

An Investigation into the levels of self-esteem,  
depression and attributional style in individuals  
who experience auditory hallucinations that they  
believe to be malevolent.

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## Abstract

Individuals who experience auditory hallucinations that they believe to be malevolent exhibit moderate levels of depression and high self-esteem on self-report measures. It was hypothesised that these individuals would present a self-serving bias (i.e. a tendency to attribute positive events to themselves) on obvious measures of attributional style such as the Attributional Style Questionnaire. This type of bias has previously been observed in individuals who experience persecutory delusions on obvious measures of attributional style but not the less obvious Pragmatic Inference Task. However, such a bias was not observed. Individuals experiencing auditory hallucinations tended to attribute negative events to themselves on both obvious measures of attributional style and the less obvious Pragmatic Inference Task. They therefore showed a cognitive style resembling that of the control group suffering from depression, as opposed to the normal control group.

The results indicate that individuals who experience auditory hallucinations maintain high self-esteem through a mechanism other than biases in attributional style. The implication being that the mechanism in operation is somewhat different to the one proposed for individuals with persecutory delusions. Possibilities for an alternative mechanism are discussed.

## **INTRODUCTION:**

This piece of research was conducted during a placement in rehabilitation services for individuals with long-term mental health problems. Although it is a piece of experimental research, it was aimed at developing understanding and ideas for cognitive behavioural therapy for individuals who experience auditory hallucinations. In particular the focus is on levels of self-esteem and depression in individuals who hear voices.

The literature below describes how the hypotheses for testing were developed on the basis of studying the symptoms of psychosis as opposed to the syndrome. The ideas were developed from work that has focused mainly on studying levels of self-esteem and depression in individuals who experience persecutory delusions. The literature tentatively proposes that persecutory delusions are a defence against feelings of low self-esteem. The idea that beliefs about hallucinations are often delusional in content is discussed and hypotheses are developed about the levels of self-esteem, depression and attributional style in individuals who have such experiences.

### **The Nature of Schizophrenia:**

The term schizophrenia has been in use for almost one hundred years. It was first outlined by Kraepelin in 1886 (cited in Bentall, 1990a). Since that time there has been considerable controversy amongst theorists as to the exact nature

of the disorder, even to the point of questioning its existence as a disorder at all. Although the definition over the years has changed one of the mostly widely accepted is that provided by the Diagnostic and Statistical Manual, fourth edition (DSM IV) (APA, 1994). DSM IV sets out six diagnostic criteria summarised below.

A. *Characteristic symptoms*: Two or more of the following, each present for a significant portion of time during a period of one month:

- i) delusions
- ii) hallucinations,
- iii) disorganised speech (e.g. frequent derailment or incoherence),
- iv) grossly disorganised or catatonic behaviour,
- v) negative symptoms, i.e., affective flattening, alogia, or avolition.

However, if the delusions are bizarre or the hallucinations consist of a running commentary then only one criterion is required.

B. *Social / occupational dysfunction*: Following the onset of the disturbance, one or more major areas of functioning such as work, interpersonal relations or self care are below the level achieved prior to onset.

C. *Duration*: Continuous signs of disturbance persist for more than six months, including at least one month of characteristic symptoms.

D. *Schizoaffective and Mood Disorder exclusion:* In particular no Major Depressive, Manic or Mixed Episodes have occurred at the same time as the active symptoms.

E. *Substance / general medical condition exclusion.*

F. *Relationship to a Pervasive Developmental Disorder:* If there is a history of a Developmental Disorder then a diagnosis of schizophrenia can only be made if there are prominent hallucinations or delusions.

Despite considerable research over the years, very little progress has been made in understanding the symptoms of schizophrenia. The competing theories are such that researchers like Bentall (1990a) have come to question whether the concept of schizophrenia is a useful scientific concept. He argues that traditional theorists tend to assume a syndrome implies some kind of hidden explanation for that observed. However, he argues that the concept of a syndrome merely implies statistical associations between symptoms and indicates nothing about underlying causes.

It has long been noted that the assignment of individuals to diagnostic categories has often been inconsistent. Brockington, Kendall and Leff (1978), compared the reliability of ten different diagnostic systems. They found very little agreement between the different systems, which calls into question the reliability

of diagnosis depending on the measure used. If the syndrome of schizophrenia has construct validity it should present in the form of a set of symptoms that tend to go together as an identifiable syndrome. As already mentioned it has not been possible to clarify this issue. In addition to this, the predictive validity of the syndrome is relatively poor (Huber, Gross, Schuttler, & Linz, 1980). On the basis of the syndrome of schizophrenia lacking reliability and validity, Bentall emphasises the usefulness of studying the symptoms of psychosis as a way of developing the understanding of psychopathology.

### **Psychotic symptoms and the prevalence of depression and low self-esteem:**

Looking at validity in particular, it has been noted that many of the symptoms that come under the label of schizophrenia are also manifest in individuals with other diagnoses. For example, individuals who are diagnosed as suffering from an affective disorder often experience hallucinations and delusions (Winters & Neale, 1983). In a similar vein, researchers have found symptoms that are not required for a definition of schizophrenia amongst those already diagnosed. Two such symptoms are that of depression and self-esteem. The latter being a well recognised clinical component of depression, with low self-esteem reflecting high levels of depression (Lancet, 1988).

**Self-Esteem:** Rosenberg (1965), defines high self-esteem as follows



the individual respects himself, considers himself worthy, he does not necessarily consider himself better than others, but he definitely does not consider himself worse, he does not feel that he is the ultimate in perfection but, on the contrary, he recognises his limitations and expects to develop and improve (p 25).

Brown, Andrews, Harris, Adler & Bridge (1986), have suggested that low self-esteem is the common pathway of factors causing vulnerability to depression. Low self-esteem is also one of the diagnostic criteria for major depressive disorder as defined by DSM IV.

Silverstone (1991), measured the levels of self-esteem in psychiatric out-patients with a variety of DSM. III-R diagnoses, including depression, anxiety disorders, psychosis, personality disorder and alcohol dependence. He used the Rosenberg Self-esteem Scale (Rosenberg 1965) to show that there were wide variations between different diagnostic groups. As one might predict, those with a diagnosis of depression and those with personality disorders showed the lowest self-esteem. However, all the groups scored more than 'normal' populations suggesting that low self-esteem may be involved in a number of psychiatric conditions, including psychosis.

**Levels of Depression:** Depressive features in individuals with a diagnosis of schizophrenia are well documented (Shanfield, Tucker, & Harrow, 1970) with as many as 25-50% of individuals manifesting depressive features during a psychotic

episode. Barnes, Curson, Liddle & Patel (1989), assessed 194 in-patients suffering from chronic schizophrenia using the Present State Examination (PSE), the Montgomery & Asberg Depression Rating scale (MADRS) and the Beck Depression Inventory (BDI). They found that 13% of their sample were depressed and that these patients were significantly more likely to have serious suicidal thoughts. They note that this is consistent with other findings, suggesting that the suicidal risk is higher in individuals with depressive symptoms. It has been found that between 10% and 25% of individuals diagnosed as suffering from schizophrenia will commit suicide, and that measured incidences of suicidal behaviour have been considered impulsive and unpredictable (Haugland, Craig & Goodman, 1983 cited in Barnes et al., 1989). Of interest, the authors found no association between mood disturbance and dosage of antipsychotic medication which had been postulated as a possible causal factor. However, they did find that those who displayed depressed mood tended to report more auditory hallucinations. They tentatively hypothesised that schizophrenic patients who become depressed are likely to develop auditory hallucinations, which may be more characteristic of psychotic depression than of schizophrenia.

Hustig & Hafner (1990), attempted to monitor more closely the relationship between mood and hallucinations using diary keeping in individuals who experienced persistent auditory hallucinations. Over a three week period their sample of twelve individuals, who met the DSM. III -R criteria for schizophrenia, completed a diary three times daily. Using a five point rating scale they recorded

the nature of their hallucinations, the intensity of their delusional beliefs, their mood and the clarity of their thinking. The authors found that there was a statistically significant relationship between the loudness and intrusiveness of the hallucinations and the intensity of the delusional beliefs. In addition, the more distressing and intrusive the hallucinations the more anxious and depressed the patients. On the basis of their findings Hustig & Hafner concluded that non-pharmacological treatments for persistent auditory hallucinations might benefit from looking at altering the individuals' mood.

### **Explanations for the Prevalence of Depressive Symptoms and Psychosis:**

A number of possibilities exist for explaining the reported levels of depression observed in individuals suffering from psychotic symptoms.

- 1) It could be that what is observed is an independent depression pre-dating the psychotic symptoms or a co-existing phenomena.
- 2) Depression could trigger psychotic events.
- 3) The reported depression could be a bereavement reaction to the loss of life expectations due to psychotic symptoms.
- 4) Psychosis could be a way of avoiding underlying depression, and
- 5) Depression could be a reaction to the distressing nature of psychotic symptoms, and confused with negative symptoms.

The latter two suggestions have been discussed in some detail by a number of authors and will therefore be elaborated upon. In relation to whether

depressive symptoms are the result of psychotic experiences, a number of writers have noted that the negative symptoms of schizophrenia are, in many ways, similar to those of depression (Kavanagh, 1992). These negative symptoms are a constant source of frustration to both clinician and client. They include low motivation, low drive, social withdrawal, emotional blunting, poverty of speech and slowed speech and movement (Kavanagh, 1992) and show little response to antipsychotic medication.

Strauss, Rakfeldt, Harding & Lieberman, (1989) have tried to explore the psychological and social factors in negative symptoms in an attempt to develop further understanding. They suggest two hypotheses regarding these symptoms. Firstly that negative symptoms may arise as a response to extremely difficult psychological and social situations as a kind of coping mechanism. The source of the stress the patient experiences being as follows:

1. Psychological contributors.

- a. The pain of relapse into positive symptoms (which can in themselves be very distressing),
- b. The loss of hope and self-esteem,
- c. The possibility of behaving in an impulsive or bizarre manner,
- d. Problems in finding a new identity as a 'non-patient',
- e. The feeling of guilt for past dysfunction,
- f. The potential threat of entering complex and stressful social situations and

g. Situations where the person is rendered helpless by the disorder, by environmental features or by both.

2. Social contributors.

a. Institutionalisation,

b. The social benefit system,

c. The stigma of schizophrenia.

Strauss et al.'s second hypothesis is that these negative symptoms themselves have a psychological and social impact on the course of the disorder. That is to say that sufferers who are too withdrawn and apathetic cut themselves off from the very sources that provide motivation, hope etc. As a result the problems become like a vicious circle with the individual unable to escape from the symptoms. Hence these hypotheses support the view that depressive - like symptoms are inevitable following a psychotic incident and that they in some way maintain the individuals difficulties.

In contrast, some authors have suggested that psychotic symptoms are the product of underlying depression. Zigler & Glick (1988), propose that paranoia is a coping mechanism for warding off the pain of depression, defending in some way against a loss of self-worth and feelings of shame and guilt. Research by Heilbrun & Bronson (1975), has added support to this notion in finding that paranoid mechanisms are triggered in normal individuals by feelings of inadequacy and low self-esteem. Zigler & Glick hypothesise that persecutory delusions (being the most common form of paranoia) defend against feelings of

inadequacy in two ways. Firstly, they argue that they are a way of projecting responsibility for inadequacy and failure onto an outside world, rather than acknowledging this. Secondly, they argue that in some way they provide the individual with an increased sense of self-importance for example, 'I must be very important because everyone is so interested in me'.

Arieti (1974), has explored the psychodynamics of schizophrenia. In summary, he proposes that psychosis is the process whereby the individual externalises (or projects) some of the psychodynamic conflicts that are unbearable. Such conflicts can affect the individuals self-esteem. He suggests that psychosis starts not only when these feelings are projected to the external world, but also when they become specific and concrete. For example, the individual no longer believes that the whole world is against them, rather that certain individuals are plotting against them. Arieti believes that this projection can be advantageous to the self, in that as unpleasant as it may be to be accused by others, it is not as unpleasant as to accuse oneself. However, because of certain "cognitive transformations" the accusation takes on a slightly different form. Arieti uses the following example to clarify this point:

...the projected feeling of being a failure does not appear as a belief of being accused of being a failure, but of being a spy or a murderer. These accusations seem worse than the original self-accusations, but are more easily projected to others. The patient who believes he is accused feels falsely accused. Thus, although the projected accusation is painful, it is not

injurious to the self-esteem.....No longer does the patient consider himself bad; the others unfairly think he is bad (p. 124).

