancy could be interpreted in a number of ways. It is possible that the security precautions, used in these previous studies, were not as effective as the controls used in this present study. Such an interpretation would suggest that the results of these other studies were due to cheating[76]. Alternatively, it could be hypothesised that some aspect of this study 'blocked' the entities from divining the order of the ESP deck. If this were the case, one would have to postulate that Cox, and Richards, are not aware of this condition, given that they agreed to the experimental protocol. This latter interpretation could be tested by running several additional studies, in which precautions against subject cheating were high, but employed a large range of conditions (e.g., various materials being used to seal the target deck) in an attempt to discover when the entities were, or were not, successful. However, given the time, and resources, which would have to be invested in such a study, it is with reluctance that the present author agrees with Hansen & Broughton (1991) in noting:

> ...researchers must decide where to focus their energy, and for us it appears that the SORRAT phenomena are not apt to produce a payoff for further research. (p. 30).

[76]It should be stressed that this present study discovered no evidence of subject fraud, nor was it specifically designed to do so. In addition, the author is not insinuating that either Ed Cox, or Tom Richards, are guilty of any fraud which may have occurred during previous testing of SORRAT phenomena.

CHAPTER SEVEN

THE FEILDING REPORT: A RECONSIDERATION[77]

> When will the investigators of Eusapia learn that no detail can be too trivial and insignificant; that in these very details consists, frequently, the clew [sic] to the mystery, and that no report will ever be regarded as final and conclusive without them?
> **Hereward Carrington, writing before the 1908 Naples sittings with Eusapia Palladino, in Eusapia Palladino and Her Phenomena.**

7.1 INTRODUCTION

Chapter five outlined recommendations for researchers wishing to carry out, and report, retrospective analyses of ostensible macro-PK. This chapter will describe how these recommendations were used to reassess of one of the best known documents within psychical research, namely: the Feilding Report (Feilding, Baggally and Carrington, 1909).

7.2 HISTORY OF THE FEILDING REPORT

At the turn of this century, many leading psychical researchers had investigated the physical mediumship of Eusapia Palladino. However, the resulting literature contained a divergence of opinion as to the validity of her phenomena. Many writers categorically stated that the phenomena were truly inexplicable (e.g. Lombroso, 1909/1988, Lodge, 1894), whilst others argued that she was merely a skilled trickster (e.g. Hodgson, 1895). At this time, the Society for Psychical Research had a policy of not working with mediums that had been found to be fraudulent. Yet Palladino had 'been observed by probably a larger number of scientific men than any other medium' (Sidgwick, 1909), such that the SPR felt it necessary to investigate this controversial figure. This investigation was undertaken by three experienced, knowledgeable and sceptical researchers, who documented their findings in a

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[77]Part of this chapter has been published as a paper in the Journal for the Society of Psychical Research, 58(826), 129-152, 1992.

remarkable paper that has come to be labelled 'The Feilding Report'[78] (Feilding, Baggally and Carrington, 1909).

The qualifications of the investigators should not be underestimated. One of them, Hereward Carrington, had previously published 'The Physical Phenomena of Spiritualism' (Carrington, 1907), a book which catalogues the diverse range of pseudo-psychic trickery which he had encountered during his extensive investigations into fraudulent mediumship. The second investigator, Everard Feilding, had also come into contact with many fake mediums, and has been described by Dingwall (1950) as 'one of the most astute critics that this country has ever produced'. Finally, the third member of the team, W.W. Baggally, was an amateur conjurer who 'had sat with every notable physical medium since Home and had found them all wanting' (Gauld, personal communication, 1991) and was also sceptical of physical phenomena.

The Feilding Report contains an extremely thorough account of eleven seances undertaken with Eusapia Palladino. Each account contains details of both the phenomena which took place, and the controls enforced against fraud. The detail given in the Report is impressive, and necessary, given that one of the investigators' aims was:

> ...not merely to come to a conclusion ourselves as to whether or not the phenomena were true, but to present a report in such a form as to enable a reader to judge of the possibility of our having been deceived;- that is, to give an absolutely full account of the occurrences at each seance, with a detailed statement of the precautions taken and of the control existing at each moment. (Feilding, 1909a, p.122).

All three investigators concluded that at least some of the phenomena witnessed in Naples were genuine. In their concluding comments to the Report, they write:

> ...we are of the opinion that we have witnessed in the presence of Eusapia Palladino the action of some telekinetic force...through which, without the introduction of either accomplices, apparatus, or manual dexterity, she is able to produce movements of...objects at a distance from her...and also to produce matter...without any...source of supply. (p.344).

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[78]The remainder of this article will simple refer to this document as the 'Report'.

For over eighty years, the Feilding report has been seen by many as some of the best evidence for directly observable psi. Indeed, some writers have cited the report as a triumph of psychical research. For example, Gauld (1968, p.243) has also noted that it is 'without a doubt the most interesting record of it's kind ever published'. Nicol (1977) has described it as 'probably the most thorough and reliable account of physical phenomena that has ever been published'. Braude (1986, p.141) has written that; 'the report is a remarkable document of the reality of large scale PK'. Beloff (1985) has cited the report as a case which has never received a satisfactory counter explanation from sceptics.

Given all of the above, the Feilding Report seems an ideal candidate for exploring some of the problems involved in evaluating archival material from this era.

Towards the end of 1908, two of the investigators (Feilding and Carrington) travelled to Naples, in order to hold ten (although this figure was later increased to eleven) sittings with Eusapia Palladino. After the fourth sitting, a third investigator, Baggally, was asked to join the team. All of these seances were held in the middle room of three adjoining rooms on the fifth floor of the Hotel Victoria, Naples. The floor plan of these rooms, as it was presented in the Feilding Report, is reproduced in Figure 7.1, at the end of this chapter. The investigators allowed Palladino to supply her own thin black cashmere curtains, and seance table. Both of these items were carefully examined (although the Report contains no details of this examination procedure). The curtains 'concealed no mystery', whilst the table was 'found to be an absolutely plain structure'. The curtains were hung across one corner of the room, in order to create a seance 'cabinet'. Before each seance, all unnecessary furniture was removed from the room. Various items (such as a small table and musical instruments) were placed behind the curtain, and the seance table placed approximately 2ft in front of the curtain. A second table was placed in the middle of the room, and used by the stenographer, Mr Meeson. At the start of the seance, Palladino would sit at the head of the table (i.e. nearest the cabinet). The investigators would then take their places around the table, usually sitting to

Palladino's left and right. For all eleven seances, Meeson took shorthand notes which contain details of the events as they occurred in the seance room. The resulting transcript includes descriptions of the phenomena produced, and controls enforced to preclude fraud. It is only by reading these transcripts, that one can start to fully appreciate the apparent evidential nature of the report. However, its flavour may be gleaned from the summary table presented by Baggally (reproduced in Figure 7.2 at the end of this chapter) in his conclusion to the Report. This table shows the huge range and quantity of the phenomena apparently produced by Palladino.

7.3 A BRIEF OVERVIEW OF PAST COUNTER-EXPLANATIONS

7.3.1 Introduction

Five types of 'normal' explanations have been proposed to account for the phenomena described within the Feilding Report. Each of these explanations were considered both by the experimenters themselves at the time of the investigation, and by commentators subsequent to the Report's publication. Each of these counter-explanations will be briefly reviewed.

7.3.2 The freeing of a limb via 'substitution'

First, many writers have considered the idea that Palladino might have been able to surreptitiously free one, or more, limb(s) from the control of her investigators. This hypothesis was considered in the Report, as well as being discussed by Podmore (1909, 1910), Stawell (1910), Baggally (1910) and Taylor (1910). The Feilding Report notes that Eusapia did, albeit occasionally, try to free her limbs, usually by the method of 'substitution'. This involved two of the investigators being led to believe that they were each holding one of Palladino's hands/feet when, in reality, they were each holding different sides of the same hand/foot. As noted by the investigators, this substitution was made possible by four factors. First, Palladino would focus the investigators' attention on the 'hand substitution' hypothesis by interrupting the seance:

> ...to ask if the control was satisfactory, and perpetually rendering it as difficult as possible for us to make it so (Report, p.325).

Second, her hands would play on top of her controllers' hands, in a 'furtive and elusive manner'. Third, Palladino would take advantage of occasions when the investigators could not fully see her hands, as might be the case in dim lighting conditions, or when the seance curtain covered her hands. Finally, she obviously possessed considerable manual skill for performing such feats, with the investigators admitting that:

> ...the skill with which the substitution was performed was remarkable. The tactile sensation of continuity of contact was unbroken. (Report, p.326).

However, it should be noted that, for much of the time, the seance conditions were good, such that any hand substitution would have probably been detected by the investigators. The investigators also admit that the most frequently employed foot control (i.e. Palladino placing each of her feet upon those of the investigators) was not satisfactory, as it made the detection of such substitutions problematic. However, it must be remembered that the investigators were primed to expect exactly this methodology. It seems implausible that Palladino would, under these conditions, be able to continually perform such trickery and thus the notion that this hypothesis could account for all 470 phenomena (as suggested by Podmore, 1910), seems incorrect. Given all of the above, the 'substitution' hypothesis seems able to explain a relatively small number of the reported phenomena.

7.3.3 Trick apparatus used by Palladino

A second line of attack suggested that Palladino was able to employ 'trick apparatus', in order to produce the reported phenomena. There are a number of variants on this hypothesis, each reflecting the investigator's, or commentator's, schema for what type of apparatus may be available to a fake medium. For example, in the Report, Carrington discusses the idea that a 'dummy' hand may have been used to produce the 'touches', experienced by the investigators during the sixth seance. In a similar vein, Stawell outlined how a 'short india rubber tube with a bulb at one end' could have produced the breeze which emitted from the medium's forehead, as well as the curtain bulging and dress swelling phenomena. However, in trying to understand why this explanation is somewhat limited, one can do no better that read Feilding's conclusion

to the sixth seance:

> It would be an interesting problem to set before a manufacturer of conjuring machines to devise apparatus capable of producing...a white hand with movable fingers..with practicable living thumb and fingers having nails, capable of reaching high above the medium's head, of patting, pinching and pulling hair, and of so vigorously grasping B. [Baggally] by the coat as almost to upset him into the cabinet. Our manufacturer must construct the apparatus that it can be actuated unseen by a...lady clad in a tight plain gown, who sits outside the curtain held visibly by hand and foot, in such a way as to escape the observation of two practical conjurers clinging about her and on the look-out for its operation.(Report, p.463).

Again, this explanation seems able to account for a small number of the phenomena.

7.3.4 Hallucination

A third explanation suggests that the investigators were the victims of hallucination, and were simply deluded as to the reality of either the phenomena themselves, or the controls being applied to Palladino. This hypothesis was discussed by the investigators themselves and rejected (on the basis of their schemata relating to the nature of hallucination) on a number of counts. First, the investigators believed that such hallucinations would have had to have been both collective and concurrent in that, all of the investigators agreed on the observation of both phenomena and controls. Second, they believed that such hallucination would have been induced by very little verbal influence on the part of Palladino, and would have entailed the investigators not noting its occurrence in either themselves, or each other. For these reasons, the investigators reject this hypothesis as a plausible counter-explanation.

7.3.5 Experimenter confederacy

Some writers have considered that some of the phenomena could have been caused by one of the experimenters acting as a confederate. For example, during the Report Baggally briefly considers the possibility that the stenographer, Meeson, could have acted as a confederate. This is rejected on the grounds that Meeson was nearly always visible to the investigators, and was placed several feet away from the seance table. Other writers have even suggested that Carrington may have colluded with

Palladino, allowing her to free a limb. For example, Rinn (1954) included Carrington in his list of investigators who may have colluded with their subjects. More recently, this accusation has been reiterated by Kurtz (1985) when he writes:

> Was..[Carrington]..a true and naive believer, or was he, like her [Palladino], a fraudulent hoaxer? Either or both explanations have some rationale, though the latter no doubt seems especially compelling. (p.209).

However, although Carrington may have had a motivation for such fraud (he later acted as an agent to Palladino, promoting her mediumship when she toured America), to my knowledge, there is little solid evidence to support this hypothesis. In addition, there are two additional problems which have not been tackled by those suggesting Carrington confederacy. First, even if Carrington had allowed Eusapia to free a limb, it is difficult to understand how such a practice would have gone undetected by the other investigator(s). Second, it is also difficult to imagine how this hypothesis would account for the phenomena which occurred in the eleventh seance (when Carrington was absent). As such, those supporting this hypothesis have failed to account for the conditions, and controls, present during the seances.

7.3.6 An accomplice

Finally, it has also been suggested that Palladino may have employed a hidden accomplice. There are two main variants on this 'accomplice' theme. Stawell (1910) notes that an accomplice (located in Baggally's room) may have been responsible for just one set of phenomenon, namely the rapping on one of the doors which occurred at the end of the eleventh seance. Also, the investigators themselves give passing reference to the idea of an accomplice actually being located within the seance cabinet. For example, the Report notes:

> The conditions in which the seances were held render absolutely inadmissible the supposition that there was any accomplice (p.341).

Whilst Baggally adds:

> The help of a confederate need not be considered, as the seances took place in our own room with locked doors. (Report, p.559).

Feilding (1909b), in relation to just one of the phenomena (grasps felt through the seance curtain), simply noted:

> These grasps, if fraudulent, could only have been done by an accomplice behind the curtain. There was no accomplice behind the curtain (p.799).

Thus the investigators certainly held schemata (albeit to a limited extent) relating to the 'accomplice hypothesis', but believed that it was falsified by the conditions under which the seances were held. However, if a accomplice could gained either complete entry into the cabinet, or merely placed his/her arm into the cabinet, a large proportion of the phenomena could immediately be explained. Most of these are self-explanatory and would include: the bulging and movement of the curtain, the rapping noises which were heard on the double doors, some of the raps which occurred in the many 'indeterminate' locations, movement of objects within the cabinet, objects brought out of the cabinet, plucking of the guitar string, occasions on which sounds were heard in the cabinet, touches by some object through curtain, touches by some object inside cabinet, grasps through the curtain, hands seen from the cabinet, objects of an indefinable nature which issued from the cabinet, objects of an indefinable nature in the cabinet, objects resembling heads which issued from the cabinet, and lights seen in the cabinet. In total this amounts to approximately 270 of the 470 reported phenomena.

In addition, many other phenomena might become explicable via such an accomplice, depending on the controls enforced by the investigators at the time of their production. Most of these would entail the accomplice using some form of instrument with which he/she could reach out into the seance room[79]. These phenomena would include the movement of objects outside of the cabinet, raps on the seance table and chairs, touches outside the cabinet, and grasps outside of the cabinet.

A full (and very time consuming) analysis of the Report would be needed in order to determine exactly how many of the phenomena could be explained by the

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[79]'Reaching rods' were easily available to fake mediums. Indeed, one mail order firm, which sold such devices (Sylvestre, 1901), advertised a telescopic reaching rod that would 'go in the pocket, extend from four to five feet..and will pick up...any small object, float a guitar, etc'!

'accomplice' hypothesis. However, even without such an analysis, it is clear that the 'accomplice' hypothesis should be taken seriously, given that it easily explains a very large number of the reported phenomena.

As noted in section 2.5 counter-explanations allow an observer to predict when, where, and how, a claimant may engage, or have engaged, in deception. However, a complete assessment of a claim does not simply entail accounting for that claim via one, or more, counter-explanation(s). Instead, the observer must assess the likelihood of trickery by reconstructing the controls (i.e., measures designed to prevent, or detect, deception) which were in place during experimentation. Thus, the following section will attempt to assess the controls, described in the Report (and subsequent literature), which might preclude the possibility of an accomplice.

7.4 AN ANALYSIS OF CONTROLS AGAINST THE 'ACCOMPLICE' HYPOTHESIS

7.4.1 Introduction

This section analyses the controls taken during the Naples investigation to prevent, or detect, an accomplice being present within the seance cabinet. The analysis mainly concentrates on the information presented within the well respected Feilding Report. Where this information has been found to be inadequate, some of the subsequent literature which refers to the Naples investigation is examined[80].

This chapter will focus on how an accomplice could have gained access to the seance cabinet via Baggally's room. This notion will be broken down into four separate sections, each of which will be discussed in turn. The first of these considers the idea that an accomplice could have gained access to Baggally's room (labelled B's room on Figure 7.1, adjacent to the cabinet) either before, or during the seances. The

[80]The additional literature examined consists of Baggally (1910), Carrington (1909a, 1909b), Feilding (1909a, 1909b), Stawell (1910), Taylor (1910), Feilding & Baggally (1910) and Podmore (1909, 1910). It does not include some of the more obscure sources which would have been difficult to obtain, and were less likely to contain information of interest (e.g. personal correspondence written by the investigators at the time of the seance, floor plans of the Hotel Victoria, etc.).

second section examines the possibility that an accomplice could have moved both into, and out of, the seance cabinet, from Baggally's room. The third section looks at the steps, taken by the investigators, to detect the presence of an accomplice in the seance cabinet. The fourth section examines the notion that such an accomplice would not have been detected leaving Baggally's room, either during, or after, the termination of the seances.

7.4.2 Could an accomplice have been in Baggally's room during the seances?

In order to aeeess whether an accomplice could have been located within Baggally's room, during the seances, it is important to know a number of pieces of information. First, was Baggally's room thoroughly searched before the start of the seances? If so, which if the investigators carried out this search and how was it performed? Second, if the room was thoroughly searched, was it sealed in such a manner that would have prevented an accomplice gaining access to it after this search? If so, would the methods used to seal the room have been effective against an accomplice?

Each of these issues will be discussed in turn.

First, the Feilding Report does not mention Baggally's room being searched at all! Indeed, it simply notes:

> Before the arrival of Eusapia, the [seance] room was examined, unnecessary furniture removed, the cabinet was prepared, the various objects put in position, and the curtains drawn together. One of us then went down to receive her [Palladino]. (p.323).

Information, presented after the Feilding Report, sheds no further light on this issue. Carrington (1909b) notes:

> I need scarcely add that we made a careful examination of the cabinet, the instruments, the table and the seance room before and after each sitting. (p. 158).

The investigators seem quite confident that an accomplice could not have gained prior access to Baggally's room. Yet, it appears they had little reason to suppose this. Although it may be assumed that the investigators would have locked their rooms when they were left unattended, a competent accomplice could have gained entry via

a duplicate, pass or skeleton key. In addition, the Report (p.527) suggests that both a chambermaid, and the 'boots'[81], may have had unsupervised access to these rooms. An accomplice disguised as a member of the (obviously large) hotel staff would have attracted little attention, no matter where in the hotel he/she might have been seen by the investigators.

In short, it is not difficult to imagine how an accomplice may have gained prior access to Baggally's room. Given that neither the Report, nor any subsequent literature, mention this room being searched, it may be assumed that the presence of such an individual could have remained undetected.

However, let us assume that an accomplice could not have gained prior access to Baggally's room, or that his presence would have been detected, had he done so. Attention now focuses on the attempts made to prevent such an individual gaining access to the room after it had been searched.

Theoretically, such entry could have been achieved in a number of different ways. One obvious point of access would be the windows, which connect Baggally's room, to the outside of the hotel. A second possibility would be that of the door which connects his room to the hotel hall. Finally, a third possibility might entail some form of covert entrance (e.g. a trap door) which connected Baggally's room to other sections of the hotel. Each of these possibilities will now be examined.

Let us turn first to the windows. As noted in the Report (p.321), the rooms used for the seance were located on the fifth floor of the hotel. Each window had a small balcony, but there were no connections between balconies, and the windows were locked and shuttered (Report, p. 345). The windows seem an unlikely point of entry.

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[81]The presence of the chambermaid and the 'boots' is only casually mentioned in relation to the 'bell' incident (Feilding et al., p.525-527). The Report really should provide a complete list of all individuals who regularly accessed the suite of rooms.

A second possible candidate for access would be the doors which link Baggally's room with the public hall of the hotel. Baggally, in his brief consideration of the 'accomplice hypothesis', notes:

> ...the help of a confederate need not be considered, as the seances took place in our own room with locked doors (Report, p. 559).

Yet, from the floor plan presented in the Report (see Figure 7.1), it can be seen that the door which connects Baggally's room to the hall is not labelled 'locked' (unlike both of the other doors connected to the hall). Thus, from the information in the Report, it appears that an accomplice may have easily been able to enter Baggally's room whilst the seance was in progress. However, there is some additional information, which throws further light on the way in which these doors were sealed. Carrington (1909b), notes that:

> Our own seances at Naples were held in the middle room of our suite at the Hotel Victoria. The three members of the committee occupied three adjoining rooms-Mr Baggally the one on the extreme left, Mr Feilding the one in the middle, myself on the extreme right. These three rooms were all connected by double doors, which were usually left open, but were closed during the seance. All these doors, particularly those leading into the public hall, were securely locked and bolted before each seance, and we tied the door handles together by means of white tape, when the doors could not be bolted from the inside. [emphasis mine] (p.157-8).

Carrington's statement is ambiguous and confusing. When he refers to 'all these doors, particularly those leading into the public hall', Carrington could be referring to all sets of doors in the suite of rooms, particularly those leading from all three rooms into the public hall. Alternatively, he could be referring to all three sets of doors leading into the seance room, particularly the doors which connected the seance room to the public hall. As such, Carrington's statement does not inform us how the doors, connecting Baggally's room to the hotel, were secured. The situation is not made any clearer by the fact that the floor plan, included in Carrington's book (reproduced in Figure 7.3 at the end of this chapter), does not even include the rooms either side of the seance room! In addition, one other aspect of Carrington's statement must be incorrect. Either of the above interpretations imply the doors, connecting Carrington's room to the seance room, were locked. Yet, during at least

three of the seances (I, II and X) the Report clearly states that these doors (i.e., those connecting Carrington's room to the seance room) were left open[82]. In another statement, Carrington (1909a), notes that:

> We occupied three adjoining rooms, which we fitted up for seance purposes. The middle room we turned into an experimental laboratory. The rooms on either side of this were occupied by ourselves, and the doors of these rooms we securely locked and bolted before each seance. [emphasis mine], (p.667-8).

Again, Carrington's statement is ambiguous. The phrase 'the doors of these rooms' could be referring to all sets of doors in the suite of rooms. Alternatively, this phrase could simply be referring to the doors linking the seance room to the rooms either side of it. Also, this statement appears to disagree with his earlier comment, in which he stated that some of the doors were secured with white tape, not bolted. In addition, either of the above interpretations again imply that the doors, linking Carrington's room to the seance room, were locked. This aspect of Carrington's statement must be incorrect, given that the Report notes that on some occasions these doors were left open (see above). The issue is further complicated by information presented by Taylor (1910). In reply to the specific criticism that an accomplice may have entered Baggally's room (made by Stawell, 1910), Taylor reports asking Baggally how the door, connecting his bedroom with the hall, was sealed. Taylor (1910) notes:

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[82]For example, at the start of the Seance I, the stenographer, Meeson, was 'in the next room [Carrington's] with the door open'. In additional, when describing the lighting conditions at this first seance, the Report notes:

> also light coming from the next room [Carrington's], which was lit by an ordinary electric light, the door being ajar about 6 inches. [emphasis mine]. (p.349).

In describing the lighting conditions for Seance II, the Report notes:

> Incandescent electric light in the centre of room, shaded as before. Bright light in the next room [Carrington's] and the door open.[emphasis mine]. (p.361).

During Seance X, photographers were present, and Baggally notes:

> There was a good deal of confusion at this seance owing to the repeated opening and shutting of the door between the seance room and C's room, where the photographic camera had been placed. [emphasis mine]. (p.535).

> In fact, the door of B's [Baggally's] room opens, not on the passage, but into a dressing room, the door of which, he assures me, it was his custom to lock whenever he left the room.' [emphasis mine] (p. 281).

This reply is interesting on two counts. First, and foremost, Baggally only mentions locking (and not bolting) the door in question. Second, the statement is a clear admission that the floor plan presented in the original report is misleading. Taylor's statement is ambiguous, as it can be interpreted in one of two ways. First, Taylor could have meant to imply that the dressing room was actually contained within the space marked 'B's room' in the original diagram. If this were the case then the door leading from the hall would have led, not directly into Baggally's bedroom, but rather into the dressing room. Second, Taylor could have meant to imply that the dressing room lay outside the area marked 'B's room', and that the door which appears to lead from Baggally's room to the hall would have actually led into the dressing room. If this were the case, it is still unclear if there was any access between this dressing room and any other part of the hotel (as, for example, might be used by the chambermaid). The original drawings of the floor plan (reproduced in Figure 7.4[83] at the end of this chapter) shed some additional light on this ambiguity. Although these plans have been drawn in ink, they do show a thin pencil line which seems to indicate that Baggally's dressing room lay outside his bedroom, and that there was indeed a door which connects the dressing room to the hall. However, it should be noted that there is no way of knowing when, and by whom, these pencil marks were drawn[84].

Finally, if the investigators had firmly secured the door leading from Baggally's room to the hotel hall, they would have been confident that an accomplice could not have

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[83]I would like to thank Alan Gauld for providing me with a copy of this original floor plan, from the SPR archives.

[84]One obvious way to clarify this point would be to visit the Hotel Victoria, or examine the hotel plans. Unfortunately, the hotel was destroyed during the second world war (John Beloff, personal correspondence, 1991). However, the Edinburgh University School of Architecture have informed me that, if the hotel was of architectural significance, its plans may still be housed somewhere in Naples.

entered Baggally's room during the seances. However, this does not appear to be the case. Indeed, Baggally reports checking for possible trap doors in the wall of the seance room, noting that:

> ..as regards to the possibility of a confederate gaining access to the cabinet by a trap door, I may say that I examined the interior of the cabinet and found that the floor was made of tiles closely cemented together. The walls were at right angles to each other; one consisting of thick masonry gave on the street, the other of thin masonry, brick or plaster, separated the seance room from my bedroom. There was no trap door. (Report, p.560).

In short, the floor plan, presented in the original Report, is grossly misleading. It fails to note that Baggally's room did not open directly into the hotel hall, but rather into a dressing room. Additional evidence seems to indicate that this dressing room then opened directly onto the hall way. Also, the Report fails to note exactly how the door which connected Baggally's bedroom (or dressing room) to the hall, was sealed. The later evidence suggests that some of the hotel doors were bolted, yet fails to clearly note whether this precaution was only taken in respect of the doors leading from the seance room, or all of the doors in the suite of rooms.