The discussion of whether depression and low self-esteem are underlying processes related to psychotic symptoms will be addressed in more detail later in this review. However, one of the ways in which this issue has been researched is through an exploration of attributional style in individuals with psychotic symptoms. Hence some background information on attributional theory and style is required.

### **Attributional Style and Depression:**

Attributional theory (Weiner, 1988) outlines that individuals interpret events as either a success or a failure. If the outcome is negative, unexpected and/or important, then the individual attempts to determine the cause. This causal decision is based on a number of factors, for example, the specific information available, causal rules, ego-defensive biases etc. The potential causes of outcomes can be internal or external, i.e. caused by the individual or by other people or circumstances. It can also be caused by stable or unstable factors indicating whether the cause affects all areas of the individuals life. Finally, a cause can be seen as controllable or uncontrollable by the individual. The stability of the cause is related to subsequent expectancy of success while the causal and controllability properties are linked to affect.



Attributional theories of depression argue that individuals with and without depression differ in their causal judgements of certain events. Abramson, Seligman & Teasdale (1978), put forward a reformulated learned helplessness model to account for the attributional differences found in depression. They argued that depression is the result of experience with uncontrollable aversive events. The nature of depression following such negative events being governed by the causal attributions the individual makes for them. If they are seen as being caused by the individual themselves (internal attributions), as opposed to being caused by someone else or circumstances (external attributions), then the resulting depression is hypothesised to involve loss of self-esteem. If the uncontrollable events are attributed to constant factors (stable attributions), as opposed to changeable factors (unstable attributions) then the depressive symptoms are likely to be longlasting. Finally, the model distinguishes between making global and specific attributions whereby if the uncontrollable events are attributed to causes present in a variety of situations the resulting depression is proposed to be pervasive.

### **Attributional Style and Psychotic Symptoms:**

To date all of the research looking at the attributional style of individuals who experience psychotic symptoms has focused on individuals with persecutory delusions. The thinking behind such investigations is as follows. In 1986, Hemsley & Garety wrote a paper titled "The Formation and Maintenance of



Delusions: A Bayesian Analysis" based on Baye's model of the way in which evidence for normal beliefs may be evaluated. In formulating and maintaining beliefs individuals use the following procedures. The authors proposed that delusions arise from errors occurring at any one of these stages

a) *hypothesis formulation*, for example generating hypotheses that cannot be tested, for example believing that the world will end in 2005.

b) *Assessing component probabilities*, for example believing 100% that the IRA are plotting to kill you but also believing that there is a one in five chance that there is no such plot.

c) *Assessing prior odds* in terms of calculating the probability of other possibilities.

d) *Assessing the likelihood ratio*, interpreting and reinterpreting new information to make it consistent with their beliefs.

e) *Information search*, often deluded individuals do not feel that they need any further evidence to support their belief.

f) *Action*, with delusions there is a remarkable lack of action in connection with sincerely held beliefs.

The crux of Hemsley & Garety's paper was that delusions are essentially normal beliefs with specific biases in information processing. Information processing biases in deluded individuals have also been found by other researchers. For example, when looking at individuals' recall of threatening or neutral themes Kaney, Wolfenden, Dewey & Bentall (1992) found that deluded individuals recalled more threatening propositions than depressed controls.

Consistent with the idea that psychotic symptoms result from information processing biases, some researchers have investigated whether such biases are present in attributional style. Kaney & Bentall (1989) note that attribution theory provides a framework for looking at the way in which individuals explain their own behaviour and the behaviour of others. Consequently, they have suggested that it might be affected in individuals with persecutory delusions, as the majority of delusions concern beliefs about the intentions of others. Using the Attributional Style Questionnaire devised by Peterson, Semmel, Baeyer, Abramson, Metalsky & Seligman (1982), they found that the attributional style of individuals who experienced persecutory delusions was, as they hypothesised, different to that of individuals suffering from depression or "normals". In particular they noted that participants suffering from paranoia tended to make external attributions for negative events, whereas individuals suffering from depression attributed the cause of such events to themselves. However, their results also showed that the paranoid individuals tended to make comparatively internal attributions for positive events. Hence the authors developed the notion of a self-serving bias in the attributional style of deluded individuals. In basic terms they hypothesised that deluded individuals tended to attribute negative events to external factors and positive events to themselves, in contrast to individuals who are depressed.

Candido & Romney (1990) also looked at the attributional style of paranoid individuals. As predicted, they found that the attributional style of paranoid individuals was diametrically opposite to that of depressed individuals. They also

studied the attributional style of individuals who were depressed and paranoid. Again as predicted they found that this group's results fell somewhere in-between that of the other two groups.

Hence, in contrast to individuals who are suffering from depression, individuals who experience persecutory delusions show a self-serving bias in attributional style on direct measures of attributional style such as the ASQ. Such a bias in attributional style is reflected in their tendency to attribute the cause for negative events to circumstances or other people, whilst attributing the cause for positive events to themselves. Lyon, Kaney & Bentall (1994) have suggested that the observed self-serving bias is only displayed on direct measures of attributional style and not on indirect measures.

### **Indirect Measures of Attributional Style:**

Along similar lines to the proposal that paranoia is a defence against feelings of depression (Zigler & Glick, 1988), Winters & Neale (1985) argue that low self-esteem characterises manic - depression in both phases of the disorder, although it is not directly expressed in the manic phase. In order to investigate this claim, they used a pragmatic inference task as a subtle way of measuring attributional style.

The pragmatic inference task was considered by the authors to bypass defensiveness about self-esteem. The argument behind this proposal was developed on the basis of Harris & Monaco's (1978) work. They suggest that

understanding is a process whereby the listener attempts to infer what the speaker wants to communicate by using the available linguistic message, contextual information and their own knowledge. A pragmatic inference is a conclusion that is drawn by an individual from stated information. However, the conclusion consists of information that was not directly stated and need not follow logically from the original statement. For example, 'The fugitive was able to leave the country', leads the listener to pragmatically infer that the fugitive did in fact leave the country. Although individuals can usually distinguish between given information and inferred information upon immediate recall, this can be lost at later recall. Hence the pragmatic inference task devised by Winters & Neale (1985) required individuals to make an attribution on the basis of information that did not give a direct cause for the event but implied a number of possible causes.

Using this type of measure they found support for the proposal that bipolar disorder is associated with unreported feelings of low self-esteem. Like the individuals who had suffered from depression, individuals who had suffered from manic - depression attributed significantly more negative events to internal causes than normals. The authors argue that the tendency to infer that failures are due to internal causes 'reflects a cognitive schema of low self-esteem.' They suggested that the remitted bipolars were defensive about self-esteem, in terms of not reporting low levels when asked directly, and that in some way the pragmatic inference task bypassed this defensive process.

More recently, the pragmatic inference task has been used to investigate the possibility that underlying feelings of low self-esteem are evident in individuals who experience persecutory delusions.

### **Delusions as a defence against low self-esteem:**

In a recent paper Lyon, Kaney & Bentall (1994) pull together the research on persecutory delusions and attributional style described above. On the basis of the observed self-serving bias in attributional style exhibited in this group they too argued that it could serve a positive function in terms of defending against low self-esteem. In order to test out their hypothesis they compared a group of individuals suffering from persecutory delusions with a group suffering from depression and normals. On self-report measures they found that the deluded participants gained high scores for depression but also for self-esteem. It would generally be anticipated that high scores on the depression scale would correlate with low scores on the self-esteem scale and vice versa. They also compared the groups on a parallel form of the Attributional Style Questionnaire (ASQpf) and the pragmatic inference task (PIT) devised by Winters and Neale. (Details of the ASQpf and the reasons for using this measure as opposed to the original ASQ are described in detail in the method section) They hypothesised that individuals with persecutory delusions would score differently on the two assessments of attributional style because the pragmatic inference task is an indirect measure

capable of eliciting responses indicative of low self-esteem in individuals with manic - depressive disorder (Winters & Neale, 1985)

The findings indicated that the normal participants and those suffering from depression showed similar causal inferences on both measures, whereas the participants with persecutory delusions showed a marked shift in scores for internality between the two. On the pragmatic inference task their scores were much more similar to the depressed group in that they attributed negative outcomes to internal causes. In contrast, on the attributional style questionnaire they showed a self-serving bias as shown in previous research.

Lyon et al., proposed that the pragmatic inference task was capable of penetrating defence mechanisms that are found on the ASQpf for individuals suffering from persecutory delusions. Such an argument was supported by the findings of Kinderman, Kaney, Morley & Bentall, in 1992. They studied in detail deluded individuals' responses on the Attributional Style Questionnaire. On this measure participants are required to write down one major cause for an event, and then to make a direct numerical estimate of whether this cause is due to themselves or due to others or circumstances. Kinderman et al., (1992) instructed judges to rate the actual causes given by participants as to whether they would consider them to be internally caused. They found that individuals suffering from delusions made relatively normal causal attributions, but that they tended to evaluate causes for negative events, that the judges considered to be internal attributions, as external. On the pragmatic inference task no such estimate of

internality is required because individuals have to choose from either an internal or an external attribution depending on which is most consistent with their memory. Therefore Lyon et al., argue that when deluded individuals have to make an explicit judgement of blame on the attributional style questionnaire, they respond in a defensive manner in order to protect low-self-esteem.

There has to date been no exploration of the attributional style of individuals who experience auditory hallucinations. The the aim of the current study is to carry out such an investigation. In order to understand how the hypotheses for testing were developed, it is important to review the psychological accounts of auditory hallucinations in some detail.

### **Theories of auditory hallucinations:**

Bentall & Slade (1988) defined hallucinations as:

- a) Experiences that occur in the absence of an appropriate stimulus,
- b) that have the full force or impact of the corresponding real perception, and
- c) that are not amenable to direct and voluntary control by the experiencer.

Hallucinations are recognised as occurring in a wide range of situations such as drug intoxication, hypnogogic phenomena, fevers and bereavement. In the absence of other explanations they are usually considered as first-rank symptoms of schizophrenia (Schneider 1959). Estimates suggest that seventy per cent of individual's diagnosed as suffering from schizophrenia experience

hallucinations (Sartorius, Shapiro & Jablensky, 1974). However, many researchers including Peters, Pickering & Hemsley, (1994) have noted that hallucinations need not always be a sign of pathology. Bentall & Slade 1985 noted that approximately 10% of the general population report experiencing hallucinations.

Significant theoretical advances have been made recently in understanding auditory hallucinations (Bentall, Haddock & Slade, 1994). This development has been spurred by a number of research findings. Firstly, clinical studies suggest that hallucinations may be associated with stress induced arousal (Slade 1972). In addition to this Bentall et al. (1994) cite studies which indicate that the onset of hallucinations is associated with fluctuations in psychophysical arousal. Secondly, evidence suggests that hallucinations are influenced by environmental conditions, for example sensory deprivation or exposure to white noise (Margo, Hemsley & Slade, 1981). Thirdly, it has been observed that hallucinations vary in different cultures, in some societies they may be a positively valued experience (Al-Issa 1978). Finally there is some evidence that auditory hallucinations tend to be associated with 'subvocalisation' i.e. the covert activity of the speech muscles whilst hallucinating. Although this evidence is somewhat inconclusive Margo et al., (1981) found that auditory hallucinations tended to be inhibited by concurrent verbal tasks such as reading or speaking.