However, let us assume that all of the doors were securely locked and bolted. It would then become essential to assess the possibility that an accomplice could have gained access to Baggally's room via some form of covert entrance (e.g. such as a hidden trap door). Unfortunately, the Report fails to mention examining Baggally's room for any such entrances. Given the solid construction of the hotel walls (Report, p. 560), the possibility of a trap door in the wall of Baggally's room appears implausible. However, the investigators do not mention if the ceiling of Baggally's room could have housed such an access. Yet Carrington (1907) was certainly aware of this form of trickery because in his earlier book, the Physical Phenomena of Spiritualism, he carefully cites sections of another book (Revelations of a Spirit Medium) which describes how certain panelled ceilings can contain such trap doors. He notes:

> This [ceiling] panel was 'doctored' and could be displaced, leaving an aperture large enough for 'spooks' to get through with perfect ease. A light ladder which reached within three feet of the floor...was

> hooked fast above and furnished the means of getting down and up again'(p.268).

Yet the investigators choose not to inform their readers whether or not such a trap door was possible in the Hotel Victoria, Naples. The Feilding Report, and subsequent additional literature, does not mention the construction, or decoration, of the hotel ceiling. This may have been of particular importance if the fifth floor of Hotel Victoria was actually the top floor of the hotel. If this were the case, the room may have had a hidden access to a loft area. All of the above may sound implausible, but, if the Report truly wishes to be complete, this sort of detail should have been provided.

An accomplice, attempting to use any of the above methods of entry, would have had considerable time to do so. The Report notes that:

> She [Palladino] came attended by her husband, who then left, and she came up to our rooms alone. (p.323).

Thus the investigators knew Palladino's husband arrived at the hotel with Palladino, and report making no effort to ensure that he actually left the hotel. In addition, in the Report, Feilding notes that Palladino had to climb the five flights of stairs up to the hotel rooms, remarking that on one occasion (Report, p.461), this journey lasted 25 minutes. The journey time, for the other seances, is not given. Also, it is interesting that the Report simply states:

> She [Palladino] came up to our rooms alone. The door was then locked, and she immediately took her place at the narrow end of the seance table...(p.323).

Yet Carrington (1909a) later states:

> When Eusapia arrived at the hotel...we would invite her, first of all, to partake of a cup of coffee, an invitation that she generally accepted. (p. 668).

Whilst Feilding (1909a) later noted:

> Sometimes we had to wait half-an-hour, an hour, even an hour and a half, before anything took place. (p.124).

Either of these delays would have provided more than enough time for an accomplice to have entered Baggally's room before the start of the seance proper. Neither of

them are mentioned in the original Report.

7.4.3 Could an accomplice have gained access to the seance cabinet, from Baggally's room?

From the above analysis, it appears that an accomplice could have been present in Baggally's room. As such, attention now focuses on the safeguards enforced by the investigators to prevent passage from Baggally's room to the seance cabinet.

Such access may have been gained via the door connecting the two rooms would be an obvious point of access.

Unfortunately, the report gives few details about the construction or sealing of the door, simply stating that it 'was permanently locked and secured with tape' (p.345). However, the door does feature in three of the photographs which accompany the Report (one of which is reproduced in Photograph 7.1 at the end of this chapter). From these photographs, it can be seen that the door is a 'double' door. The doors appear to be of polished wood and heavily panelled.

The Report does not state if any precautions were taken in order to prevent, or detect, tampering with the doors before the first seance. Thus, if the investigators had booked the rooms from England (before setting off for Naples), Palladino, or her colleagues, may have been able to discover which rooms were going to be used for the seance, gained access to them (perhaps by renting the rooms), and have doctored the door in question. Additional information sheds no light on this issue. Feilding (1909b) notes that:

> The eleven seances took place in my bedroom on the fifth floor of an hotel chosen by ourselves...[emphasis mine] (p.802).

Carrington (1909b) writes:

> ...we [Carrington and Feilding] left London on different days, travelled by different routes, and met in Naples on the afternoon of November 19, 1908.(p. 152).

Again, both of these statements fail to clarify exactly when the rooms were booked,

and therefore whether Palladino (or her colleagues) would have had time to tamper with the rooms.

Even if Palladino could not have accessed the rooms before the investigators arrived, it is possible that such tampering could have been effected in the time between their arrival in Naples (on the afternoon of the 19th November [Carrington, 1909b, p.152]), and the time of the first sitting (on the evening of the 21st November [Report, p. 349]). Carrington (1909a, p. 667) describes how he and Feilding visited Palladino very soon after their arrival in Naples (as noted above, Baggally did not join the investigative team until the fifth seance). This being the case, Palladino would have known the investigators were not going to have been in the hotel at this time, potentially allowing any colleagues to effect alterations on the door in question without fear of being disturbed. In addition, Carrington (1909a) also noted:

> On two or three occasions, Eusapia appeared in very bad humor...We were warned of this, happily, by previous investigators, and were advised by them to stimulate her social nature...by presents, dinners, drives and theatre-parties. We followed this advice, and found it exceedingly helpful. (p.675).

Carrington then goes on to describe, in some detail, one such dinner party in a Neapolitan restaurant[85]. The original Report mentions none of these diversions. In addition, the investigators also fail to mention that Palladino had, previous to the 1908 Naples investigation, used a room on the second floor of the Hotel Victoria for a preliminary set of seances with the 'Institut General Psychologique'[86]. This information is vital, as it makes it more likely that Palladino may have had a 'special relationship' with one, or more, of the Hotel's staff. Thus it appears that an accomplice would have had ample opportunity to tamper with the investigator's rooms, with little fear of being detected.

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[85]Carrington does not state whether any of these events took place before, during or after the series of eleven seances.

[86]I would like to thank Mary Rose Barrington for providing me with this information.

Such tampering could have entailed the faking of one of the larger door panels, such that it could be secretly opened on a later date[87]. Given that the Report states that the seance cabinet was 8ft 2 1/2 inches tall, and that the photograph shows the top of the cabinet in line with the top of the door frame, it can be seen that the larger panels on the bottom of the doors would be approximately 19 inches high and 15 inches wide, which would be large enough for an individual of small stature to pass through without difficulty. The above method was (and, on occasion, still is) employed by criminals wishing to gain illicit entry into, and by escapologists trying to break out of, supposedly 'secure' buildings. The method has a long history, being featured in an early crime prevention handbook (Cruikshank, 1851). Such a false panel would have to look convincing from both sides, and an accomplice would have to be able to remove, and replace, the panel without attracting attention. To determine if such a panel could be made, the present writer consulted a carpenter/magician. This individual stated that such fakery could be easily achieved and promptly demonstrated it by gimmicking a panel in a large section taken from a real panelled door. The faking took less than an hour, requiring no carpentry tools that would not have been available at the turn of the century. The panel can be removed or replaced easily and with little noise or disturbance. I have found the fakery to be undetectable to anyone who does not examine the door closely, knowing what to look for[88]. In addition, when assessing if Palladino could have employed the skills of a carpenter, three factors should be borne in mind. First, Naples was 'home territory' for Palladino. Second, she was being paid a considerable sum of money (200 lira[89], or, in present day terms, approximately £650[90]) for each of the SPR seances. Third, Palladino quite likely knew individuals capable of such fakery. Carrington (1909b), when

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[87]My thanks to Martin Breese for mentioning this notion at my lecture to the SPR, 13th June 1991.

[88]This fake door panel is currently stored at Edinburgh University.

[89]My thanks to Alan Gauld for making this information available from the SPR archives.

[90]My thanks to Edinburgh University's Department of Economic and Social History for providing this information.

presenting a biographical sketch of Palladino, writes:

> When we asked Eusapia whether the report was true that she had married a conjuror, she replied indignantly that it was not. She stated that her first husband[91] had been 'connected with theatricals,' and knew the details of stage mechanism, and its various trick devices'. He also knew a few tricks, and took delight in exhibiting them to his fellow-workers; but that he was not by any means a professional conjuror. [emphasis mine] (p. 19).

Given all of the above, it is perhaps surprising to discover that the Report makes absolutely no mention of examining the doors in question, for any possible signs of tampering. Also, the precautions reported by the investigators to seal the doors, (i.e. locks, perhaps bolts, and the use of white tape placed around the door handles) would not have prevented the above method of entry. In addition, even if we assume that the doors connecting the seance room to Baggally's room were opened between seances, there is no reason to suppose that a well constructed false panel would have been discovered.

Given that an accomplice could have attempted to gain access to the seance cabinet through such a faked door panel, attention focuses on the investigators' efforts to detect the movement of either the panel, or an accomplice, during the seances.

In assessing this issue, it is important that the Report notes:

> ...the [seance] curtains were, at Eusapia's request, stretched across one corner of the room. [emphasis mine] (p.322).

This statement is clearly ambiguous. This may mean that Palladino chose the exact corner in which to place the curtains. Alternatively, it may mean that Palladino merely insisted that the curtains be placed across any corner, and the investigators chose which corner was most convenient. The Report, and subsequent literature, fails to clarify this ambiguity.

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[91]It should be noted that Palladino had remarried by the time of the Naples investigation.

Regardless of who chose the placement of the curtains, it is interesting to note that, in all three photographs contained in the Report, one side of the curtain is fixed to a point above the doors, such that the curtain completely obscures one half of the right hand door. This is in direct contrast to the floor plan, (and the 43 seating sketches scattered throughout the report, along with the floor plan produced by Carrington, see Figure 7.3), which clearly shows the curtain to be fixed to the right of the door. However, the original floor plan (see Figure 7.4) shows that the curtain did indeed obscure part of the door. Again, the well respected Feilding Report appears to contain grossly misleading information.

From the photographs, it is also clear that if the curtains were to be slightly pulled forward then they would completely obscure the panel in question. If this had happened, the curtains would have provided ample visual cover for an accomplice entering the cabinet through this panel. From the same photographs, it can be seen that not only do the curtains touch the floor, but there is actually a considerable amount of the curtain resting on the floor of the seance room. It does not seem unreasonable to assume that, if the curtain could have been pulled forward the extra few inches needed to completely obscure the panel in question, it would have remained in that position, due to the excess material resting on the floor of the seance room.

It is also interesting to note the discrepancy in the dimensions of the seance cabinet as they are presented in the Report. The Report states that the two sides of the cabinet formed by the hotel walls measured 90cm and 100cm respectively. Yet the Report gives the distance between the corner of the room and the centre of the seance curtains as being 80cm. Assuming the corner of the room to be a right angle, and that the investigators measured the shortest possible distance between corner and curtain, these measurements simply cannot be correct. If the measurements of the two sides of the cabinet are correct, the distance between the corner of the room and the curtains should be approximately 70cm. This non-trivial discrepancy could be interpreted in a number of different ways. Perhaps the measurements of the cabinet

sides are incorrect. Perhaps the large amount of curtaining on the floor of the seance room accounts for the inaccuracy. Perhaps the curtains were pulled forward from their 'natural' position. Again, in retrospect, it is difficult to decide between these hypotheses, and thus the above discrepancy is yet another source of ambiguity within the Feilding Report.

However, even if the curtains were not permanently pulled forward, Palladino may have had ample opportunity to pull the curtains into such a position before, or at the start of, the seances. This movement of the curtain, could have been performed as a quite natural action during the long period of waiting that accompanied the start of the seances. The Report does indeed mention Palladino touching the curtain at the start of some of the seances. For example, seance four starts at 9.30 pm. After seventeen minutes, during which only a few 'non-evidential' phenomena (e.g., weak rapping and tilting of the table) take place, Feilding noted:

> Medium asks if she can touch the curtain, which she does with her left hand, C's right hand being in hers. (p. 403).

Seance seven starts at 9.30 pm. After approximately seventeen minutes, during which only the left side of Palladino's dress swelled out, Feilding asks Palladino if she could try to make the small stool move towards her. In a note added to the Report the next day, Feilding recalled:

> She [Palladino] said 'We can always try it, but it does not depend upon me.' I took the small stool from the cabinet, ascertained that it had no attachment, and placed it on the ground to her left. <u>She pulled the curtain of the cabinet partly over it.</u> [emphasis mine] (p. 466).

There would have certainly been time to make sure that the curtains were pushed slightly back before the photographs were taken.

Given all of the above, it appears that any entry of an accomplice could have been visually masked by the seance curtains. However, there is no doubt that the investigators were seated very close to the seance curtain. Surely they would have detected an accomplice climbing through a faked door panel? Again, the Report fails to provide enough detail for later readers to assess this point. The Report fails to

mention exactly how far the investigator, on the right hand side of the seance table (i.e. the individual nearest the door in question) would have been from the door. Instead, one again has to rely on the photographs presented within the Report itself, and by Carrington (1909b). These photographs were not taken during the actual seances but rather were reconstructions of the seances. Indeed, in many of the photographs, the role of Palladino is played by the chambermaid of the hotel[92]. In these photographs, the position of the table varies considerably. In one of the photographs (Carrington, 1909b, facing p.98), one of the investigators is indeed pushed very close to the panel in question. Yet in other photographs (e.g. Carrington, 1909b, facing p.192 & p.222) a considerable distance separates the investigator from the door. One cannot ascertain the exact position of the investigator nearest the door, so again, in retrospect, vital information has been denied us.

In addition, even should an accomplice have accidentally touched the curtain, as he/she climbed through the panel, this may simply have been interpreted as one of the many 'paranormal' movements of the curtain.