On the basis of the above evidence a model has developed proposing that hallucinations occur as a result of a misattribution of private or mental events to an



external source. That is to say that individuals who experience hallucinations mistake their own thoughts as coming from outside their body. However, there is a difference of opinion as to the exact cognitive abnormalities that may be responsible for this misattribution. Hoffman, (1986) argues that it is the result of a discourse planning disorder which leads the individuals to experience subvocalisation as unintended. However, as Slade & Bentall (1988) note no consistent relationship has been observed between hallucinations and speech disorders. Also this hypothesis cannot account for the presence of non-auditory hallucinations. Another theory has been suggested by Frith & Done (1987), proposing that all positive symptoms are the result of a deficit in the a neuropsychological mechanism responsible for monitoring the source of perceived events. However, the exact mechanism involved in the brain has yet to be identified.

To date the most comprehensive model to account for the misattribution is that proposed by Bentall and Slade in a number of papers (see Bentall et al., 1994). They consider the discrimination between self-generated events and external stimuli to be a metacognitive skill. Metacognition refers to the mental processes involved in the knowledge that one has about one's own mental processes. On the basis of research in this area (Johnson & Raye, 1981), Bentall (1990) suggests that the ability to discriminate between what is 'real' and 'imaginary' is an inferential task. That is to say that people do not automatically know whether perceived events are self-generated or externally generated, and

must make a guess on the basis of the evidence available. As with other forms of discrimination they believe that it is a function of specific characteristics of the event and the individual's beliefs and expectations. Such beliefs and expectations are about what events the individual sees as likely to occur in the internal and external world. They also reflect basic assumptions about the causal agencies that operate in the world (e.g. spirits, telepathy etc.)

According to Bentall et al., (1994) this model is consistent with the experimental evidence outlined above in the following ways:

- a) it accounts for the apparent association between auditory hallucinations and subvocalisation in that the latter is misattributed to external sources,
- b) distinction between external and internal events is likely to be most difficult under conditions of unpatterned stimulation i.e. white noise,
- c) the relationship between anxiety and hallucinations is also accounted for as anxiety is associated with deficits in information processing efficiency, which might affect the ability to discriminate effectively and,
- d) the cultural differences observed in the content of hallucinations can be understood because some expectations about what kind of events are likely to be 'real' are culturally determined.

There have been a few investigations into the model's claim that hallucinations reflect an error in judgement. In 1985, Bentall & Slade found that individuals who experience auditory hallucinations, in comparison with a control group, showed an abnormal bias towards detecting speech in white noise.

However, in other studies the evidence has not reached a significant level (Bentall, Baker & Havers 1991). A number of researchers have looked at the relation between hallucinations and responsiveness to suggestions. Mintz & Alpert (1972) used the 'White Christmas' test in which participants are asked to close their eyes and listen to a recording of 'White Christmas' which is in fact not played. They found that hallucinators were more likely to report auditory perceptions than controls. Young, Bentall, Slade & Dewey, (1987) replicated these findings with some refinements and found that hallucinators were more likely to report both auditory and visual perceptions consistent with simple suggestions they had been given. Finally Alpert (1985) (cited in Bentall, 1990) also found that hallucinators were more susceptible to suggestions to hear voices whilst listening to white noise.

### **The Function of Hallucinations:**

Slade in 1976 proposed a four factor model of hallucinations that identified four possible variables that might affect their occurrence. As mentioned above he cited evidence that hallucinations may be associated with stress induced arousal. Secondly he proposed a number of predisposing factors, for example, Ramathan (1986, cited in Bentall, 1990) found an association between scores on the 'N' scale for the Eynsenck Personality Questionnaire and the presence of hallucinations. It has also been documented that individuals who have hallucinations are more responsive to suggestions. Bentall, (1990) concluded that

individuals who hallucinate make rapid and overconfident judgements about the nature of their perceptions. Slade's third variable was that of environmental stimulation. Tarrier, Beckett, Harwood, Baker, Yusopoff & Ugarteburu, (1987) found that social isolation and specific stimuli such as traffic noise were both reported as antecedents to hallucinations and delusions, by some individuals. The fourth variable hypothesised by Slade to affect hallucinations was reinforcement.

Although it is likely that the reinforcing component of hallucinations is very complex, Bentall (1990), developed some interesting ideas. He suggested that 'hallucinators may find cognitive strategies that lead to hallucination reinforcement because such strategies allow the patient to avoid aversive stimulation' (p 90). In particular, he suggested that this reinforcing process may be anxiety reduction, through the misclassification of certain kinds of internally generated events, (for example worries or disturbing thoughts about the self) to an external source. Such a proposal is consistent with Arieti's (1974) theory that psychotic symptoms arise through a projection of uncomfortable thoughts and feelings related to psychodynamic conflicts.

Once an unpleasant internal event has been misclassified as an external input, Bentall proposes that the reduction in the unpleasant feeling will act as a negative reinforcer and increase the likelihood that this will occur again. As he notes, this is in line with some psychodynamic theorists who have drawn attention to the similarities between dreams and hallucinations (Arieti 1974). Thus leading

to the possibility that both are an expression of wishes that may be unacceptable to the conscious mind.

In addition to this there is the fact that hallucinators do not hallucinate random events. As noted by Bentall, (1990) auditory hallucinators often experience threatening voices, and visual hallucinators see visions of dead ancestors or other people of significance to them. He presumes that the content of hallucinations may in some ways be related to their personality.

In support of this idea, Forgas & De Wolfe, (1969) asked hallucinators to recall brief stories. They found that participants more readily recalled themes relating to their voices than they did neutral themes, suggesting that the contents of the hallucinations reflect dominant psychological concerns. In addition to this Judkins & Slade, (1981) found that hostility scores, as measured by the Hostility and Direction of Hostility Questionnaire, were significantly higher for a group of individuals who experienced abusive auditory hallucinations. They suggested that the 'quality' of the voices may be affected by personality factors including hostility.

### **The Link between Hallucinations and Delusions:**

With the recent interest in cognitive-behavioural treatments for chronic auditory hallucinations some researchers have looked at the cognitive, affective and behavioural responses to such experiences. Romme & Escher (1989) showed that an individual's ability to cope with their voices varied according to

their appraisal of them. In a recent study, Chadwick & Birchwood (1994) suggested that the degree of fear, acceptance and compliance shown to voices might be mediated by beliefs about the voices. In particular, beliefs about the voice's power, authority and the consequences of disobedience.

They argue that if a voice is construed as coming from a powerful and vengeful spirit then that person may be terrified of the voice to such an extent that they comply with its commands to harm others. However, if they believe that the voice is self generated they may feel and act quite differently. This is in line with Bentall et al's. (1994), model of auditory hallucinations being a misattribution of self-generated events. The relevant issue here is that misattribution can only occur when an individual develops a belief that is delusional. That is to say, that misattribution requires the individual to believe their thoughts are coming from an external source. As others do not hear the voices, and therefore do not share this belief, the belief could be considered delusional. DSM IV is not very clear on the distinction between hallucinations and delusions and in fact states that 'delusions are erroneous beliefs that usually involve a misinterpretation of perceptions or experiences' (p 275). In the context of Bentall et al's., theoretical proposals one could argue that auditory hallucinations also fit this criteria.

Chadwick & Birchwood (1994) went on to focus more closely on the importance of the beliefs individuals have about their voices. They found that on the basis of beliefs about presumed identity, omnipotence and purpose, voices were believed to be either malevolent or benevolent. Further they discovered that

it was this distinction that was underlying people's distress and behaviour towards the voices, rather than the actual content. They noted that beliefs were not always consistent with the content of the hallucination, for example, a voice commanding someone to harm themselves may be considered benevolent.

Chadwick and Birchwood clearly draw out the relationship between Beck's cognitive model of depression and the applicability of this model to auditory hallucinations. Beck, Rush, Shaw & Emery (1979), proposed that the behavioural and affective symptoms of depression are consequences of particular negative beliefs (e.g. 'I am worthless') and not antecedents (e.g. 'She disagreed with me'). The established effectiveness of cognitive therapy for depression relies heavily on the disputing and testing of beliefs. Chadwick & Birchwood used an adapted version of cognitive therapy for four individuals with drug-resistant voices in a single subjects case design. They focused on and successfully challenged beliefs about the voices' omnipotence, identity and purpose. Associated with this there was a reduction in distress, an increase in adaptive behaviour and unexpectedly a fall in voice activity. The reduction in distress observed in such therapeutic approaches is proposed to be through the process of desensitisation to the content of the hallucinations.

Bentall et al's study (1994), used a cognitive-behavioural approach to treat auditory hallucinations that placed more emphasis on focusing techniques and reattribution to the self. This approach was based on their theoretical model of misattribution. They found that three out their six participants did not show

consistent benefits as a result of the focusing. Three factors were identified as possible causes for this lack of improvement. Firstly, the number of sessions may have been too short for any benefit to be seen, especially given the long-standing nature of the targeted symptoms. Secondly, it was not possible to control for environmental stressors noted to be associated with persistent psychotic symptoms (e.g. poverty and poor housing). Finally, the authors noted that encouraging individuals to reattribute their hallucinatory experiences to themselves was very anxiety-provoking. They noted that this seemed to be because the attribution of negative or hostile content to the self was quite threatening. This suggestion is in line with some of the criticisms of psychodynamic therapies for psychotic symptoms. For example, Meuser & Berenbaum (1990) have opposed such therapies for individuals with psychotic symptoms because these therapies raise anxiety-provoking issues with which the individual is unable to cope.

Hemsley & Garety's (1986) paper notes that hallucinations often play an important role in the formation and / or maintenance of delusions. At the formation stage hallucinations are often information that is distressing and uncontrollable and individuals seek an explanation. Most individuals believe that their experience is not internal and infer the existence of some other source for the sounds. As a result delusional beliefs develop to support the externalisation of the sounds.



### **Present Investigation:**

As discussed above the evidence is consistent with the notion that hallucinators misattribute internal events to external causes. It also indicates that malevolent auditory hallucinations may be an externalisation of internally generated events in order to avoid distress. In addition to this Chadwick & Birchwood's (1994) work, stresses the importance of delusional-like beliefs that affect the way in which auditory hallucinations are perceived. As Hemsley & Garety (1986), suggest these beliefs could develop to support the externalisation of distressing thoughts.

The aim of the present investigation is to see whether individuals who experience auditory hallucinations, which they believe to be malevolent, show similar patterns of self-esteem, depression and attributional style to individuals who experience persecutory delusions. If the beliefs about voices are delusional and at the basis of the misattribution, then a similar pattern should be observed.

As mentioned above, Lyon et al., (1994) compared individuals who experience persecutory delusions with depressed individuals and a normal control group on measures of these factors. They reported that individuals with persecutory delusions showed a self-serving bias in attributional style on direct but not indirect measures. They therefore proposed that the reported high levels of self-esteem and the contrasting findings on the attributional style measures was suggestive of a defence against low self-esteem. If auditory hallucinations

are the result of externalising distressing internally generated thoughts in order to relieve distress, biases in attributional style may be present.

In order to investigate these issues the same procedure and experimental design as the work carried out by Lyon, Kaney and Bentall (1994) was used. This will be clarified in the method section.

A number of hypotheses being tested were based on replicating the findings of Lyon et al. They were as follows:

- a) Individuals suffering from depression tend to attribute negative events to themselves on obvious measures of attributional style.
- b) Individuals who are depressed show a similar pattern of results on unobvious measures of attributional style.
- c) Normal individuals show a self-serving bias in that they tend to attribute negative events to external causes and positive events to themselves.

The specific hypotheses under investigation in the current study were:

- i) Contrary to individuals who are depressed, individuals who experience hallucinations which they believe to be malevolent will show a self-serving bias in attributional style when assessed through direct tasks. That is they will attribute negative events to an external source.
- ii) When measured on indirect measures of attributional style, however, individuals who believe their hallucinations to be malevolent will show a similar attributional

style to people with depression, in that they will attribute negative outcomes to external causes.

iii) Individuals who experience 'malevolent' hallucinations will exhibit high self-esteem and high levels of depression on self-report measures.

## **Method:**

### **Design:**

This piece of research followed Lyon et al's design except for the inclusion criteria for the experimental group. Instead of comparing individuals with persecutory delusions against depressed and normal controls, individuals who experience voices they believe to be malevolent were investigated. Participants in the three groups were matched for age, gender and intellectual ability as closely as possible. This was in order to reduce the possible variance between the groups for comparison purposes. See the results section below for the methods used to assess the variance between the groups.