Also, at least two, and sometimes all three, of the investigators were trying to control Palladino. This control consisted of trying to hold onto her limbs, and constantly describe, out loud, the nature of these controls. As such, Palladino may have been in a position to make this control particularly difficult at certain moments, in order to mask (both visually and acoustically) the possible removal of a fake panel, or entry of an accomplice.

The investigators did not position themselves in such a way as to obtain a good view of the double doors. As can be seen from the floor plan, the investigator nearest the door (i.e. the person occupying the top right hand position of the seance table) would not have been facing the door. The individuals facing the door (i.e. the people on the

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[92]This information is casually mentioned in the Report, when Feilding notes:
> The chambermaid...could barely be persuaded to play 'Eusapia' in some imitation photographs of phenomena we took yesterday. (p. 527).

left hand side of the seance table and the stenographer) would all have had their observation of the door degraded, by both distance and the fact that Palladino and the other investigators would, at least in part, obscure their view. The Report also notes that 'the floor was of tiles covered by heavy carpet', which may have had the effect of dampening any sound caused by an accomplice's contact with the floor.

It is also interesting to note which of the investigators were sitting at the top right hand position of the seance table (i.e. the position nearest the door), when an accomplice might have entered the seance room. At the start of six of the eleven seances[93] Carrington is seated in this position, and in four of these[94] he swaps (three times at Palladino's request) with another individual around the seance table. By comparison, on the five occasions when another individual is seated in this position, a seating change occurs only once[95]. Given that Carrington was the most experienced of the investigators, this could be interpreted as Palladino attempting to remove him from the position in which he was most likely to detect trickery. A similar point has been made by Podmore (1909). Baggally (1910), in his reply to Podmore, notes:

> Mr Carrington was ill and was compelled to keep his bed for some time during the course of these seances, and when Eusapia asked him to retire from his control at seances V., VII., she said that she did so because his vitality was very low. (p.216).

Thus, although the Report briefly mentions that Carrington was 'unwell' (p. 467) it fails to note that this illness was such that he had to take to his bed. This is a good example of the way in which information can be omitted by even the most qualified investigators (see section 4.3.2.2). Surely the Report should have stated the severity of the illness, along with assessing if the illness may have effected Carrington's capacity to be an able investigator/observer.

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[93]Seances I, III, V, VII, VIII, IX.

[94]Seances I, V, VII, VIII.

[95]This change occurs in Seance IV, when Palladino requests that Feilding changes places with a non-investigator, Prof Galeotti.

7.4.4 Would an accomplice have been discovered in the seance cabinet during the seances?

All of the above arguments would be of little consequence if the investigators regularly checked the inside of the cabinet during the seances.

Thus it is important to establish the number of times that, during the seances, the investigators actually looked directly inside the cabinet. Throughout the eleven seances, the Report only explicitly mentions three such occasions[96]. Two of these occur towards the end of the second seance. In the first of these (Seance II, 12.1 a.m.) the investigators note that the seance curtains have become accidentally parted. The investigators do not report seeing an accomplice in the cabinet, although it should be noted that the phenomena which occurred at this time (i.e. the movement of the small table into the cabinet, and the plucking of the toy guitar string) could have been produced by an accomplice who had left the cabinet, but still remained in Baggally's room. For example, such an accomplice could have, whilst he/she was in the cabinet, attached a thread to the small table and passed this thread under the door, into Baggally's room. Later pulls on the thread would then cause the table to jump back into the cabinet. The plucking of the guitar string could have been caused by an accomplice having a second toy guitar in Baggally's room. A few moments later (Seance II, 12.15 a.m.) the curtains gently part in the middle, allowing the investigators to see inside the cabinet. Again, this gentle parting of the curtains could have been achieved by the accomplice attaching a thread to one of the curtains before leaving the cabinet, and gently pulling this thread from Baggally's room. All of the above may have been a staged attempt, performed early in the course of the seances, to deceive the investigators into believing that the cabinet did not contain an accomplice. The only other time at which the investigators explicitly report looking inside the cabinet occurs at the end of the sixth seance. The Report notes:

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[96]It should be noted that there are a few other occasions whereby it is difficult to establish if the investigators actually looked inside the cabinet. For example, occasionally the investigators report placing objects inside the cabinet, during the seances. Yet they do not report if this entailed them actually looking inside the cabinet, or merely placing their arms into the cabinet.

F. I asked medium whether I could look inside the cabinet and she says certainly[97].
C. I see a slight bulge of the curtain.
B. She [Palladino] now parts the curtain altogether and gives it to me to enable us all to look inside the cabinet. (p. 455-6).

For most of this seance the shorthand report carefully noted the time at which each of the phenomena took place. However, this careful reporting did not continue until the end of the seance. The last time recorded in the shorthand report is that of 12.55 a.m. (Feilding et al, 1909, p. 455). At this time the report noted that the investigators had asked Palladino if she would try to influence the movement of a cork which had been suspended on a piece of elastic stretched between two nails. Palladino tried to psychically move the cork, but failed. The curtain then apparently blew over Baggally's left shoulder, and Feilding then requested to see inside the seance cabinet. As noted above, the seance officially ended after Palladino parted the curtains. Unfortunately, the shorthand report fails to note the time at which each of the events occurred, or how long the this entire episode (i.e., from 12.55 a.m. to the end of the seance) lasted. Fortunately, Carrington, writing about the seance three days later, provides us with this latter piece of information. He noted:

> Several important phenomena took place at the conclusion of the sixth seance, after the stenographic record ends. The reason for this is that the stenographer ceased taking notes when the light was turned up, owing to the lateness of the hour (it was getting on for 2.0 a.m.), but phenomena continued to take place in the light...[emphasis mine] (Report, p. 457).

Thus the events which occurred between 12.55 p.m. and the end of the seance (occupying only 15 lines in the Report) definitely lasted over half an hour, and may have lasted up to an hour. Thus, it remains quite possible that there was a time delay between Feilding asking to see inside the cabinet, and Palladino opening the curtains. Given that we do not know how long the above exchange took, an accomplice may have had time to effect his/her exit in the time between the request and the opening

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[97]Feilding does not explain why he wishes to look inside the cabinet, although the comment may have been prompted by his earlier remark (made sometime between 12.40p.m. and 12.55p.m.) that 'The curtain is pulled up as though by somebody inside. It is pulled inwards first and is then pushed outwards' (Report, p. 455).

of the curtains (perhaps thus accounting for the bulge in the curtain observed by Carrington). Alternatively, an accomplice could have already left the cabinet before Feilding's request, and somehow produced the bulge of the curtain from behind the door.

Barrington (1991) has suggested that the investigators may have been able to see through the seance curtains, and thus would have detected the presence of an accomplice. Yet for the investigators to be able to see through the curtains, some degree of illumination from within the cabinet, would have been required. However the light for the seances was being provided from the centre of the seance room (and, during the first seances, from a slight opening of the door into Carrington's room). As such, all of this light would have been in front of the curtains, thus making it difficult, if not impossible, for the investigators to see through the curtains into the cabinet. This notion is supported by the fact that, during the entire Report, the investigators never mention being able to see through the seance curtains. In fact, given the lighting conditions described above, it seems likely that an accomplice may well have been able (at least to some extent) to see <u>out</u> of the cabinet. Indeed, such a notion would account for some of the moments wherein phenomena, radiating from the cabinet, appeared to be coordinated with movements being made by either the investigators or Palladino herself.

Barrington (1992) also makes much of Palladino not asking for a black curtain to be hung at the back of the seance cabinet (as had been the case during some of her previous seances). She argued that a black-clad accomplice would have been camouflaged against such a curtain, and thus its absence proves that Palladino did not use an accomplice. She states:

> The walls making up the corner of the cabinet behind the curtain were...white or light in colour. If Palladino were in the habit of introducing an [accomplice] into her cabinet...she would know that there was always some danger of an inquisitive researcher looking into the cabinet to assure himself that the hand grasping him through the curtain was not attached to a permanent body...A black draped figure freezing in a corner of the cabinet might just succeed in merging into

the background if there were a black background. (p. 4).

I do not agree that a back curtain is essential, helpful, or even feasible if a accomplice is to be used, and so its absence does not prove an accomplice was not used.

First, a back curtain would have needed to have been fixed in the corner of the room somehow. However, when describing the seance room, Carrington (1909a) notes:

> The floor was the usual tiled floor common to Italian houses; the walls were of brick and stone, so solid in character that we found it impossible to drive a nail into them. (p. 668). [emphasis mine].

Thus it seems possible that the curtain was absent simply because it would have been very difficult to secure it in place. Second, a back curtain (probably nailed, somewhere, to the door connecting the seance room to Baggally's room) could well have obscured the very door panel through which the hypothetical accomplice could have gained access to the seance cabinet. It seems unlikely that ~~would~~ Palladino have risked possibly having to draw attention to the door by requesting that part of the cabinet wall be left uncovered. Third, it is doubtful that a back curtain would have actually been necessary, or helpful, in the event of somebody seeing into the cabinet, either covertly or overtly. A parting of the curtain sufficiently covert to escape Palladino's attention would afford such a narrow and poorly illuminated field of view that a back curtain would ~~not~~ hardly be necessary for an accomplice to escape detection. If, however, the researchers had simply throwing open the curtain, suddenly and without warning, a back curtain would be of little help to an accomplice trapped in the cabinet; camouflage needs distance to be effective, and an investigator willing to dramatically open the cabinet in this way would hardly balk at stepping inside it. But it is unlikely that the investigators would have behaved like this anyway. It is vital to realise that the idea of the investigators looking suddenly into the cabinet, without first asking Palladino's permission, runs contrary to the whole nature of the 1908 Naples inquiry. Throughout the whole of the Report, the investigators make it quite clear that they were most anxious not to displease Palladino by imposing any conditions which might annoy or upset her. At the start of the Report they note:

> ...we preferred to adopt conditions to which the medium was used and

> in which therefore it was probable that effects would be produced, rather than impose others which might possibly impede the production of what we had gone to study. (p. 326).

For example, before the fourth seance the investigators pasted a strip of paper around the seance table, to help prevent Palladino faking the levitation of the table by placing her hand under the table. However, following only one tilting of the table, and two non-evidential levitations (Report, p. 400), Palladino contested that the paper was 'antipathetic' to her (p. 404). The investigators immediately reversed the table allowing Palladino access to its opposite end, which did not have any paper pasted around it. Similarly, on the one occasion (approximately 12.55pm in seance six) when the investigators actively opened the seance curtains, and looked into the cabinet, the resulting shorthand report reveals that Feilding asked Palladino's permission beforehand. As such, the investigators were clearly eager to ensure that their behaviour complied with the whims of Palladino. Judging by this, and their guiding principle of the non-imposition of antagonistic controls, it seems unlikely that the investigators would have suddenly opened the seance curtains without seeking prior permission. Mediumistic law dictates that such behaviour could be physically damaging, if not fatal, to the medium - something which would have be borne in mind by an investigator contemplating covert action. The investigators would have probably seen such an action as likely to, in their own words, 'impede the production' of what they had travelled to Naples to study. Palladino, if she was considering using an accomplice (who in any case would not need to spend all his time wholly inside the cabinet) would probably have considered it an acceptably small risk.

Barrington (1992) has also argued that the 'accomplice' hypothesis is implausible as the experimenters may, at any moment, have rushed into Baggally's room and thus discovered the accomplice. However, I believe this argument to be incorrect for many reasons. First, Barrington fails to note that the hypothetical scenario of Baggally suddenly entering his room has already been considered by Stawell (1910). Stawell concluded that:

> As the door from the seance room into B's [Baggally's]...was 'permanently locked and secured with tape' (p. 345) it would not have

been possible to detect the confederate by suddenly opening it. (p. 235).

Taylor (1910) later criticised many aspects of Stawell's paper often supporting his ideas with additional comments by Baggally. However, neither Taylor, nor Baggally, argued against this particular part of Stawell's critique. Second, as noted above, the investigators were unlikely to do anything which might have upset, or annoyed, Palladino. Thus, Palladino could have easily prevented Baggally from unsealing the door by stating, for example, that such an action was upsetting the seance cabinet and thus causing her harm.

7.4.5 Could an accomplice have left Baggally's room before the termination of the seances?

Finally, an accomplice could have left the seance cabinet, and then Baggally's room(s), via any of the access points outlined in section 7.4.2 (e.g., the door linking Baggally's room to the hotel hall or a hidden ceiling panel). Alternatively, he/she could have hidden in Baggally's room(s) (which neither the Report, nor additional literature, mention searching after the seance) and waited until the doors were unlocked/unbolted before making his exit. In addition, the Report makes no mention of any of the investigators accompanying Palladino down the stairs of the hotel, and thus does not report at what point in the evening Palladino met back up with her husband.

7.5 DISCUSSION

This chapter first noted that a majority of the phenomena in the Report become explicable if one assumes an accomplice could have gained access to the seance cabinet. It was argued that this 'accomplice hypothesis' should therefore be taken more seriously than it has been in the past.

The chapter then utilised some of the recommendations in chapter five in order to carry out a detailed retrospective analysis of the Feilding Report. For example, as recommended in sections 5.3.2.2 & 5.5.3, a number of sources (e.g., the Report

itself, later descriptions of the investigation made by Feilding et al., the writings of subsequent commentators on the Report etc.) were collected and examined[98]. Second, where important (e.g., when assessing the floor plan presented in the Report), access was gained to primary, as opposed to secondary, material. Third, all sources of information were compared for completeness, and consistency. It was discovered that the Report was badly flawed in a number of respects. The Report does not describe any search being made of Baggally's room before the start of seances. The controls enforced to prevent entry to this room were not described in any great detail. The Report also failed to note that there were often large delays at the start of the seances.

The Report contains a floor plan which is grossly inaccurate. The floor plan (and all of the 43 seating plans) contained in the Report fail to show that the seance curtain actually occluded part of the door which led from Baggally's room, into the seance room. The floor plan also failed to note the presence of a dressing room between Baggally's room and the hotel hall. The Report fails to mention taking any precautions to prevent prior tampering with this door, or making any examination of the door. The measurements of the seance cabinet given within the Report cannot be correct. The Report fails to indicate the exact position of the seance curtain during the seances. On only three occasions do the investigators report looking inside the seance cabinet. On all three occasions an accomplice could have left the cabinet in advance of these observations. The Report fails to note any search of Baggally's room after the seances. It was argued that these errors allow for the possibility of an accomplice moving in and out of the seance cabinet, from Baggally's room.

It may seem astonishing that the investigators did not give more information concerning the possibility of an accomplice, especially since the investigators often remarked that many of the phenomena appeared to be caused by an entity located

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[98]It should be noted that, although this analysis examined the bulk of additional published material, it is possible that some more obscure sources (e.g. the investigator's private correspondence, or hotel plans) may still cast additional light on the topic. It will be interesting to see if any additional sources act to further confirm, or disconfirm, the 'accomplice hypothesis'.

behind the curtain. For example, in the third seance, Carrington noted 'I can hear noises in the cabinet as though something were moving softly about'. Whilst, in the seventh seance, Baggally, describing a form emerging from the cabinet, remarks 'In appearance it resembled an arm with a closed fist, covered by some black material', and later in the same seance, noted 'the hand appeared to be a mans hand of a natural colour'. In trying to understand why the investigators took the 'accomplice hypothesis' so lightly, it is important to understand that, in the past, Palladino had not been seriously accused of using such a methodology. As such, the investigators may have become preoccupied with guarding against possible limb substitution (which she had attempted both before, and during, the 1908 Naples seances) and this may have caused them to view any other 'normal' explanation as implausible. It was exactly this stratagem which was discussed in section 3.4. Of course it is possible that the investigators did not lightly dismiss the accomplice hypothesis at all, but rather simply chose not to report the various controls taken to counter the notion. Again, as noted in section 4.5.4, the reporting of such studies needs to be complete, and extremely accurate. As noted by Carrington (1909b):

> I have no doubt whatever that every impartial investigator, who sits with Eusapia, becomes convinced of the reality of at least some of the phenomena; but all the world cannot obtain personal sittings. They must judge by the printed reports; so long as that is the case, the reports of the sittings must be made to read convincingly. (p. 156).

As such, this analysis has demonstrated the clear need for recommendations (of the type outlined in chapter five) to help parapsychologists design, and report, research in such a way that the opportunity for retrospective accusations of deception are minimised.

If additional sources do not disconfirm the 'accomplice hypothesis', it is vital that a thorough reassessment of the phenomena contained in the Feilding Report takes place (taking into account both the 'accomplice', and all other possible 'fraud' hypotheses). This may alter the evidential nature of the Report in a number of ways. First, it may be that all of the phenomena become explicable, and thus the Report would no longer

be evidential to the paranormal. Second, it may be that the Report will no longer be seen as containing enough information about the phenomena (e.g. the exact position of objects etc.) to assess whether or not they are explicable. Finally, such an analysis may reveal that, although some of the phenomena can now be explained, others still remain inexplicable. It this were the case, it would have important implications for those researchers attempting to speculate on the nature of the paranormal ability which may have been possessed by Palladino (e.g. Braude, 1986).

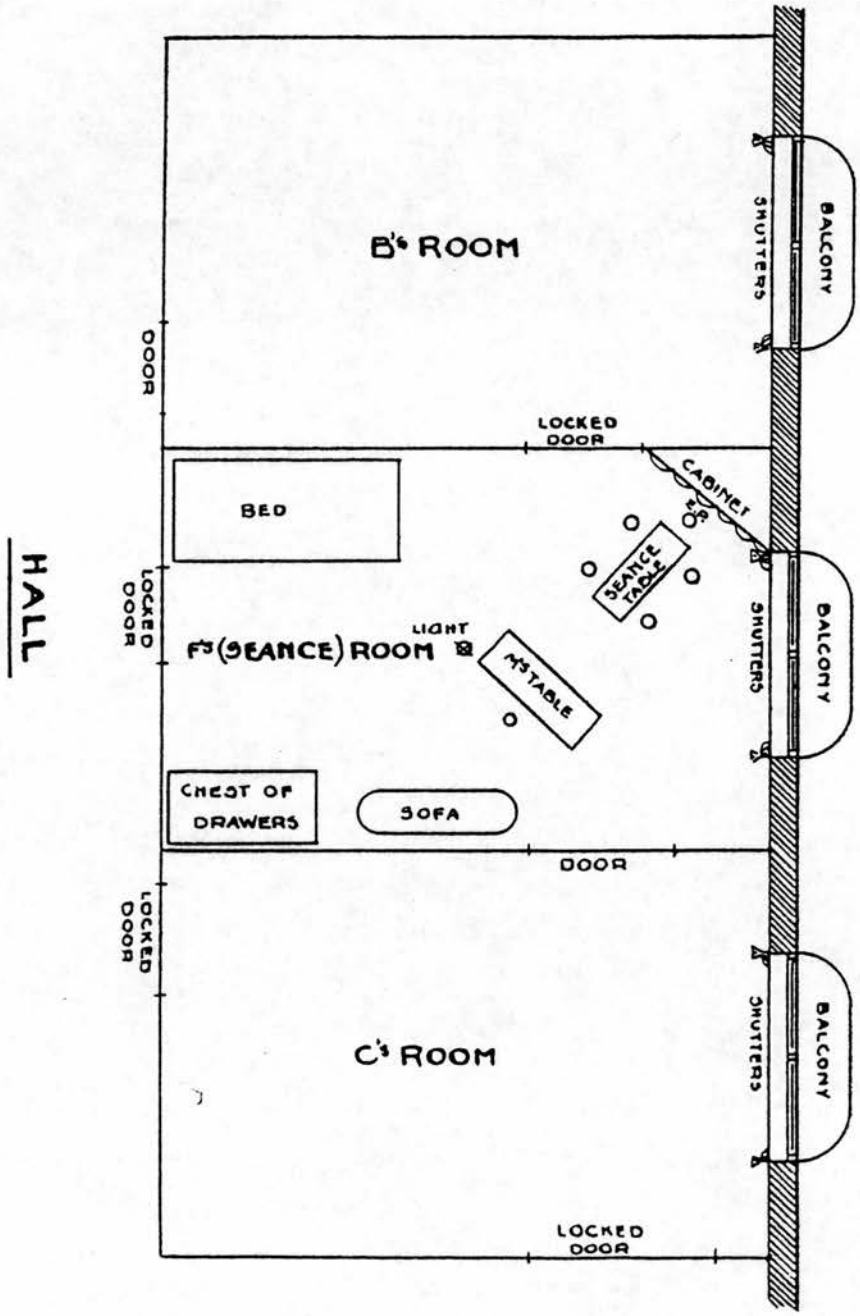


Figure 7.1: The floor plan, as presented in the Feilding Report (Feilding, Baggally and Carrington, 1909).

Classification of Phenomena.	Control by 2 Members of S.P.R. Committee.	Control by 1 Member of S.P.R. Committee and 1 Non-member.	Control by 2 Non-members.	Totals.
Complete levitations of séance table,	34	8	3	45
Bulgings and movements of curtains,	59	32	2	93
[1] Occasions on which bulges of medium's dress occurred,	4	2	—	6
Movements of objects within the cabinet,	28	4	2	34
Movements of objects (other than séance table) outside the cabinet,	41	3	7	51
Objects brought out of the cabinet,	5	8	1	14
Plucking of the guitar string,	1	—	—	1
[2] Occasions on which sounds were heard in the cabinet (including sounds on tambourine, guitar, etc.),	14	7	—	21
[2] Occasions on which sounds were heard outside the cabinet, such as knocks and scrapings on door, raps on backs of chairs, etc.,	6	8	—	14
Loud sounds on séance table, synchronising with movements of medium's head or foot,	7	—	—	7
Touches by some object (hand ?) through curtain,	20	6	2	28
Touches by some object (hand ?) outside the cabinet,	22	21	1	44
Occasions on which touches by some object (hand ?) were felt inside the cabinet,	—	1	—	1
Grasps and touches by a tangible hand through curtain,	19	7	—	26
Grasps and touches by a tangible hand (not visible) outside the cabinet,	13	22	—	35
Hands seen which issued from and retired into the cabinet,	3	2	—	5
Objects seen of an indefinable nature which issued from and retired into the cabinet,	16	9	3	28
Objects seen of an indefinable nature in the cabinet,	1	—	—	1
Objects seen resembling heads which issued from and retired into the cabinet,	5	1	—	6
Lights seen in the cabinet, on the curtain, and on medium's lap,	5	2	—	7
Untying of knots,	—	1	—	1
Occasions on which currents of air issued from medium's head,	2	—	—	2
	305	144	21	470

[1] These do not give the actual number of bulges but the occasions on which they occurred. Several bulges in succession are put down as one phenomenon.

[2] The actual number of sounds is not given but the occasions on which they were heard. A series of thumps on the tambourine struck in succession are put down as one phenomenon, etc.

Figure 7.2: A summary table of phenomena, as presented in the Feilding Report (Feilding, Baggally and Carrington, 1909).

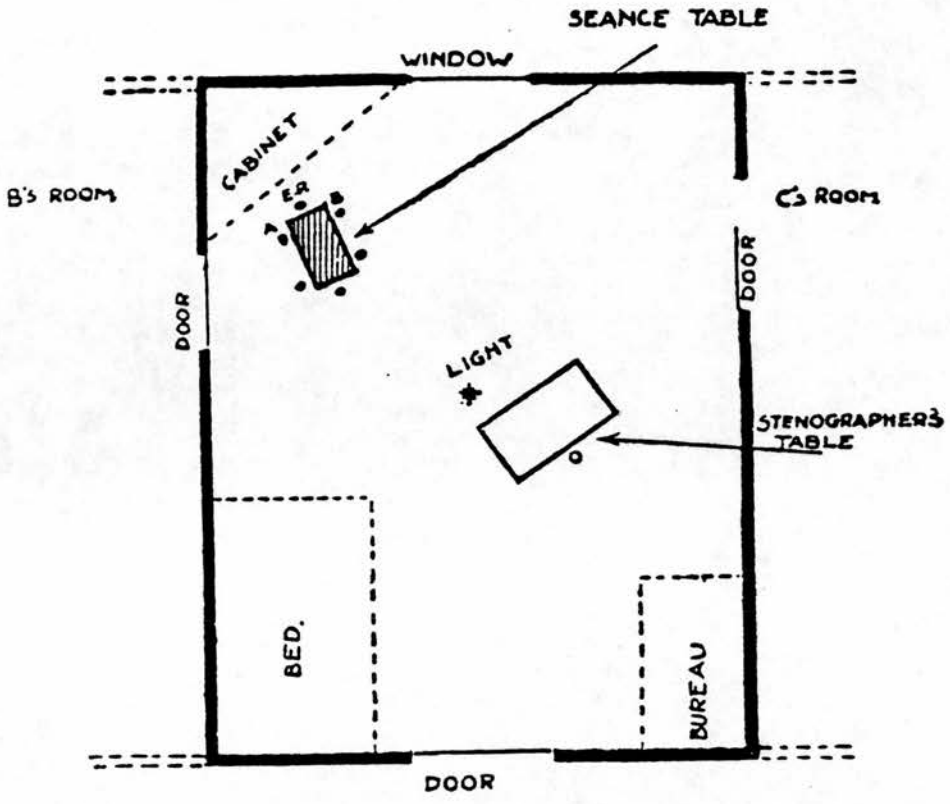


Figure 7.3: The floor plan, as presented in Carrington (1909a).