**Ethical Considerations:** The research proposal and methodology was passed by the local ethics committee (see appendix I ). The main ethical issue to highlight was that participants were told that one of the questionnaires was a memory task when in fact it measured attributional style. Although this was deceiving participants, this was necessary for the purposes of the research because as Kinderman et al. (1992) suggested, deluded individuals show a self-serving bias when required to make direct estimates of internal verses external causality. Such a bias is not evident on less obvious measures of attributional style. Although such a deception could be considered unethical, participants had already agreed to complete measures on

attributional style and were therefore not being deceived into providing information that they might feel unhappy about.

### **Participant Selection:**

All participants were required to be able to read and write in order to complete the questionnaires. The experimental group was recruited first, then the psychiatric control group and finally the normal control group. This was to aid the matching process, as the two control groups needed to be as closely matched to the experimental group on age, gender and intellectual ability.

**Group I - Experimental Group :** The criteria for inclusion was as follows:

- experiencing auditory hallucinations in the last week,
- believing these hallucinations to be malevolent,
- not having a current diagnosis of depressive disorder,
- having a diagnosis of schizophrenia,
- receiving either in-patient or out-patient treatment for auditory hallucinations at the time of the study,
- not having had fixed delusional beliefs for at least the last two years.

This final criteria was considered important in order to ensure that the results obtained were not influenced by processes that might be attributable to delusions. However, it proved very difficult to find sufficient individuals who had no history at all of

any delusions. As a result a cut off point of two years was added part way through the data collection.

However, people with specific beliefs about the hallucinations were included as long as the beliefs developed following the onset of the hallucinations. For example, one participant believed that his voice was that of an ex-girlfriend and that it was there to punish him, although he could not elaborate on why this might be. It was important to set out such specific criteria as the distinction between delusional beliefs and beliefs about voices that may be delusional in content, is rather unclear, as already stated in the introduction. This criteria also ruled out individuals who had separate delusions. For example, one individual who was considered for the research was ruled out because although she had experienced persistent auditory hallucinations that supported beliefs that others were talking about her; the voices had started after that belief had been formed.

This group was only comparable with Lyon's experimental group in that they did not have a diagnosis of depressive disorder and they had a diagnosis of schizophrenia. However, Lyon et al's group also included individuals with a diagnosis of delusional disorder.

**Process of participant recruitment:** This group were particularly difficult to identify, due to the very specific criteria set. As a result a number of sources were used in order to aid recruitment.

Firstly, consultant psychiatrists in the area were contacted by letter to ask if they had any objection to their Registrar being approached to help with recruitment (see appendix II for a copy of letter). Registrars from the local psychiatric hospital and rehabilitation units were contacted by telephone. The purpose of the research was explained, what it would involve and the participants being sought. Either they themselves suggested individuals who might fit the criteria, or they suggested members of the nursing staff who might be contacted. Seven participants were identified in this way. Six participants were recruited through contacting the local community psychiatric nurses.

Lyon et al's study included data on fourteen individuals for each group. As already stated the experimental group of individuals were particularly difficult to identify through the available means, and there were time restrictions for completing the project. Hence only thirteen were identified and recruited.

Once identified, a member of staff who knew the individual approached them and asked if they would be interested in participating in the research. The identified individual's were told the following:

That the research was concerned with looking at levels of self-esteem and depression in individuals who hear voices. That it involved completing five questionnaires which would take up to one hour. It was made clear that it was possible to meet on two separate occasions rather than for a whole hour if this was felt to be too long. They were also told that all the results would be

confidential and that they would in no way affect the treatment received. In addition to this they were handed some written information (see appendix III ).

If individuals were interested in participating, the member of staff arranged a meeting. In fact all the individuals approached said that they were happy to participate. Eleven of the participants in this group were seen on hospital premises in consulting rooms. Two of the participants who were recruited via the community psychiatric nurses requested a home visit as they had no transport.

#### **Procedure:**

Each participant was given a number to ensure confidentiality and their age and gender were recorded. They then completed the measures described below. However, the experimental group were asked for some additional information.

Firstly they were asked to complete the Beliefs About Voices Questionnaire (BAVQ) (see appendix IV), designed by Chadwick & Birchwood (1994) to look at the perceived malevolence and benevolence of the 'voices' heard. This questionnaire has twenty statements of beliefs about voices and the respondent has to circle whether they believe they are true or false. The statements are divided into malevolent and benevolent beliefs, an example of the former being 'My voice is punishing me for something I have done', and the latter 'My voice wants to help me'. The psychometric properties of this measure have been addressed by Chadwick and Birchwood (*in press*), in a study including sixty participants.



In addition to this, participants in this group were asked the following questions in order to clarify that they met the inclusion criteria:

'Have you heard 'voices' in the last week ?'

If so, 'How long have you heard 'voices'?''

'Have you ever had any unusual experiences?'

'Have you ever had any beliefs that others do not share?' If so 'What are these beliefs?' and 'When did you last have this belief?'

In order to check the recruitment process further, participants recruited via the rehabilitation and acute psychiatric services were asked if they had any objections to their medical notes being looked at by the author. This was in order to verify their symptoms and diagnosis. Specifically to check that the individual had not been diagnosed as suffering from a depressive illness, and that there was no mention of delusional beliefs in the last two years. No one objected, thus providing a third way of checking that the participant was appropriate for the criteria outlined above.

However, checking through the medical notes of community patients was not feasible, therefore the inclusion criteria was checked very carefully with the person who identified them.

**Description of participants:** For the following reasons it is important to describe the experimental group in some detail. Firstly the research includes only small numbers and a clear description allows an assessment of how representative the sample is. Secondly, such a description would allow for comparison with other groups.

All participants had heard voices that they believed to be malevolent in the last week despite taking antipsychotic medication. (Only participant 9 was not taking any medication at the time of the research)

**Table 1:** General Information about Participants.

CHARACTERISTICS	PARTICIPANT NUMBER												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Age	23	45	29	37	29	29	36	32	43	65	46	23	26
Gender	M	M	M	F	M	F	M	M	F	M	F	F	M
Length of Diagnosis	2yr	17	10	15	7	1	6	11	9	30	19	4	2
In-patient	-	-	-	-	Y	Y	Y	Y	-	-	-	-	-
Out-patient	Y	Y	Y	Y	-	-	-	-	-	-	-	Y	-
Community Patient	-	-	-	-	-	-	-	-	Y	Y	Y	-	Y
Past Delusions	-	-	-	Y	-	-	Y	-	Y	-	-	-	-

As can be seen from Table 1, only participants four, seven and nine reported delusional beliefs in the past. However, it was clear that they no longer held these beliefs, and the staff who identified them felt confident that they did not have any further persecutory delusions at the time of the study.

Table 2, provides a summary description of the content of each participant's voice. Voices were categorised according to their area of content. It is interesting to note that each hallucination could be accounted for within six summary categories, suggesting that the content area of individual's voices tend to very similar. As can be seen from Table 2, only participant 13 heard benevolent voices as well as malevolent ones. However he circled all the malevolent statements on the Chadwick and Birchwood questionnaire as being true, hence he was included in the study.

**Table 2:** Descriptive Categories of the Content of each Participants Voice(s):

CONTENT OF VOICES	PARTICIPANT												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Sexual	Y	Y	-	-	Y	-	-	-	-	Y	-	Y	Y
Derogatory	-	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Self Harm	-	-	Y	Y	-	Y	Y	Y	Y	-	-	Y	-
Harm Others	-	-	-	Y	Y	-	Y	Y	-	-	-	-	-
Commentary	Y	-	-	Y	-	-	-	-	-	Y	Y	-	-
Benevolent	-	-	-	-	-	-	-	-	-	-	-	-	Y

Table 3, contains information taken from the Beliefs About Voices Questionnaire (Chadwick & Birchwood 1994) indicating which statements participants believed to be

true. For all items, if an individual answered Yes, they scored 1, if the answer was No, they scored 0. The authors suggest that the statements cover the following areas Malevolence, Benevolence, Resistance and Engagement. There are six items for malevolence, namely, numbers 1, 3, 5, 7, 9, and 11. The authors indicated that a threshold score of four or more is indicative of malevolence. However, for the purposes of this study it was felt that items 15, 17, 18 and 20 were also indicative of the voices being seen as unpleasant although the authors classed these items under resistance, relating to feelings about the voice(s). Hence as long as participants scored six or more on the above mentioned items they were included in the study.

Table 3: Responses on the Beliefs About Voices Questionnaire.

BELIEFS ABOUT VOICES	PARTICIPANT												
	1	2	3	4	5	6	7	8	9	10	11	12	13
1. My voice is punishing me for something I have done.	Y	Y			Y		Y	Y		Y			
2. My voice wants to help me.	Y				Y								
3. My voice is persecuting me for no good reason.	Y	Y	Y	Y		Y	Y			Y	Y		Y
4. My voice wants to protect me.	Y												
5. My voice is evil.	Y	Y	Y	Y	Y	Y	Y	Y		Y		Y	Y

6. My voice is helping to keep me sane.	Y												
7. My voice wants to harm me.	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	
8. My voice is helping me to develop my special powers or abilities.	Y			Y									
9. My voice wants me to do bad things.	Y		Y	Y	Y	Y	Y		Y	Y	Y		
10. My voice is helping me to achieve my goal in life.	Y		Y										
11. My voice is trying to corrupt or destroy me.	Y	Y	Y	Y	Y	Y		Y	Y			Y	
12. I am grateful for my voice.	Y												
13. My voice is very powerful.	Y	Y	Y				Y	Y	Y				Y
14. My voice reassures me.	Y												
15. My voice frightens me.	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	
16. My voice makes me happy.	Y												
17. My voice makes me feel down.	Y	Y	Y		Y	Y	Y	Y	Y	Y			Y
18. My voice makes me feel angry.	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y
19. My voice makes me feel calm.	Y					Y							
20. My voice makes me feel anxious.	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y		

## **Group 2: Individuals suffering from depression.**

The criteria for inclusion for this group was in line with that used by Lyon et al., and was as follows:

- a diagnosis of major depressive episode or depressive disorder as defined by D.S.M. IV, (see appendix V).
- receiving in-patient or out-patient treatment,
- no evidence of psychotic symptoms.

This last criteria was not explicitly outlined by Lyon et al. However, it was felt to be important in terms of clarifying the samples to avoid a confusion with the symptoms exhibited by the experimental group.

**Process of participant recruitment:** Again, twelve of this group were identified by the Registrar's and nursing staff working in the acute psychiatric services. They were all in-patients at the time of testing. Those that fitted the above criteria were approached by a member of staff whom they knew and given the same information as group one about what the research involved. A member of the nursing staff arranged a meeting if they were willing to participate. The research was carried out in consulting rooms on N.H.S. premises.

One participant was recruited through the psychology services and was a psychiatric out-patient who was admitted shortly after participating. He was first approached by the psychologist and then seen at home by the author.

It was made clear to all participants in this group that their data would be for comparison purposes. If they were willing to participate the member of staff who approached them arranged a time for us to meet.

### **Group 3; The normal control group.**

The inclusion criteria for this group was also in line with Lyon et al's and was as follows:

- no previous psychiatric treatment,

**Process of participant recruitment:** The participants in this group were selected from friends and health care workers. They were given the same information as the other two groups and again were informed that their data was for comparative purposes. The research was carried out in participants homes or in consulting rooms on N.H.S. premises.

### **Measures Used:**

**National Adult Reading Test:** The National Adult Reading Test (NART) was used as an estimate of pre-morbid intellectual ability. The NART comprises a list of fifty irregularly spelt words printed in order of increasing difficulty. The individual is asked to read aloud down the list of words and the number of errors made is recorded.

Full-Scale IQ scores can be predicted from this reading error score when inserted into the appropriate formulae. However, for the purposes of this piece of work only the

number of errors was calculated. Evidence suggests that the NART correlates well with other measures of intelligence (Crawford, Parker, Stewart, Beeson & De Lacey, 1989).