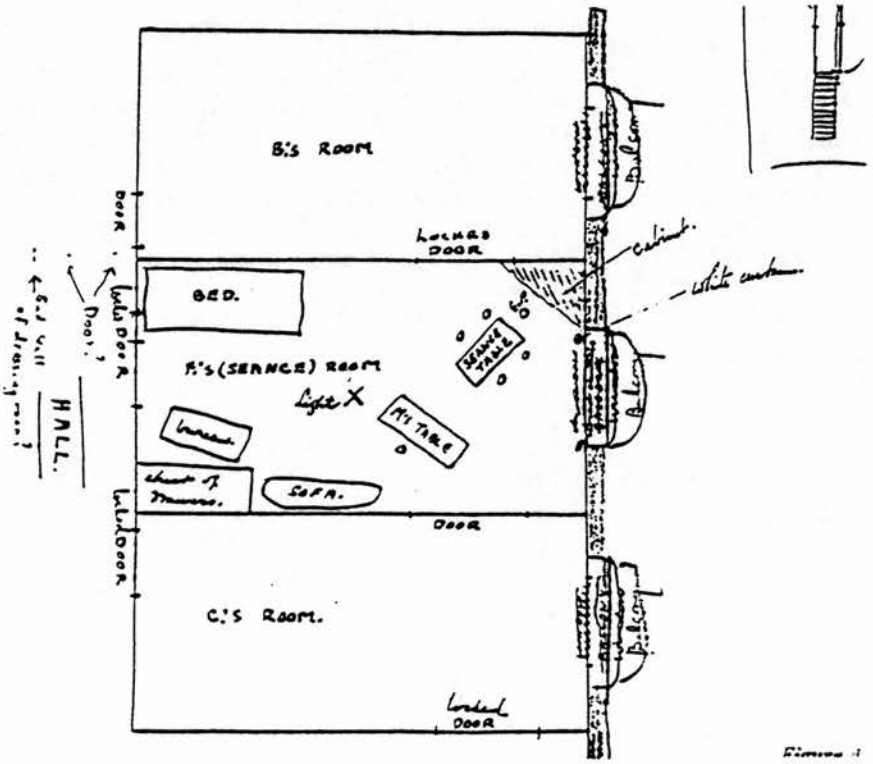
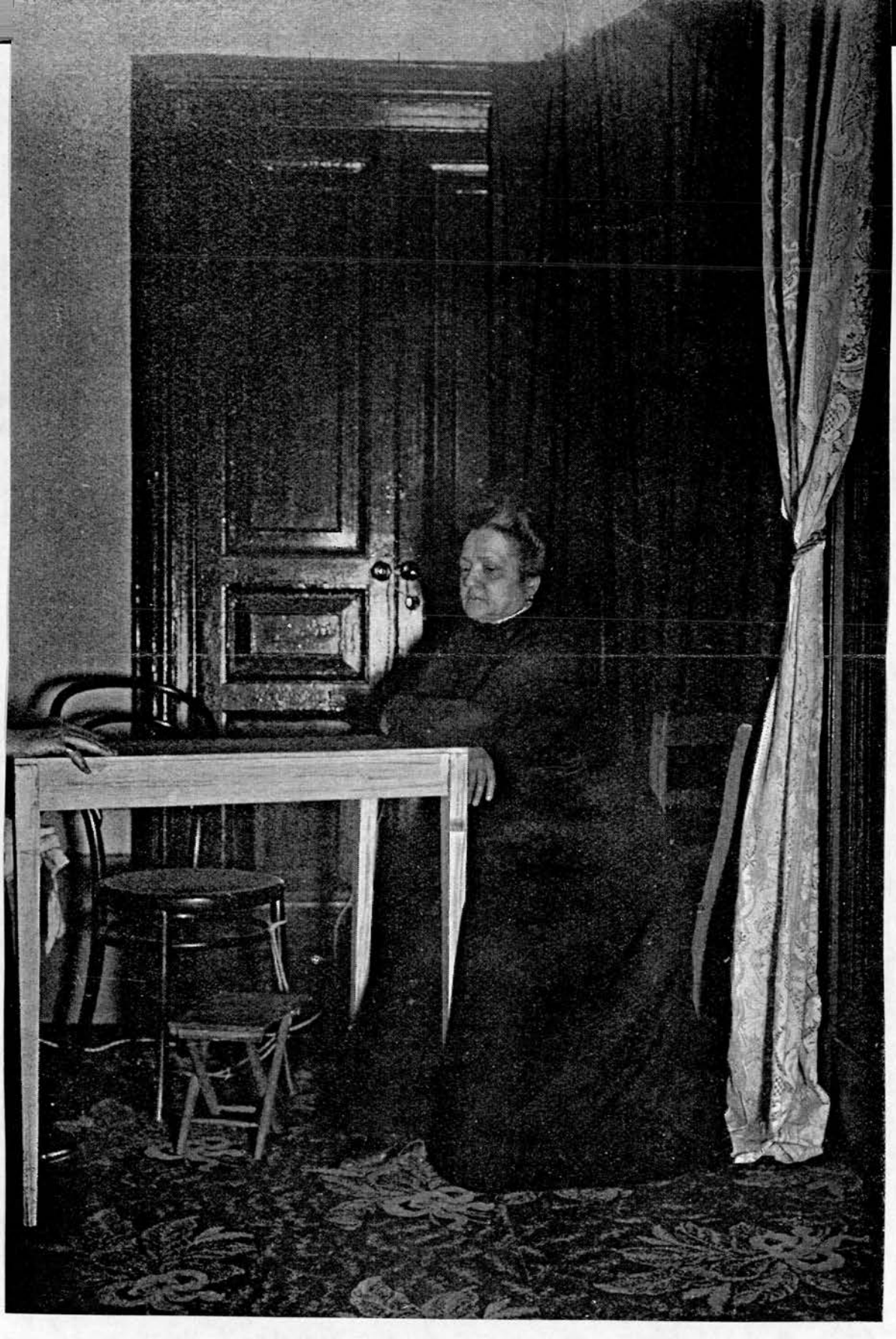


Figure 7.4: The floor plan, as housed in the SPR archives.



Photograph 7.1: A photograph of Palladino, and the corner of the seance room (Feilding, Baggally and Carrington, 1909).

CHAPTER 8

SUMMARY AND CONCLUSION

8.1 INTRODUCTION

The first part of this thesis outlined a cognitive proto-model which helped organise the stratagems used by conjurors, and pseudo-psychics, to fabricate macro-PK. A small part of this model was then subjected to experimental testing. The proto-model was then used to create methodological recommendations for researchers engaged in the assessment of individuals claiming macro-PK ability. Finally, these recommendations were illustrated by two detailed assessments of such individuals.

This section will briefly outline the implications of the work presented in this thesis and how future research could build upon it.

8.2 THE FURTHER CONSTRUCTION, AND EVALUATION, OF DECEPTION MODELLING

Chapters two, and three, outlined a proto-model which accounted for the stratagems used by conjurors, and pseudo-psychics, to fabricate macro-PK. Chapter two first discussed how an observer may frame a demonstration as either a magic trick, a pseudo-psychic hoax or a display of genuine macro-PK, with chapter three showing how a pseudo-psychic may deceive an observer into misframing a fake demonstration as genuine by manipulating the cognitive, motivational and social processes involved in the framing process. Chapter two then outlined how an observer develops counter-explanations for a demonstration, noting how such hypotheses depended upon the observer's claim schemata, causal schemata and perceived adequacy of prior counter-explanations. Chapter three outlined how both magicians, and pseudo-psychics, may exploit these factors to deceive an observer into not forming the correct counter-explanation. Chapter three also noted that even if the correct hypothesis is developed, the observer may be deceived into rejecting it as implausible. Chapter two also discussed how an observer may develop controls designed to counter the trickery

predicted by the various counter-explanations. Chapter three presented the ways in which an observer can be deceived into applying controls which are ineffective and/or can be removed. Chapter two outlined how the assessment process can be influenced by consideration of the conditions apparently needed to elicit psi. Chapter three outlined how a fake claimant may, during an active analysis, manipulate these conditions in order to be able to better deceive the observer. In a retrospective analysis, such manipulation can persuade an observer to reject an unsuccessful demonstration (i.e., one at which fake macro-PK could not be performed) as non-evidential. Finally, chapter two noted how an observer assesses the running, and outcome, of a demonstration. Chapter three noted how a fake claimant may be able to exploit the running of a study, and 'explain away' evidence of fraud which might be uncovered during, or after, a demonstration.

Chapter four then described one pilot study, and two formal experiments, concerned with the effect that observers' belief in psi has on the observation, and recall, of pseudo-psychic demonstrations. In all three studies, Ss were first shown a videotape containing pseudo-psychic trickery, and then asked to rate the 'paranormal' content of the videotape. In the pilot study and second experiment, Ss were then asked to write down any explanations (either 'normal' or 'paranormal') which they believed might account for the demonstrations. In all three studies, all Ss were then asked to complete a set of recall questions. Ss were then told that the videotape contained magic tricks, and asked to complete a second set of recall questions. The recall questions referred to information that was either 'important' or 'unimportant' to the methodology of the trickery. Five findings emerged. First, Goats rated the pseudo-psychic demonstrations as less paranormal than Sheep. Second, Goats tended to be better than Sheep at solving the pseudo-psychic trickery used in these demonstrations. Third, the first recall period there was a tendency for Goats to recall more 'important', but not more 'unimportant', information than Sheep. Fourth, this differential recall only occurred when a problem solving task was inserted between the initial observation of the videotape, and the first recall period. Fifth, this differential recall still appeared to be present in the second recall period, despite all of the Ss now

knowing that the videotape contained trickery.

Future research could build upon this work in a number of ways.

First, the proto-model could be elaborated upon, such that it accounts for the fabrication of ESP, as well as macro-PK. Given the ease with which many of the recommendations, derived from the model, were used to assess the ESP claim of SORRAT (see chapter six), this extension may not be especially problematic. However, it should be noted that the SORRAT claim was quite idiosyncratic, having features more common to many macro-PK, and opposed to ESP, claims.

Second, the thesis presented a general overview of the model. Future work could build upon this structure by elaborating on various sections of the model. Such elaboration could incorporate other areas of both cognitive, and social, psychological research. For example, section 3.3.2.2 noted how an observers recall of a pseudo-psychic demonstration may be biased by the use of 'verbal recapping'. The effect that postevent verbal information can have on recall has been examined by researchers interested in eyewitness testimony (e.g., Loftus, 1975, Loftus & Palmer, 1974, Loftus, Miller & Burns, 1978). Wells & Turtle (1987) noted this research has identified many factors which influence the extent to which misinformation is incorporated into eyewitness reports. For example, Loftus at al. (1978) noted that postevent information has a greater impact on observer's reports if it is administered at a later time, rather than immediately following the original event. Also, Dristas & Hamilton (1977) demonstrated that observer's recall for peripheral details of an event are more susceptible to the effects of misinformation than are memories for more salient components of the event. These findings could be incorporated into the proto-model to help understand when, and how, fake claimants can distort an observer's reconstruction of ostensible macro-PK by presenting misinformation in this way. Section 3.3.2.2 noted how an observer's recall of a pseudo-psychic demonstration may be biased by the use of 'in transit' actions. This aspect of the model could be expanded upon by employing, and building upon, previous work on

the recall of goal directed actions. For example, Lichtenstein & Brewer (1980) asked Ss to watch, and then recall, a videotape which showed an actor carrying out two everyday tasks (i.e., writing a letter, and setting up a projector). All of the actor's actions had previously been segmented, and classified as either 'goal', or 'non-goal' directed. For example, in one sequence, the actor opened a desk drawer, removed a pen, took the cap off of the pen and signed a letter. Here, the first three actions were classified as 'non-goal' directed, as they were performed in order to achieve the fourth ('goal' directed) action. Lichtenstein & Brewer discovered that Ss recall for 'goal' directed actions was significantly better then their recall of 'non-goal' directed actions. These findings, along with the theory suggested by Lichtenstein & Brewer to account for the result, could be used to elaborate upon how fake claimants can use 'in transit' actions to bias an observer's recall. Other parts of the model could benefit from findings, and theory, within social psychology. For example, a great deal of research has attempted to identify the psychological, and physical, attributes which help a communicator be an effective persuader (see, e.g., the seminal work of Hovland, Janis & Kelley, 1953). This work could be used to elaborate on section 2.2.2.3, which was concerned with the way in which a pseudo-psychic used interpersonal influence to coerce an observer into misframing a fake demonstration as genuine. In addition, the model could be elaborated upon by including novel types of bias suggested by this type of psychological research. For example, Lichtenstein & Brewer (1980) also discovered that Ss often altered the sequence of events during recall, such that they did not adhere to the order in which they occurred on the videotape (e.g., the actor removing an envelope from a draw before signing the letter), but rather the order in which they usually occur in everyday situations (e.g., the actor removing an envelope from a draw after signing the letter). Other sections of the model may not have been the subject of previous research and, if this is the case, work into these areas may have to be more exploratory.

Third, only one small part of the proto-model underwent any type of formal testing (see chapter four). The remainder of the model remains speculative. Future work could redress this balance by testing additional sections of the model, and modifying

the model on the basis of the results of such testing. As noted in chapter four, some of this additional testing could utilise the methodology developed in that chapter, as it provides researchers with a flexible, straightforward, and easy to apply, way of accurately assessing various issues involved in the recall of complex material. This methodology could be used to examine the observation, and recall, of other types of ostensible psychic events (e.g., psychic surgery), and by different types of observers (e.g., parapsychologists who have observed a large number of ostensibly psychic demonstrations, magicians). Also, such studies could ~~be~~ compare the recall of 'live', as opposed to videotaped, demonstrations. The testing, and development, of other parts of the model may require methods associated more with social psychology. For example, many studies have examined the way in which the presence of others can influence an observer's perception of a stimuli (see, e.g., Sherif's [1936] now classic studies concerned with the so-called 'autokinetic' effect). Similar studies could compare observers' perception/recall of an ostensible macro-PK demonstration both with, and without, the influence of other individuals. For example, such studies could examine how an observer's perception/recall can be modified by being in the presence of others who either strongly believe, or disbelieve, the validity of a supposedly psychic demonstration (as would be the case, for example, when the observer attends a seance, and is surrounded by a number of other sitters).

Such elaboration, and testing, may have advantages for both parapsychology, and cognitive psychology. For parapsychologists, a more detailed understanding of the stratagems of psychic fraud may help develop further recommendations for the assessment of psychic claimants (see section 8.3 below). For cognitive psychology, research into certain sections of the model may reveal novel types of bias and, like the study of optical illusions (e.g. Coren & Girgus, 1978), and judgements under uncertainty (Kahneman, Slovic & Tversky, 1982), provide important new insight into the weaknesses of human information processing. Also, the further analysis of psychic fraud may allow cognitive psychologists to undertake research into novel areas of enquiry which are recognised as important but, up to this point in time, have proved problematic to investigate. For example, Norman (1980), in his discussion

of new directions which should be taken by cognitive psychologists, lists the investigation of belief systems as one of 'a core group of issues along which we must proceed if our field is to make substantive progress. Clearly, an examination of psychic fraud may prove helpful to such an endeavour, given that pseudo-psychics frequently manipulate, and exploit, an observer's belief system. Finally, various writers (e.g., Rumelhart, 1980, Thorndyke & Yekovich, 1980), have noted that schema theories are often phrased in very general terms. This, in turn, makes the formulation, and testing, of specific hypotheses problematic. To help overcome this problem, Thorndyke (1984) has recommended that theorists apply schema theory to 'real world' problem areas involving cognition. The application of schema theory to the study of conjuring, and psychic fraud, could further help develop, and sharpen, the schema concept for use within cognitive psychology.

Fourth, the methodology used in this thesis to model the stratagems of conjuring, and psychic fraud, could be applied to help understand other areas of human deception. These areas could include: military operations, confidence games, corporate fraud, white collar fraud, scientific fraud, gambling scams, hoaxing, and deception within the intelligence and security services. The modelling of these types of deception may benefit from, and have relevance to, parapsychology. For example, further understanding of experimenter fraud within mainstream science (see Broad & Wade, 1982) may be aided by the study of examples within parapsychology (e.g. the Levy exposure [see, e.g., Rogo, 1985]), and the lessons learnt may minimise the likelihood of parapsychologists successfully engaging in such behaviour, or being unfairly accused of so doing.

Finally, as noted in the introduction of this thesis, some writers have postulated that it is possible to model the underlying principles of human deception. The stratagems of conjuring, and psychic fraud, identified in this thesis, may help in the construction of this general theory of deception. Indeed, there is reason to be optimistic about such a theory, given that there is a certain amount of overlap between the stratagems of conjuring and psychic fraud described in this thesis, and the principles of deception

already identified in the two other areas of deception which have received most attention from theorists, namely: military deception and confidence games. For example, in the same way that pseudo-psychics deceive observers into misframing a faked psychic demonstration as genuine (see section 3.2), so confidence artists ensure that their 'marks'[99] misframe a scam as a genuine money making scheme (see, e.g., Hankiss, 1980). Likewise, military deception planners also wish their targets to misframe a false manoeuvre as a genuine military operation (see, e.g., Daniel & Herbig, 1982). Further, in agreement with section 3.2, such mis-framing is achieved by the exploitation of motivational, cognitive and social factors. Hankiss notes that all con games involve some form of 'bait'[100] which acts to motivate the mark into wanting to believe the scheme genuine. Likewise, when discussing the creation of deceptive military operations, Moose (1982) advises planners to 'stimulate actions on the part of the target that are congruent with the target's goals', thus increasing the likelihood of the target wanting to believe the operation genuine. For example, a military planner may be aware that the enemy wishes to take control of a certain bridge. If this is the case, the planner may purposely invest, but conceal, a large amount of resources defending this bridge. Such concealment exploits the enemy's goals by encouraging them to attack the bridge with insufficient force. Hankiss has described the various social stratagems which cause a mark to trust the con man. For example, Hankiss notes how the skilled con artist may select marks who would not wish to voice distrust of another individual, in part, because they would find it socially embarrassing to do so[101]. Also, both confidence artists, and military deception planners, try to make their trickery seem as plausible as possible. Thus, Leff (1976) has noted how con men construct plausible scams by ensuring that both con man, and mark, appear to need each other for either of them to profit from the

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[99]The term 'mark' refers to the victim, or intended victim, of a con (see Maurer, 1974, p. 281).

[100]The 'bait' is the sum of money which the mark apparently stands to gain if he becomes involved in the confidence game.

[101]Hankiss (1980, p. 110) refers to this as the 'sensitive plant syndrome'.

scheme. Also, many writers on military deception note that most successful deceptions appear, to the enemy, to be plausible because they reenforce the enemy's predispositions (see, e.g., Daniel & Herbig, 1982, Handel, 1987). For example, towards the end of WWII, the German High Command believed that the most plausible place for an Allied attack was Pas de Calais. The Allies exploited this belief by mounting OPERATION FORTITUDE, which provided misinformation supporting such an attack, and, at the same time, concealed the locations of the actual invasion (see Dewar, 1989). Also, section 3.4 noted that a fake claimant may deceive an observer into rejecting the correct counter-explanation as implausible by incorrectly estimating the claimant's fraud capability, or rejecting the hypothesis because it seemed too obvious. Both of these stratagems are commonly used by military deceivers. For example, Daniel & Herbig (1982) note that some planners were manipulated into erroneously rejecting the notion of an enemy carrying out a certain action, because they were deceived into believing that their opponents did not have the capability to mount such an operation. Also, Dewar (1989) notes how the 'double bluff' has been used during some military campaigns. Section 3.4. also noted the importance of fake claimants being able to adapt their trickery to changing circumstances, especially on the basis of feedback from the observer. Again, this stratagem has already been identified in both military deceptions, and confidence games. For example, Daniel and Herbig (1982) note the importance of obtaining feedback relating to the success of an ongoing military deception, and further note that one characteristic of the most effective deceptions is their ability to adapt to changing circumstances. When discussing confidence games, Hankiss describes a similar attribute, noting:

> An able con artist almost immediately ascertains the kind of role a victim will be attracted to (likes being patronised or giving orders, is naive or a know-it-all, etc.), and the con artist adopts the complementary role with all its trappings, both in appearance and behaviour. (p. 111).

Section 3.6 noted how a pseudo-psychic may have an 'out' to account for why he/she failed to produce genuine psychic phenomena during a demonstration. Likewise, con men have a number of 'outs' to account for why an apparent money making scheme

has lost the mark an (often considerable) amount of money. The use of these outs are referred to as 'cooling off' the mark (Goffman, 1952, Maurer, 1974). For example, the con man might inform the mark he has a good tip for a horse race, telling him to place his money on a certain horse. The mark then bets that horse to win and, if it comes either second or third, the con man states that there was a misunderstanding concerning the term 'place'[102]. As illustrated by this, albeit brief, review, there does appear to be a certain amount of overlap between the stratagems of conjuring and psychic fraud outlined in this thesis, and the principles of deception already identified within military deception and confidence games. Such an overlap implies that a general theory of deception may be possible, and appears to be a promising area for future research.

8.3 THE FURTHER DEVELOPMENT, AND APPLICATION, OF METHODOLOGICAL RECOMMENDATIONS

Chapter five outlined many recommendations for researchers wishing to investigate individuals claiming macro-PK ability. Chapter six then illustrated how these recommendations could be used during an active investigation, describing a recent assessment of psychic claims made by the SORRAT. Chapter seven then illustrated how the recommendations could be used to analyze a past investigation, describing a reassessment of the 1908 Naples investigation into Eusapia Palladino.

Future work in this area could take a number of directions.

First, the assessment of SORRAT demonstrated that the recommendations could also help the testing, and reporting, of present day claimants. Parapsychologists could employ, and expand upon, these recommendations when assessing present day claimants. In addition, the recommendations could be used by a variety of investigators interested in assessing psychic claimants operating in a diverse range of 'real world' settings (e.g., faith healers, physical mediums, and cult leaders who

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[102]In British horse racing parlance, the term 'place' refers to a type of bet which pays out if the horse comes either first, second or third.

claim macro-PK ability).

Second, future research could use the recommendations to reassess other well documented examples of ostensible macro-PK which have apparently occurred in the past. The usefulness of such archival research need not be confined to evaluating the validity of psychic ability. Instead, the methodology of such investigations can be studied, in order that present day researchers can learn from the mistakes made, and knowledge possessed, by their predecessors.

Finally, the recommendations presented in chapter five were more conceptual than pragmatic. Thus the chapter identified general suggestions to minimise subject fraud, as opposed to describing detailed procedures by which these suggestions could be implemented. Future research could concentrate on constructing more specific procedures, and methods, by which with these general ideas can be executed. In addition, the recommendations required researchers to have a relatively large amount of control over the running of their studies, and thus applied more to laboratory, as opposed to field, investigations. Future research could concentrate on developing analogous recommendations for the testing of psychic claimants in field settings. Finally, the recommendations could be disseminated through the parapsychological community, perhaps in the form of a training manual, or expert system (see Morris, 1986b). Such a manual (based upon the work presented in chapter five) is currently being produced by the author, jointly funded by the John Bjorkhem Memorial Fund and the Koestler Chair of Parapsychology.

APPENDIX A

Literature search within the conjuring, and pseudo-psychic, communities (Chapter one).

Introduction

A large amount of literature, relating to the stratagems of conjuring and psychic fraud have been produced by, and for, magicians and pseudo-psychics. This information often takes the form of specialised books, pamphlets, and magazines, which are intended for relatively small groups of potential deceivers. This literature is, for the most part, not well organised and could not be searched in a systematic manner. However, the following searches were undertaken.

Books

A number of authors have produced bibliographies of the magic, and pseudo-psychic, literature. Gill (1976) contains information on many of the more well known works on conjuring, presenting a brief overview of each title mentioned. Weibel (1980) has compiled a bibliography of articles relating specifically to conjuring and psychology. More recently, Coleman (1987) has presented a reference guide to various aspects of conjuring, including the psychology of conjuring. Finally, Whaley (1989) has produced a massive two volume work which details publications which have used various words of magic jargon. All of these works were searched for relevant literature. In addition, the catalogues, produced by various magic, and pseudo-psychic, book dealers were searched. These included publications by; Magic Books by Post, The Supreme Magic Company, Goodliffe Publications Ltd, Martin Breese, Lee Jacobs, and Jeff Busby.

Periodicals

Alfredson & Dailey (1986) have noted that there have been approximately 1,250 magic, and pseudo-psychic, periodicals published within the period 1791-1983. Many of the articles (i.e. up to, and including, 1967) contained in these publications have been catalogued, by subject, in 'The Master Index to Magic In Print' (Potter &

Hades, 1967). In addition, many individual magazines (namely, Abracadabra, The Magic Circular, Invocation, Seance, Magik) have produced subject indexes of their own articles. Both the Potter Index, and individual magazine indexes, were searched for relevant material.

Additional searches

In addition to the above sources, I also wrote a Guest Editorial for the weekly magic magazine Abracadabra (number 2254) asking for individuals, interested in the psychology of magic and psychic fraud, to contact me. I also lectured on the relevance of psychology to parapsychology, and conjuring, at the Magic Castle, Hollywood. Finally, I corresponded with, and/or interviewed, a number of magicians, and pseudo-psychics, who were knowledgable in this field. These individuals included; Richard Weibel, David Berglas, Malcolm Davison, Sam Sharpe, Max Maven, T A Waters, Roy Scott, and Charles Cameron.

Obtaining references

Some of the references were located via the Edinburgh University Inter-Library Loans Service, the National Library of Scotland, the Edinburgh Public Library and the British Library. Other literature was obtained through The Magic Castle Library, the Harry Price Library and the private libraries of Rex Cooper, Roy Scott, Dan Mayers, Eddie Dawes, and Nikunj Somia.

APPENDIX B

Belief in the Paranormal Questionnaire (BPQ)

The six questions of the 'Belief in the Paranormal Questionnaire' (BPQ) are reproduced below.

1) Do you think that some people are able to gain, by paranormal means, access to information being thought of by others?

2) Do you think that some people are able to gain, by paranormal means, access to information that nobody else is aware of at the time (e.g. the order of a shuffled deck of cards)?

3) Do you think that some people can, by paranormal means, know what is going to happen in the future?

4) Do you think that some people can influence a frequently occurring event (e.g. a number of rolls of dice) such the outcome of that event deviates away from chance (e.g. the dice show more or less 'sixes' than would be predicted by chance alone)?

5) Do you think that some people can, just by mental effort, apply a noticeable force to an object?

6) Do you think that some people can, just by mental effort, alter the physical characteristics of the material from which an object is made?

Ss responded to each of the questions on a five point scale, depending on the degree to which they felt the answer to be yes or no. Before the above study, the questionnaire was run on 122 Ss and the inter-question correlations shown in Table A.1.

Table A.1: Correlation matrix for questions on the 'Belief in the Paranormal Questionnaire' (N=122).

Question Number (Type)	1 (Telepathy)	2 (Clairvoyance)	3 (Precognition)	4 (Micro-PK)	5 (Macro-PK)	6 (Macro-PK)
1	1					
2	.62	1				
3	.22	.21	1			
4	.47	.50	.23	1		
5	.48	.55	.22	.41	1	
6	.46	.53	.19	.44	.73	1

A Pearson Product Moment Correlation Coefficient revealed all interactions significant at $p < 0.05$.

APPENDIX C

A brief description of pseudo-psychic demonstrations used in Pilot Study 1 and Experiment 1 (Chapter Four)

Key bending

In the first demonstration, the magician chose two items from a pile of keys. The interviewer was asked to concentrate on bending the keys. After a short period the keys remained unbent. The magician picked up one of the keys and apparently placed it into the interviewer's hand. After another short period the key was removed from his hand and shown to be bent.