**Beck Depression Inventory:** The revised Beck Depression Inventory (BDI) is a 21-item instrument designed to assess the severity of depression. The psychometric properties of the BDI, in terms of reliability and validity have been established by Beck, Steer & Garbin, (1985)

The BDI was scored according to the manual.

**Rosenberg Self-Esteem Scale:** The Rosenberg Self-Esteem Scale (RSES) was designed to measure attitudes toward the self. It consists of ten statements which the individual is asked to rate on a four point scale. This measure was designed by Rosenberg (1965) for use with adolescents and has not been standardised for use with adult populations. Although there are no norms and this questionnaire has not been validated, there are few standardised measures for self-esteem and this scale has been used widely by other authors, including Lyon et al., in their study. Hence despite these limitations this measure was used as an assessment of self-esteem so that the results would be comparable with the findings of Lyon et al., (1994).

For the purposes of this study the Rosenberg Self-Esteem Scale was scored according to Slade's method of scoring so that the results would be comparable with those in Lyon et al's study (Lyon, 1995 personal communication.) A template for the



scoring method is shown in the appendix VI. In summary, individuals score points for agreeing with positive statements about the self and disagreeing with negative statements.

**The Parallel Form Attributional Style Questionnaire (ASQpf):** The original Attributional Style Questionnaire (ASQ), was initially designed by Peterson, Semmel, von Bayer, Abramson, Metalsky & Seligman (1982), as a measure of the degree individuals used the attributional dimensions of internality, stability, and globality. However, because of the close similarity of the items on the ASQ and the Pragmatic Inference Task used in this study the original version of the ASQ could not be used. Instead the ASQpf devised by Lyon, Kaney & Bentall (see Lyon et al., 1994) was used.

The ASQpf was constructed from a draft questionnaire of 40 ASQ.-type items which was completed by 40 undergraduate medical students. The negative items were taken mainly from the expanded ASQ devised by Peterson & Vilanova (1988), and the positive items were drawn up by the researchers. Six positive and negative items were selected from the data on the basis of correlation's for internality, lack of skew and adequate variance. Like the original ASQ, the ASQpf requires respondents to generate a cause for a number of events, six positive and six negative. Then they are asked to rate the cause of the event along a 7-point scale according to its' perceived internality, stability and globality.

Although not published, the authors of the ASQpf administered the original ASQ, the final ASQpf and the Pragmatic Inference Task to a mixed group of individuals.

Modest correlations were observed between the two ASQ measures, although globality measures for negative events failed to reach significance. When self-serving bias scores were calculated, however, a highly significant correlation was observed between the two ASQ measures. Given that this was the measure of particular relevance to their study, Lyon et al., proceeded to use the revised scale in their study.

In the comparative study of individuals with persecutory delusions Lyon et al., found that there were no significant group differences in the measures of globality and stability on the ASQpf. The only significant findings were that the entire sample made more stable and global inferences for positive than negative events. This was in contrast to findings on the original ASQ. Using the original ASQ studies have found (Kaney & Bentall 1989, Candido & Romney 1990) that individuals suffering from delusions and depression tend to make excessively global and stable attributions about negative events.

The ASQpf has been criticised by its authors Lyon et al., for issues of reliability and more specifically the possible validity of the measures of globality and specificity. However, when looking at individuals who experience delusions they argue that the obtained scores for the pragmatic inference task stand in marked contrast not only to the ASQpf internal validity scores of the same participants but also those obtained from similar individuals using the original ASQ (Kaney & Bentall, 1989; Candido & Romney 1990). They also noted that any validity problems in the ASQpf would be likely to minimise the observed group differences in internal validity. On the basis of the criticisms

made of the ASQpf Bentall is in the process of piloting an amended version of the questionnaire (1995 personal communication).

Given the arguments outlined above and the fact that the updated version was not completed it was decided to proceed in the current study using the ASQpf. However, participants were asked to complete only the measures relating to that of internality as this provided the self-serving bias score. This was for the following reasons:

- i) as outlined above the validity and reliability of the global and stable measures on the ASQpf are questionable,
- ii) the measures of internality were those of direct relevance to the hypotheses being tested and these have been shown to correlate with the original ASQ,
- iii) participants were already being asked to complete a large number of questionnaires that were quite time consuming and it therefore seemed rather unethical to require them to complete measures that had already been shown to be unreliable.

The events used in the ASQpf are as follows:

- 1) Winning a competition,
- 2) The end of a steady romantic relationship,
- 3) Passing someone who smiles at you,
- 4) Experiencing a major personal injury,
- 5) Going on a journey to a strange place and getting there quickly,
- 6) Not being paid much attention by your spouse,

- 7) Being asked to make a farewell speech at a colleagues leaving party,
- 8) Being involved in a car accident,
- 9) Winning money in a game of cards,
- 10) A room-mate telling you s/he is switching to another room,
- 11) Enjoying yourself at a social event and
- 12) Having trouble with one of your instructors.

Participants are asked to imagine the event happening to them and to write down one likely cause. Then they are asked to rate the cause of the event along a seven point scale as to whether they think that the cause of the event was due to something about them or to something about others or circumstances. (see appendix VII for a copy of questionnaire)

The ASQ was scored by adding the ratings for the negative events and then the ratings for the positive ones. Thus providing a score of internality for both positive and negative events.

**Pragmatic Inference Task:** The Pragmatic Inference Task, was designed by Winters & Neale (1985), as an indirect measure of attributional style. The task is presented as a memory task with the aim of avoiding conscious response biasing. The individual is played twelve tape-recorded scenarios (see appendix VIII for the anglicised version of the written transcript of the scenarios). Half of the scenarios are about successful outcomes and the other half are about failures. Each describes a situation where both an internal and external locus of causality is implied. For example one scene describes

a situation where the listeners new business is successful; the cause is hinted at either being a clever business person or that there was no competition.

The other scenarios are about the following;

- 1) Being unemployed and having difficulty finding a job,
- 2) Being complimented on your appearance,
- 3) A neighbour shunning you by not asking for your advice,
- 4) A colleague acting hostile towards you,
- 5) A first date going badly,
- 6) A stranger who is having difficulties befriending you,
- 7) Throwing a successful party,
- 8) People reacting negatively to a speech you give,
- 9) The boss complaining about your work performance,
- 10) Receiving compliments from a teacher on a piece of work and
- 11) Receiving a pay rise.

The scenarios are presented in the above order so that success and failure items are randomly ordered.

After each scenario is presented the participant is asked to respond to four multiple choice questions related to the story. One question asks participants to select which cause (internal or external) they remembered as the contributing factor to the outcome of the scenario. This is the target question related to attributional style. In another question they are asked to choose between two answers to a question where

the information was only implied. The other two questions were related to facts stated in the scenario (see appendix IX for a copy of questionnaire).

The Pragmatic Inference Task differs from the ASQ in the following ways:

- a) both internal and external causes are suggested in each story,
- b) participants are required to answer questions about facts and inferences not related to causality, and
- c) the task is presented as a non-specific memory task.

For scoring purposes, each scenario has one identified question that relates to attributional style (as asterisked on the questionnaire in the appendix). If participants chose an internal answer then they received a point. Hence they could score a maximum of six for both positive and negative events.

As the ASQpf and the PIT are different versions of essentially the same test the PIT was presented first since this was the covert measure of attributional style. The assessments were presented in the following order ;

- i) National Adult Reading Test,
- ii) Beck Depression Inventory,
- iii) Pragmatic Inference Task.
- iv) Rosenberg Self-Esteem Scale and
- v) Attributional Style Questionnaire pf

## RESULTS

### **Description of Results:**

In order to simplify the presentation of the results, individuals who experience auditory hallucinations will be referred to as the experimental group, individuals suffering from depression, the psychiatric control group and the final group will be referred to as the normal control group.

The experimental group consisted of eight men and seven women, the psychiatric control group consisted of eight women and six men and the normal control group was made up of seven of each. Although not evenly matched, these differences are in line with statistical findings that there is an over-representation of men suffering from psychotic symptoms with a corresponding over-representation of women suffering from depression (DSM IV, p 341).

The experimental group had a mean age of 35.69 (SD 11.71) with a range of 23 to 65 years of age. Their mean error score on the National Adult Reading Test (NART) was 14.92 (SD 7.61). The psychiatric control group had a mean age of 39.62 (SD 9.43) the range being 25 to 57 years. Their mean error score on the NART was 15.69 (SD 4.70). Finally the normal control group had a mean age of 37.08 (SD 11.03), ranging from 23 to 53 years. They had a mean error score on the NART of 15.62 (SD 5.01).

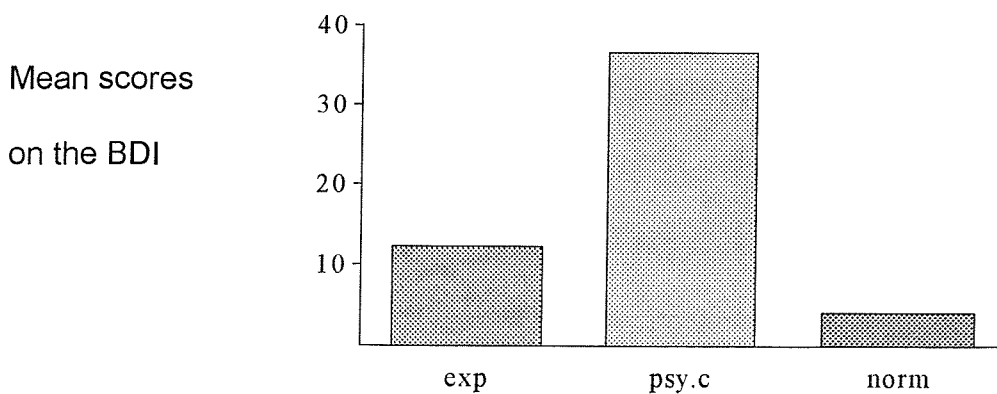
A non-parametric analysis of variance was used to compare the groups for age differences because it was not possible to assume a normal distribution for age. This showed that there were no significant differences between the groups age ( *Chi-Square*

= 1.07, d.f.= 2,  $p > 0.05$ ). Differences between NART errors were analysed using a oneway ANOVA. This indicated that there were no significant differences between the groups for intellectual ability ( $F = 0.06$ , d.f. = 2,  $p > 0.05$ ).

### Beck Depression Inventory results:

The experimental group had a mean score of 12.23 (SD 8.53) on the BDI with a range of 3 - 35, which placed their average score in the mild/moderate depression range. It is important to note that the large standard deviation for this group was partly due to an outlier score of 35 which was 22.77 points above the mean. The psychiatric control group had a mean of 36.53 (SD 8.45), with a range of scores from 23 - 51, placing their average score in the severe range. Finally the normal control group had a mean of 4.15 (SD 2.90), with a range of 0 - 10, which placed their average score within the normal range.

**Fig. 1:** Graphical display of the mean scores for each group on the Beck Depression Inventory.



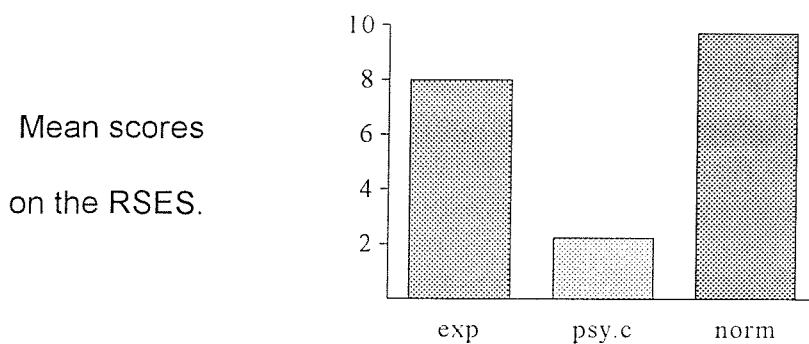


Given the range of the scores within the groups, it was not considered appropriate to assume a normal distribution. Therefore, these results were analysed using non-parametric statistics. A Kruskal Wallis 1-way ANOVA was used to examine the differences between these scores. Results from the analysis indicated highly significant differences between the groups on the BDI (*Chi-Square* = 70.82, d.f.= 2, *p*< 0.05).