Divination of ESP cards

In the second demonstration, the interviewer mixed up some ESP cards. The magician placed the cards under the table, and then returned them to the interviewer. The interviewer was then instructed to hold the cards under the table and cut them as many times as he liked. The magician then incorrectly guessed the first card and correctly divined the following three cards.

Fork bending/breaking

In the third demonstration, both the magician and interviewer chose one fork each from a pile of cutlery. One of the forks was returned to the pile of cutlery. The magician carefully stroked the neck of the remaining fork, whereupon it started to bend, and eventually broke.

APPENDIX D

Marking procedure for the problem solving task used in Pilot Study 1 (Chapter Four)

One mark was awarded for each of the 'main principles' explicitly stated in Ss protocols, an additional half-mark was awarded for each further detail mentioned.

Key bending

Main Principle

Magician switched the keys

Details

Magician may have already had another pre-bent key.

The pre-bent key rested on the magicians lap.

Magician chose the key from the pile himself.

The magician switched keys as he apparently placed the key into the interviewers hand.

Divination of ESP cards

Main Principle

The magician knew the order of the cards.

Details

The magician had another pack in a prearranged order.

The prearranged pack rested in the magicians lap.

The magician switched packs under the table.

The interviewers cutting of the cards did not disturb the order of the cards.

The magician needed to see the top card in order to divine the others.

Fork bending/breaking

Main Principle

A prepared fork

Details

The magician had prestressed a fork before the demonstration.

The prestressed fork was hidden under the pad on the table.

The magician loaded the prestressed fork onto the pile of cutlery when he move the pad.

The magician chose which fork should be used in the demonstration.

The magician handled the fork as it bent and broke.

APPENDIX E

Recall questions used in Pilot Study 1 and Experiment 1 (Chapter Four)

'I' denotes an 'important' question.

'U' denotes an 'unimportant' question.

First Set

1) Key bending

a) Three keys were initially chosen from the large pile of keys. (U).

b) Nick Dowdes chose the key that was eventually bent. (I).

c) When being touched by Nick Dowdes during this demonstration, the chosen key was always in view on the video tape. (I).

d) After the demonstration, the key was placed aside by Nick Dowdes. (U).

2) Divination of ESP Cards

a) Up to this demonstration, the ESP cards were always in view on the video tape. (U).

b) When being touched by Nick Dowdes, the ESP cards were always in view on the video tape. (I).

c) Nick Dowdes incorrectly guessed the first of the ESP cards. (I).

d) After the demonstration, the cards were held onto by the interviewer. (U).

3) The broken fork

a) The cutlery was touched by Nick Dowdes before the fork demonstration began. (I).

b) At the start of the demonstration, three forks were initially chosen from the pile of cutlery. (U).

c) Nick Dowdes returned the unbent cutlery to the pile. (U).

d) Whilst initially bending, the fork was partly held by both Nick Dowdes and the interviewer. (I).

Second set

1) Key bending

a) During the whole of this demonstration, the remaining pile of keys were always in view on the videotape. (U).

b) Nick Dowdes picked up the chosen key and placed it into the interviewers hand. (I).

c) The chosen key was definitely bent when the interviewer opened his hand. (U).

d) The chosen key continued to bend after it was removed from the interviewers hand. (I).

2) Divination of ESP cards.

a) After the ESP cards were initially removed from the box and displayed, the cards were shuffled by the interviewer. (U).

b) The interviewer was then instructed by Nick Dowdes to hold the cards under the table and again thoroughly mix them up. (I).

c) Nick Dowdes saw the face of each card after attempting to guess the geometrical design on that face. (I).

d) After Nick Dowdes had made his guesses the faces of the rest of the cards were not shown on the video tape. (U).

3) Bending the fork

a) The interviewer chose the fork that was eventually bent. (I).

b) The pile of cutlery was touched by Nick Dowdes during the fork demonstration. (U).

c) The region in which the fork broke was previously being held by Nick Dowdes. (I).

d) After being bent & broken, the parts of the fork were not touched by the interviewer. (U).

APPENDIX F

A description of pseudo-ESP demonstrations used in Experiment 2 (Chapter Four)

Demonstration 1

A deck of cards was shuffled by the magician. The magician instructed the interviewer to cut the cards, and the cut was 'marked' by the magician placing the top half of the deck at right angles to the bottom half. The magician picked up a writing pad and tore off two sheets of paper. The interviewer looked at the 'selected' card, and secretly noted its value on his sheet of paper. The magician then picked up his sheet of paper and noted the value of a card. When the interviewer, and magician, compared papers it was seen that the same card had been written on each.

Demonstration 2

A deck of cards was shuffled by the interviewer. The interviewer cut the cards and 'marked' the cut in the manner described above. The magician then gave the pad to the interviewer, and asked him to write down the value of the selected card. Once the interviewer had done this, the magician asked him to remove this piece of paper from the pad and place it out of sight. The magician then took the pad, removed a piece of paper, and correctly noted down the value of the selected card.

APPENDIX G

Marking procedure for the problem solving task used in Experiment 2 (Chapter Four)

One mark was awarded for each of the 'main principles' explicitly stated in Ss protocols, an additional half-mark was awarded for each further detail mentioned.

Demonstration 1

Main principle

The magician 'forced' the interviewer to take a certain card.

Details

The magician shuffled the deck, and looked at the top card.

The magician incorrectly 'marked' the cut by placing the bottom half of the deck on top of the top half of the deck.

Demonstration 2

Main Principle

The magician could see the impression left on the pad by the interviewer.

Details

The interviewer leant on the pad to draw his design.

The magician looked at the pad after the interviewer had drawn his design.

APPENDIX H

Recall questions used in Experiment 2 (Chapter Four)

'I' denotes 'important' questions.

'U' denotes 'unimportant' questions.

'PI' denotes 'pseudo-important' questions.

First Set

1) Key bending

a) In one of the four video clips, Nick Dowdes placed a writing pad on the pile of keys. (PI).

b) The interviewer initially chose one of the two keys taken from the pile of keys on the table. (U).

c) During this demonstration, both of Nick Dowdes hands were always fully visible on the videotape. (I).

2) First telepathy demonstration

(target card; the 2 of clubs)

a) At the start of the demonstration, the interviewer picked the cards up off of the table. (U).

b) Nick Dowdes did not touch the cards directly after the interviewer had cut them into two piles. (I).

c) Whilst drawing his design, the interviewer held both the piece of paper and writing pad under the table. (PI).

3) Fork bending/breaking

a) At one point during this demonstration, the fork which eventually bent was fully obscured (i.e not visible) on the videotape. (PI).

b) Nick Dowdes was touching the fork when claiming that it was bending. (I).

c) Right at the end of the demonstration, Nick Dowdes was left holding the broken pieces of fork. (U).

4) Second telepathy demonstration

(target card; the 8 of diamonds)

a) At the start of the demonstration the interviewer shuffled the deck of cards. (PI).

b) Both of the pieces of paper (on which the interviewer and Nick Dowdes draw their designs) were removed from the writing pad at the same time. (I).

c) During the demonstration, Nick Dowdes moved the cards off of the mat and onto the table. (U).

Second Set

1) Key bending

a) At one point during this demonstration, the key which eventually bent was fully obscured (i.e. not visible) on the video tape. (I).

b) Nick Dowdes was touching the key when claiming that it was bending. (PI).

c) Right at the end of the demonstration, Nick Dowdes was left holding the bent key. (U).

2) First telepathy demonstration

(target card; the 2 of clubs)

a) At the start of the demonstration the interviewer shuffled the deck of cards. (I).

b) Both of the pieces of paper (on which the interviewer and Nick Dowdes draw their designs) were removed from the writing pad at the same time. (PI).

c) During the demonstration, Nick Dowdes moved the cards off of the mat and onto the table. (U).

3) Fork bending/breaking

a) In one of the four video clips, placed a writing pad on the pile of cutlery. (I).

b) The interviewer initially chose one of the two forks taken from the pile of cutlery on the table. (U).

c) During this demonstration, both of Nick Dowdes hands were always fully visible on the videotape. (PI).

4) Second telepathy demonstration

(target card; the 8 of diamonds)

a) At the start of the demonstration, the interviewer picked the cards up off of the table. (U).

b) Nick Dowdes did not touch the cards directly after the interviewer had cut them into two piles. (PI).

c) Whilst drawing his design, the interviewer held both the piece of paper and the writing pad under the table. (I).

APPENDIX I

Experimental Conditions initially sent to the SORRAT (Chapter six)

We (John and myself) will supply a package containing one standard deck of 25 ESP cards, sealed with any materials, and processes, of our choosing.

Before the package is dispatched to you, details of the precise sealing procedure will be recorded (by John and myself), and remain at Edinburgh University.

After sealing the package, we will place a sticker on the outside of it. This sticker will state that, should the package be found, it should not be opened, but mailed directly back to Edinburgh University. The outside of the package will also indicate which way the ESP cards are facing.

This package will then be placed inside an envelope and will be mailed, by registered post, to yourself. Upon receipt of this envelope, you should open the envelope, and check that the outside of the package shows no obvious sign of damage caused in transit. Should the package show any serious signs of damage, or tampering, please return the package to ourselves, whereupon this experiment will be aborted, and, possibly, arrangements made, for a second experiment to begin. If the package shows no such sign of serious damage, you should pass it onto the claimant.

The claimant is free to touch or hold the package in any manner that he feels necessary, but is not to try and open, or interfere, with it's covering, or seals.

The claimant is to complete a 'call sheet' (which will be sent with the package) consisting of twenty five sets of the five ESP symbols, each set corresponding to a position in the ESP deck. The claimant is to circle one of the symbols in each set, indicating the claimants call for the card in that position of the deck. This procedure is designed to eliminate any ambiguity about the identity of each call.

Once the claimant has returned the package, it must be returned to us, by registered mail, along with the call sheet.

The package must be returned, to us, within two months of our posting it to you, otherwise the experiment will be called off. Upon receipt of the package, we may have the package examined (for signs of damage, or tampering) in any way that we feel necessary.

During examination, the package will be opened and a comparison made between the call sheet and the order of the respective ESP deck.

Should any response on the call sheet be missing, or ambiguous, that call will be counted as a miss.

In order for a single call to be considered a 'hit' the call must exactly match the symbol on the face of the card at the relevant position in the deck.

In order that the test be considered successful, the claimant must score 15, or more, direct hits.

Once the results are known, John and I will then prepare a full report, describing, in general terms, the security precautions used in the package, along with the results of the examination/judging procedures. It should be noted that, should the claimant be successful in this experiment (i.e. he manages to produce 15, or more, hits, and the package shows no sign of damage, or tampering), we would include in our report a statement that we are impressed by the results, that we have no ready conventional explanation for the results and that we feel further research is warranted. However, we will not issue any statement to the effect that we believe the claimant to have 'psychic' ability.

After receiving this report you will be asked if you wish to write up the experiment

for either publication, or private circulation. If you decide to write-up the experiment, the above report must be reproduced as part of that write up. The report may not be omitted, paraphrased, or shortened in any manner without written permission from either John, or myself. We reserve the right to both publish, or circulate, a write up of the experiment in whatever manner we feel appropriate, incorporating the full contents of the report.

Both during, and after, the testing, all packaging remains the property of Edinburgh University.

We, the undersigned, fully accept all of the above experimental conditions.

_____ _____

Ed Cox Tom Richards

APPENDIX J

The actual card order, and the two sets of 'entity' calls, for each position in the pilot ESP deck [hits shown in bold] (Chapter six)

Position Number	Actual Symbol	First attempt	Second attempt
1	Circle	Square	Lines
2	Cross	Star	Lines
3	Lines	Star	Circle
4	Lines	Circle	Square
5	Cross	Lines	Square
6	Lines	Cross	Star
7	Lines	Circle	Cross
8	Star	Square	Circle
9	Square	Star	Cross
10	Square	**Square**	**Square**
11	Circle	Star	Lines
12	Star	Cross	Square
13	Star	Cross	**Star**
14	Cross	Circle	Star
15	Square	Circle	Circle
16	Circle	Lines	Cross
17	Circle	Square	Star
18	Cross	Square	Star
19	Square	Circle	Cross
20	Cross	**Cross**	Circle
21	Circle	Star	**Circle**
22	Star	Lines	Square
23	Lines	**Lines**	**Lines**
24	Star	Lines	Cross
25	Square	Blank	Lines

APPENDIX K

A copy of the actual card order, and calls, for each position in the ESP deck used in the formal experiment [hits shown in bold] (Chapter six).

Position Number	Actual Symbol	Called symbol
1	Plus	Square
2	Waves	Plus
3	Waves	**Waves**
4	Square	Waves
5	Star	Plus
6	Circle	Plus
7	Plus	Star
8	Star	**Star**
9	Plus	Square
10	Square	Circle
11	Circle	**Circle**
12	Square	Circle
13	Circle	Square
14	Square	Plus
15	Waves	**Waves**
16	Star	**Star**
17	Square	**Square**
18	Star	Circle
19	Waves	Circle
20	Plus	**Plus**
21	Circle	Star
22	Circle	Star
23	Waves	**Waves**
24	Plus	Waves
25	Star	Square

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Abbreviations

EJP	European Journal of Parapsychology
JASPR	Journal of the American Society for Psychical Research
JSPR	Journal of the Society for Psychical Research
JP	Journal of Parapsychology
PSRP	Proceedings of the Society for Psychical Research

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