The rest of the results were analysed using the same statistical process as used by Lyon et al.

#### **Rosenberg Self-Esteem Scale results:**

The experimental group had a mean score of 8 (SD 4.95), with a range of scores from 1 - 20. The psychiatric control group had a mean of 2.23 (SD 2.17), with a range of 0 - 8, and the control group scored 9.69 (SD 4.31) ranging from 4 - 20. In keeping with Slade high RSES scores indicate a high self-esteem.



A one-way ANOVA was used to examine the differences between these scores. Results from the ANOVA indicated highly significant differences between the groups on the RSES ( $F= 14.34$ , d.f. 2,  $p<0.05$ ). Sheffe tests indicated that the experimental group and the control group differed significantly from the depressed group ( $p< 0.05$  for each comparison) though not from each other.

Although standardised adult norms for the RSES do not exist, these results would indicate that the psychiatric control group had significantly lower self-esteem than the control and experimental group, which had very similar levels to each other. Results of scores on the RSES and the BDI were consistent with those reported by Lyon et al.

**Relationship between self-esteem and depression:** Pearson correlation's were calculated for each group between BDI and RSES scores. For the experimental group this was found to be negative and significant ( $r= -0.5727$ ,  $p< 0.05$ ). The same was found for the control group ( $r= -0.63$ ,  $p< 0.05$ ) indicating that low levels of depression were related to high levels of self-esteem. However, no significant correlation's were found for the psychiatric control group ( $r= -0.1667$ ,  $p>0.05$ ). Again these findings were consistent with Lyon et al's results.

### Attributional Style Questionnaire Results:

Table 4, represents the means for scores of the internal attributions made on the ASQpf. for both positive and negative events

**Table 4:** Scores obtained for internal attributions on the ASQpf.

Group	positive events			negative events	
	mean	(sd)		mean	(s.d)
Experimental	25.38	(7.39)	<	26.76	(5.18)
Psychiatric control	23.15	(6.29)	<	27.92	(6.75)
Normal Control	28.15	(4.12)	>	21.53	(4.37)

*Note: higher scores indicate a higher internal attribution for the event.*

A repeated measures two-way ANOVA was computed to analyse these results for any significant effects or interactions (group x positive vs negative events). This indicated that the group main effect was not significant ( $F= 0.41$ , d.f.= 2,  $p> 0.05$ ), and neither was the condition main effect ( $F= 0.02$ , d.f.= 1,  $p> 0.05$ ) There was however, a significant group x condition interaction ( $F= 8.58$ , d.f.= 2,  $p<0.05$ ). This suggests that the relationship between scores for positive and negative events varied for the three groups.

**Figure 3:** Mean scores obtained by each group for both positive

and negative

events on the

ASQpf.

Mean scores

for internal

attributions

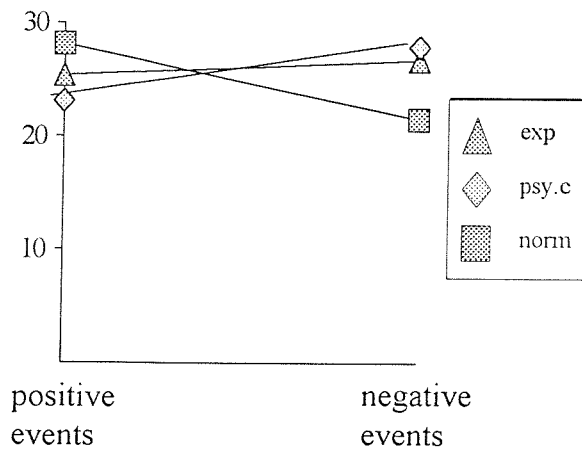


Figure 3, shows that this effect is due to the differences between the psychiatric and normal control group scores. That is, depressed individuals tend to attribute negative events to themselves and positive events to external sources, whereas the opposite is true for the control group. As can also be seen, the experimental group tend to show little contrast in their internality scores for both positive and negative events.

### Results from the Pragmatic Inference Task:

Table 5, represents the means for scores on the PIT for positive and negative events.

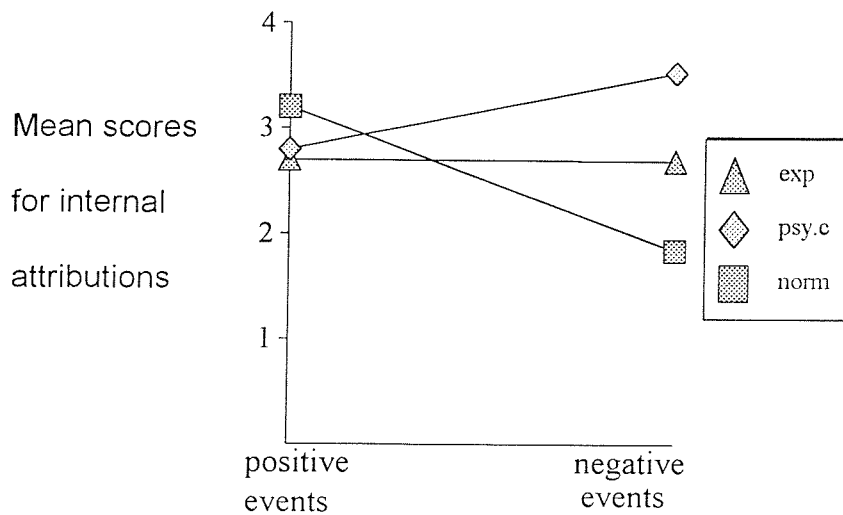
**Table 5;** Scores obtained for internal attributions on the PIT.

Group	Positive events			Negative events	
	mean	(sd)		mean	(sd)
Experimental	2.7	(1.41)	>	2.69	(1.18)
Psychiatric control	2.8	(1.28)	<	3.53	(0.88)
Normal control	3.2	(1.24)	>	1.84	(0.99)

*Note: Higher scores indicate a higher number of internal attributions for events.*

Repeated measures two-way ANOVA (group x positive v. negative events) was computed for the scores obtained on the PIT. This showed that the group main effect was not significant ( $F= 1.99$ , d.f.= 2,  $p> 0.05$ ), neither was the condition main effect ( $F= 1.17$ , d.f.= 1,  $p> 0.05$ ). However, the group x condition interaction was found to be significant. ( $F= 5.34$ , d.f.= 2,  $p< 0.05$ ) Figure 4, shows that this difference can be accounted for by the differences in the internal attributions made by the psychiatric control group and the normal control group for negative events. That is, individuals suffering from depression tend to attribute the cause for negative events to themselves and positive events to others or circumstances. Whereas the normal control group showed the opposite attributional style. In contrast to both groups the experimental group showed little difference as a group in their internal attributions for either positive or negative events. This finding is consistent with those found on the ASQpf.

**Figure 4:** Mean scores obtained by each group for both positive and negative events on the PIT.



To summarise, these results are in contrast to scores obtained by Lyon et al., on the ASQpf. for individuals with persecutory delusions, who showed a self-serving bias, attributing positive events to themselves and negative events to others. In the current study the experimental group showed an attributional style similar to those suffering from depression. In addition to this, unlike the two control groups, the those who experience auditory hallucinations showed little difference in their internal attributions for both positive and negative events irrespective of the measure of attributional style used.

## DISCUSSION

### **Major Findings of Current Study:**

Consistent with Lyon et al's findings for individuals who experienced persecutory delusions, individuals who experience malevolent auditory hallucinations exhibited moderate levels of depression. In keeping with the experimental hypothesis, individuals who hear voices appear to have relatively high levels of self-esteem that are similar to normal levels and significantly different to those suffering from depression. These findings were also consistent with those for deluded individuals.

Support was not found, however, for the hypothesis that individuals who experience auditory hallucinations show a self-serving bias in attributional style on direct measures, in this case the ASQpf. Instead the results showed that this group displayed a similar attributional style, for negative events, as those who suffer from depression. This was found on both direct and indirect measures of attributional style. Hence, they tended to attribute negative events to internal causes. This contrasts Lyon et al's findings that individuals who have persecutory delusions attribute negative events on the ASQpf. to an external source and positive events to an internal source.

Individuals with auditory hallucinations scored somewhere between the psychiatric and normal control groups on all measures. In terms of attributional style, the psychiatric control group attributed more negative events to themselves, in contrast to the normal control group who attributed more positive events to themselves. For the

experimental group, however, positive and negative events were equally likely to be attributed to internal causes.

One possible explanation for the lack of distinction made by the experimental group between positive and negative events, could be an insensitivity to the differences between the two. Alternatively, it could suggest a general bias towards attributing causes for events to the self.

A number of statements on the Beliefs About Voices Questionnaire (BAVQ) were consistently circled as being true by the experimental group. Eleven out of the thirteen participants reported their voice made them anxious and angry. However, only seven out of thirteen felt that their voice was very powerful. This is in contrast to Chadwick and Birchwood's (1994) findings that all the participants in their study thought that their voices were omnipotent.

The mean results for the experimental group showed the following profile: high self-esteem, moderate levels of depression and an attributional style similar to depressives on both measures. This atypical profile is in contrast to the psychiatric and normal control group who showed an inverse relationship between depression and self-esteem. Given the negative correlation found between the scores for the experimental group on the BDI and RSES, it remains possible that the less depressed participants in the group increased the mean score of self-esteem for the group as a whole. In addition to this, the groups' attributional style was very similar to the depressed group whose level of self-esteem was very low. Hence the experimental group showed a pattern that was in contrast to psychiatric and normal control group.



To summarise, individuals who hear voices exhibit a similar score profile to those suffering from persecutory delusions on self report measures of depression and self-esteem. However, they show a consistent attributional style across both direct and indirect measures which resembles that shown by individuals suffering from depression. This indicated that they did not show a self-serving bias on direct measures of attributional style as reported for individuals who experience persecutory delusions.

In order to explore explanations for these findings it is necessary to discuss any methodological issues that may have affected the current results.

### **Critical Discussion:**

**Measures used:** The Beck Depression Inventory as a self-report measure of depressive symptomatology encompasses feelings of low self-esteem (Beck & Beamesderfer, 1974). Hence it would generally be anticipated that individuals obtaining high scores for depression on this measure would obtain low scores on the Rosenberg Self Esteem Scale. The overall findings reported here for individuals who experience auditory hallucinations are in contrast to this. One possible explanation for this seemingly paradoxical finding could be that the BDI and the RSES are measuring different aspects of self-esteem. Alternatively, this finding could be in accordance with Winters and Neale's (1985) observation that low self-esteem is sometimes expressed overtly in depression, yet it is sometimes effectively avoided during a manic phase of bipolar disorder.

The findings reported here, are somewhat in contrast to the findings of Silverstone (1991) who reported relatively low self-esteem in psychotic individuals also using the RSES. Given that Lyon et al., also found high levels of self-esteem in deluded individuals one must question the inconsistency of findings using the Rosenberg Self Esteem Scale (RSES) for individuals suffering from psychotic symptoms.

One possible factor that might contribute to the inconsistencies in findings across studies is that the precise scoring mechanism for the RSES is not clear. Researchers appear to be using different scoring techniques, Silverstone's method resulting in high scores indicating low self-esteem, whereas the method devised by Slade and used in this study, produced high scores for high self-esteem. Moreover, both of these scoring methods lose significant data points, and therefore variance in the scores. This is because they fail to ascribe a score for each of the four categories "Strongly Agree", "Agree", "Disagree" and "Strongly Disagree". Rather they only score a maximum of one or two points for each response, so some of the more subtle differences between responses are lost.

In addition to this problem the statistical properties of the RSES in terms of reliability and validity have not been established. It could be argued, however, that the measure has good face validity, in that other studies have reported scores on the RSES showing an inverse relationship for those individuals who are depressed and normal control groups (Lyon et al., 1994 and Silverstone, 1991). However, the

reliability of the measure remains questionable on the basis of the different scoring methods and the findings reported.

With respect to the measures assessing attributional style, the results reported in this study suggest that the two measures used are measuring the same factor, in that overall scores on one measure are similar to those on the other. This is an important observation since there is no apparent evidence to support the validity or reliability of the PIT. The similarity of between scores obtained on both measures appears to be supportive of the validity of the PIT as a measure of attributional style. Despite these difficulties, participants in the two control groups responded in a similar fashion to the corresponding participants in Lyon et al's., study. This appears to support the reliability of the measure of internality on both measures.

As noted by Lyon (1991), the ASQpf. proved to be a difficult measure to administer. A number of participants from each group had difficulty understanding what was required of them on the task. A number of participants commented that it was a rather 'strange' measure, indeed one individual suffering from depression became quite frustrated by it.

In addition to this, some of the events forced incongruent responses. In particular, the event 'You are asked to make a farewell speech at a colleagues leaving party' caused this problem. A number of individuals in the experimental and psychiatric control groups initially responded to this item "Well I wouldn't be asked anyway." It could be argued that such a statement is indicative of an automatic negative thought (Beck et al. 1979). However, when encouraged to imagine that they

were in fact asked to make a speech, participants replied that they were asked because they knew the individual and therefore the cause was due to something about themselves. Such a response did not represent a depressive attributional style and was therefore not consistent with the participants' initial style of response.

**Sampling:** Considerable effort was made in this study to find a very specific sample of individuals. This was in line with the suggestion for symptom oriented research (Bentall 1990). The criteria used was quite stringent in order to make a clear comparison with Lyon et al's., work, and to ensure that findings were not attributable to the presence of persecutory delusions. An assumption was made that it would be possible to find a discrete group of individuals who had been diagnosed as suffering from a schizophrenic disorder, who experienced auditory hallucinations, but did not have persecutory delusions. As indicated in the methodology section such a group proved very difficult to identify. Interestingly, a number of individuals identified by staff as having auditory hallucinations and no persecutory delusions were found to have had significant delusional beliefs in the past. Although at the time of the research a number of these individuals clearly experienced hallucinations without persecutory delusions, it would seem that delusional beliefs often accompany such experiences at some time.

Given this finding it is necessary to question whether the sampling in this study was sufficiently stringent. It is possible that individuals in the sample were experiencing persecutory delusions at the time of participating. Also, it is possible that the inclusion of three individuals who had in the past had delusional beliefs affected the

data. Upon looking at the data for these participants it was noted that one individual who scored very highly on the BDI (25) showed a self-serving bias in attributional style on the ASQpf but not the PIT. Such a bias was not evident for the other two participants who had in the past experienced persecutory delusions. It is therefore possible that one of the participants' scores were affected by a history of persecutory delusions, but not all three.

One way of checking more vigorously would have been to check the medical notes of those recruited through the community psychiatric nurses. However, the information provided by the medical notes was not always straightforward. Beliefs about voices were sometimes described as delusions or the individual was described as being 'paranoid'. Such ambiguity is an issue for symptom oriented research and will be discussed in further detail below.

One way of overcoming the difficulties outlined above in terms of identifying a discrete sample would be to identify individuals at early onset. In this way a clear history could be provided by the individual themselves and those around them. One participant in this study fitted this criteria. Upon examining the data her scores were very similar to the overall picture except that her self-esteem score was slightly lower than the mean score for the group.

The possibility remains that such a discrete group do not exist. It may be that the experimental group provided very similar scores to the group of individuals suffering from depression, because they are more like this group than individuals who experience delusional beliefs. As stated earlier, hallucinations are quite common in

individuals who are suffering from depression (Winters & Neale, 1983). It is just such a proposal that would support the emphasis of research being on symptoms rather than syndromes (Bentall 1990a).

### **Interpretation of Findings:**

As already mentioned, individuals who experience malevolent auditory hallucinations show a similar profile on measures of self-esteem and depression, as individuals who have persecutory delusions, but fail to show a defensive attributional style. The current findings do not offer any clear model for understanding hallucinations. The main conclusion, however, is that individuals with hallucinations do not show a self-serving bias in attributional style on direct measures. On this basis one can hypothesise that the processes involved in hallucinations and delusions are somewhat different. Such differences could reflect differences in cognitive process or they could reflect functional differences. Given the high levels of self-esteem observed in both individuals with hallucinations and those with delusions, it is possible that both symptoms serve the same function of maintaining self-esteem, but that the process through which this is achieved is somewhat different.

A discussion of the possible processes involved will be addressed later. First consideration will be given to the possibility that auditory hallucinations serve to protect self-esteem. In keeping with psychodynamic understandings of schizophrenia, Arieti (1974) suggests that concepts such as self-esteem are maintained in some individuals by projecting uncomfortable inner conflicts, developed during early relationships,

through psychotic symptoms. He notes that although this projection can still be very painful, it is easier to believe that others say unpleasant things to you, than to own those beliefs oneself. In this way projection can allow for the maintenance of self-esteem. The finding that individuals who experience psychotic symptoms show high levels of self-esteem on self-report measures is consistent with this notion.

Again the more qualitative data from the Beliefs About Voices Questionnaire (BAVQ) supports the notion that once individuals have projected issues, self-esteem can be maintained by not owning self-generated thoughts and projecting them to an external source. Ten out of the thirteen participants who heard voices believed 'My voice is persecuting me for no good reason'. Such a belief indicates that once self-generated thoughts have been projected to an external source they can be discredited more easily. Hence one could argue that projection through the process of auditory hallucinations serves to maintain self-esteem.

Given that the current research does not support the hypothesis that a defensive attributional style is related to auditory hallucinations, Bentall & Slade's (1985) proposal that hallucinations are the result of a reality monitoring deficit remains the most supported model to account for the misattribution of internally generated events to an external source. Specifically, Bentall argues (1995, personal communication) that if thoughts are seen as automatic and unintended i.e. requiring low cognitive effort, then it is more difficult for individuals to locate the source. As a result he argues that individuals who experience auditory hallucinations find it difficult to locate the source of thoughts that are seen as unintended and automatic. It is possible that attributional

style is not implicated in the misattribution of internally generated events because attributional style is a way of viewing the world. As delusions are about an individual's relationship with the outside world one might expect that attributional style would be affected in these individuals. However, the absence of a self-serving bias in attributional style for individuals who experience auditory hallucinations could be because hallucinations arise in response to an internally generated event. In the absence of a bias in attributional style, the observed bias in reality monitoring could be one of the processes engaged to maintain self-esteem.

Recent work suggests a similarity between individuals who hear voices and those who suffer from obsessive compulsive disorder (Bentall 1995 personal communication). Following from this it is proposed that unintended thoughts, similar to those experienced by individuals suffering from obsessive compulsive disorder, are seen as coming from an external source due to a reality monitoring deficit. However, what is not clear in all of this discussion is why some individuals show such a bias when others do not. It is possible that the occurrence of hallucinations in an individual would be more likely if they a) have a reality monitoring bias and b) they have a history of traumatic events.

Another complex area is the relationship between voices and the beliefs individuals have about their experiences. One might expect that individuals who are constantly hearing a voice that they believe to be malevolent would not feel very highly about themselves, as they are frequently being reminded of their unworthiness. However, Chadwick & Birchwood (1994) noted that the content of auditory



hallucinations was not always related to the beliefs an individual has about them. For example, one of the participants heard a voice saying that she was a murderer yet she still scored 9 on the RSES which is consistent with normal levels of self-esteem. This participant also felt that her voice was punishing her for something she had done, but that it was also persecuting her for no good reason. This is important as one would predict that an individual's self-esteem would be low if they believed the content of their voice to be true and valid. As can be seen by this example, clarifying such beliefs is rather complicated, but potentially very important.

An attempt was made in this study to clearly distinguish between delusions and beliefs about voices. Earlier in this report it was highlighted that such a distinction is not entirely clear, and partly on this basis the hypotheses for testing were generated. Despite the finding that different cognitive processes are in operation for individuals who experience malevolent auditory hallucinations and persecutory delusions the clarification of whether beliefs about voices are in fact similar to delusions is unclear. Chadwick and Birchwood (1994) are the only researchers to date who have studied beliefs about voices and perhaps further research is called for to examine the nature of these beliefs in more detail. To add to this debate a number of the individuals in this study exhibited quite paranoid beliefs about their voices, for example, believing that the voice was of an ex-partner who was trying to harm and persecute them for no good reason. A question arises as to whether this paranoid process is similar to that seen in individuals who are diagnosed as suffering from paranoid disorders. Given that individuals who experience auditory hallucinations do

not exhibit a defensive attributional style it could be that beliefs about voices are in fact different to persecutory delusions.

A general observation of the experimental group, in relation to their beliefs about their voices, was that they were able to complete the voices questionnaire very quickly. This would indicate the presence of fairly fixed and well developed sets of beliefs about voices that did not require thinking time in order to answer the questions.

Finally, it is worthwhile commenting on the reported moderate levels of depression on the BDI in the experimental group. It may be that self-esteem is maintained to some extent by externalising uncomfortable internal processes, but that this results in depressive features, in that the resulting symptoms are themselves distressing. This would be consistent with Kingdon and Turkington's (1994) idea that depressive features are often found in response to psychotic symptoms. On the other hand levels of depression, as measured by the BDI, may be under represented. The fact that the experimental group showed a similar attributional style for negative events to a very depressed group of individuals may offer support for this possibility. Yet their scores on the self-report measures only showed moderate levels of depression.

### **Areas for future research:**

Given the recent developments in an area that was previously rather void of psychological understanding, innumerable possibilities for future research are

available. However, a number of areas arise directly from this work and are discussed below

Although there is a growing emphasis in the psychological literature of studying the symptoms as opposed to syndrome of schizophrenia, research to date has made little attempt to clarify the sample under investigation. That is to say papers like Lyon et al's (1994), looking at delusions have not clarified whether the individuals in their study also experienced auditory hallucinations. In the same way researchers into auditory hallucinations have not outlined whether their participants also presented with delusions (Judkins & Slade, 1981).

This piece of research has clearly attempted to study a distinct set of symptoms. When this sample is compared with Lyon et al's., using the same measures, differences in attributional style are observed. Although it is not clear whether Lyon et al's., sample also experienced hallucinations, the results discussed here do indicate that there are differences between the attributional style of this group and individuals who have not had persecutory delusion in the last two years. As a result it can be argued that different mechanisms are in operation, and that future research should endeavour to clarify samples in order to avoid results being attributable to unreported symptoms.

In line with the argument that supports a clear discrimination between symptoms for the purposes of research, it would be interesting to investigate the same area including individuals who had both hallucinations and persecutory delusions. Such an investigation may show that because these individuals have delusional beliefs that they would show a defensive attributional style. However, a strong case was made for the

fact that individuals included in this study had delusional beliefs about their voices, and they were not shown to have a self-serving bias on obvious measures of attributional style.

Given the similarities found between individuals suffering from depression and those who experience auditory hallucinations it would be interesting to research into the similarities and differences between voice hearers who are diagnosed as having a depressive disorder and those with schizophrenia.

Relating back to an issue discussed above, little research has investigated the nature of individuals beliefs about their voices. Such an investigation may, like Chadwick and Birchwood's work, prove very useful to the development of cognitive behavioural treatment of auditory hallucinations. Of particular interest would be further investigation of beliefs about the omnipotence of voices given the discrepancy between the findings reported here and those by Chadwick and Birchwood.

### **Implications of Findings:**

As already discussed authors such as Bentall (1990) and Jackson & Pilgrim (1988), have questioned the validity of the concept of schizophrenia. They argue that until validity can be verified, it would be more productive to study the pathologies underlying specific symptoms. The results of this study supports a suggestion that treatment for drug resistant symptoms should perhaps be more open to considering alternative approaches rather than concentrating solely on treatments that have been suggested for individuals suffering from schizophrenia.

Although the literature does acknowledge the presence of depression in individuals with psychotic symptoms (Barnes et al., 1989) the findings reported here and by Lyon et al., suggest that perhaps the significance of depressive features in the psychotic process should be addressed more clearly. Seven of the sample of individuals who experienced hallucinations reported in this study scored in the normal to mild range for depression, with three of these scoring nine which is the cut off point for this range. However, four individuals scored in the mild to moderate range with two individuals scoring in the severe range. Kingdon and Turkington note that such depressive symptoms are often seen as part of the negative symptoms. However, a number of possibilities have been discussed in this text that suggest these symptoms might benefit from being addressed independently. Irrespective of whether they are a reaction to the distressing nature of the positive symptoms and / or to the loss of life expectations, or they are related to the underlying causes of the psychotic symptoms they may benefit from psychological interventions.

The clinical picture seems to be in accordance with the current findings. Individuals do not initially present with issues of low self-esteem. However, feelings of low self-esteem and unworthiness are identified in individuals when the cognitive behavioural technique of Socratic questioning (Padesky 1994) is used to uncover core beliefs about voices. Such beliefs are often related to unresolved traumatic issues from the past. Evidence from the research into the incidence of childhood sexual abuse (Friedman and Harrison, 1984) supports the idea that individuals suffering from

psychotic symptoms often have traumatic backgrounds. This picture is also consistent with Arieti's theory that psychotic symptoms are an expression of unresolved conflicts.

In order to facilitate this idea two clinical anecdotes will be presented. One individual heard voices that told her to kill herself. Socratic questioning identified underlying beliefs about the voices suggesting that she believed that her family would be better off without her because of the bad things she had done in the past. Another perhaps clearer clinical example is of a man who heard a voice saying he was 'queer'. Again through the use of Socratic questioning it emerged that he had feelings of guilt related to sexual fantasies he experienced about a boy at school. Hence clinical data from participants indicates that levels of high self-esteem apparent on self-report measures may be misleading, in that hallucinations often relate to underlying feelings of unworthiness and guilt. Such examples have clear treatment implications in terms of addressing negative beliefs about the self through cognitive behavioural therapy.

The use of the BAVQ in this study has highlighted the complex belief systems that individuals have about their voices. In terms of treatment this tool might be very effective. For example, one belief is 'My voice is helping to keep me sane', such beliefs may inhibit an individual's desire to engage in treatment. It is also a way of exploring beliefs about voices without asking the individual to explicitly generate ideas that might be difficult to express.

### Conclusion:

Individuals who experience auditory hallucinations that they believe to be malevolent exhibit moderate levels of depression and high self-esteem on self-report measures. On both direct and indirect measures of attributional style they give similar responses to those suffering from depression, attributing negative events to themselves. Hence they do not show a self-serving bias in their attributional style. These results indicate that the reported levels of high self-esteem are not maintained by a defensive attributional style. Thus the findings suggest that different mechanisms are in operation for those who experience malevolent auditory hallucinations and those who experience persecutory delusions. As yet the exact the nature of this difference still remains unclear.

The findings also indicate that beliefs about voices are important, but that they involve somewhat different processes than delusions, in that they do not result in attributional biases.

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# HEALTHCARE

NHS Trust

Road,  
Telephone: ( ) - Fax (Executive) (Finance)

DJT/CM/Minutes/Dec.wk3

15 December 1994

Ms  
Road

Dear Ms

**An Investigation into the Attributional Style, Level of Depression and Level of Self-Esteem in Individuals Who Experience Auditory Hallucinations Which They Believe to be Malevolent**

I am pleased to advise you that the Trust's Research and Ethical Committee approved this research project at its meeting on 14 December 1994.

The Committee felt that this was a particularly interesting area of research and requested a copy of the final project results when these are available.

Yours sincerely



Secretary to the  
Research & Ethical Committee

cc Mr



Provider of Community & Mental Health Services

## APPENDIX II

Dear Dr.

I am a third year trainee on the University of Southampton training course in clinical psychology. As part of my training I am carrying out a research project. This project involves investigating the levels of self-esteem, depression and attributional style of individuals who experience auditory hallucinations. As a result I am trying to recruit people who experience auditory hallucinations and people who suffer from depression (for comparison purposes) who would be willing to take part in the study.

The project has been passed by the local ethics committee. I am writing to ask if you have any objection to my contacting your Registrar to see if any of your patients fit the above criteria and would be willing to participate. I would be most grateful if you could contact me, at the above address, if you have any objections to this.

Yours sincerely,

(Trainee Clinical Psychologist)

## APPENDIX III

WRITTEN INFORMATION SHEET TO BE HANDED TO ALL PARTICIPANTS.

Dear Participant,

Thankyou for agreeing to meet with me to discuss taking part in this project. The project is to do with:

- a) looking at people's general level of memory and cognitive functioning,
- b) their levels of happiness,
- c) their levels of self-esteem,
- and d) what they think are the causes of certain imaginary situations.

To complete the above measures will take up to one hour. The purpose of this project is to help further the understanding of different kinds of mental health problems.

All the information collected will be confidential and will not be used for any other purpose than for this study.

Thankyou for your help and I will be in contact to arrange for us to meet.

Yours faithfully,

(Trainee Clinical Psychologist)

## APPENDIX IV

## BAVQ

- |     |                                                                   |     |    |
|-----|-------------------------------------------------------------------|-----|----|
| 1.  | My voice is punishing me for something I have done.               | YES | NO |
| 2.  | My voice wants to help me.                                        | YES | NO |
| 3.  | My voice is persecuting me for no good reason.                    | YES | NO |
| 4.  | My voice wants to protect me.                                     | YES | NO |
| 5.  | My voice is evil.                                                 | YES | NO |
| 6.  | My voice is helping to keep me sane.                              | YES | NO |
| 7.  | My voice wants to harm me.                                        | YES | NO |
| 8.  | My voice is helping me to develop my special powers or abilities. | YES | NO |
| 9.  | My voice wants me to do bad things.                               | YES | NO |
| 10. | My voice is helping me to achieve my goal in life.                | YES | NO |



11.	My voice is trying to corrupt or destroy me.	YES	NO
12.	I am grateful for my voice.	YES	NO
13.	My voice is very powerful.	YES	NO
14.	My voice reassures me.	YES	NO
15.	My voice frightens me.	YES	NO
16.	My voice makes me happy.	YES	NO
17.	My voice makes me feel down.	YES	NO
18.	My voice makes me feel angry.	YES	NO
19.	My voice makes me feel calm.	YES	NO
20.	My voice makes me feel anxious.	YES	NO
21.	My voice makes me feel confident	YES	NO

not merit a separate diagnosis. However, when the depressive symptoms meet full criteria for a Major Depressive Episode (or are of particular clinical significance), a diagnosis of Depressive Disorder Not Otherwise Specified may be made in addition to the diagnosis of Schizophrenia, Delusional Disorder, or Psychotic Disorder Not Otherwise Specified. Schizophrenia, Catatonic Type, may be difficult to distinguish from Major Depressive Disorder, With Catatonic Features. Prior history or family history may be helpful in making this distinction.

In elderly individuals, it is often difficult to determine whether cognitive symptoms (e.g., disorientation, apathy, difficulty concentrating, memory loss) are better accounted for by a **dementia** or by a Major Depressive Episode in Major Depressive Disorder. This differential diagnosis may be informed by a thorough general medical evaluation and consideration of the onset of the disturbance, temporal sequencing of depressive and cognitive symptoms, course of illness, and treatment response. The premorbid state of the individual may help to differentiate a Major Depressive Disorder from dementia. In dementia, there is usually a premorbid history of declining cognitive function, whereas the individual with Major Depressive Disorder is much more likely to have a relatively normal premorbid state and abrupt cognitive decline associated with the depression.

#### ■ Diagnostic criteria for 296.2x Major Depressive Disorder, Single Episode

- A. Presence of a single Major Depressive Episode (see p. 327).
- B. The Major Depressive Episode is not better accounted for by Schizoaffective Disorder and is not superimposed on Schizophrenia, Schizophreniform Disorder, Delusional Disorder, or Psychotic Disorder Not Otherwise Specified.
- C. There has never been a Manic Episode (see p. 332), a Mixed Episode (see p. 335), or a Hypomanic Episode (see p. 338). **Note:** This exclusion does not apply if all of the manic-like, mixed-like, or hypomanic-like episodes are substance or treatment induced or are due to the direct physiological effects of a general medical condition.

*Specify* (for current or most recent episode):

**Severity/Psychotic/Remission Specifiers** (see p. 376)

**Chronic** (see p. 382)

**With Catatonic Features** (see p. 382)

**With Melancholic Features** (see p. 383)

**With Atypical Features** (see p. 384)

**With Postpartum Onset** (see p. 386)

### ■ Diagnostic criteria for 296.3x Major Depressive Disorder, Recurrent

- A. Presence of two or more Major Depressive Episodes (see p. 327).
- Note:** To be considered separate episodes, there must be an interval of at least 2 consecutive months in which criteria are not met for a Major Depressive Episode.
- B. The Major Depressive Episodes are not better accounted for by Schizoaffective Disorder and are not superimposed on Schizophrenia, Schizophreniform Disorder, Delusional Disorder, or Psychotic Disorder Not Otherwise Specified.
- C. There has never been a Manic Episode (see p. 332), a Mixed Episode (see p. 335), or a Hypomanic Episode (see p. 338). **Note:** This exclusion does not apply if all of the manic-like, mixed-like, or hypomanic-like episodes are substance or treatment induced or are due to the direct physiological effects of a general medical condition.

*Specify* (for current or most recent episode):

**Severity/Psychotic/Remission Specifiers** (see p. 376)

**Chronic** (see p. 382)

**With Catatonic Features** (see p. 382)

**With Melancholic Features** (see p. 383)

**With Atypical Features** (see p. 384)

**With Postpartum Onset** (see p. 386)

*Specify:*

**Longitudinal Course Specifiers (With and Without Interepisode Recovery)** (see p. 387)

**With Seasonal Pattern** (see p. 389)

## 300.4 Dysthymic Disorder

### *Diagnostic Features*

The essential feature of Dysthymic Disorder is a chronically depressed mood that occurs for most of the day more days than not for at least 2 years (Criterion A). Individuals with Dysthymic Disorder describe their mood as sad or "down in the dumps." In children, the mood may be irritable rather than depressed, and the required minimum duration is only 1 year. During periods of depressed mood, at least two of the following additional symptoms are present: poor appetite or overeating, insomnia or hypersomnia, low energy or fatigue, low self-esteem, poor concentration or difficulty making decisions, and feelings of hopelessness (Criterion B). Individuals may note the prominent presence of low interest and self-criticism, often seeing themselves as uninteresting or incapable. Because these symptoms have become so much a part of the individual's day-to-day

### ■ Criteria for Major Depressive Episode

A. Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure.

**Note:** Do not include symptoms that are clearly due to a general medical condition, or mood-incongruent delusions or hallucinations.

- (1) depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful). **Note:** In children and adolescents, can be irritable mood.
- (2) markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation made by others)
- (3) significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day. **Note:** In children, consider failure to make expected weight gains.
- (4) insomnia or hypersomnia nearly every day
- (5) psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down)
- (6) fatigue or loss of energy nearly every day
- (7) feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick)
- (8) diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others)
- (9) recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide

B. The symptoms do not meet criteria for a Mixed Episode (see p. 335).

C. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

D. The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hypothyroidism).

E. The symptoms are not better accounted for by Bereavement, i.e., after the loss of a loved one, the symptoms persist for longer than 2 months or are characterized by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms, or psychomotor retardation.

# SLADE

## APPENDIX VI

QUESTION NO.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Agree <sub>+</sub>	Agree	Disagree	Disagree <sub>+</sub>
2	1	0	0
2	1	0	0
0	0	1	2
2	1	0	0
0	0	1	2
2	1	0	0
2	1	0	0
0	0	1	2
0	0	1	2
0	0	1	2

**Appendix VII**

**1. You win a competition.**

A. Write down the one major cause.

B. Is the cause of you winning a competition due to something about you or to something about other people or circumstances? (circle one number)

totally due									totally due
to others	1	2	3	4	5	6	7		to me

**2. Your steady romantic relationship ends.**

A. Write down the one major cause.

B. Is the cause of the end of your relationship due to something about you or to something about other people or circumstances? (circle one number)

totally due									totally due
to others	1	2	3	4	5	6	7		to me

**3. You pass someone who smiles at you.**

A. Write down the one major cause.

B. Is the cause of this person smiling due to something about you or to something about other people or circumstances? (circle one number)

totally due									totally due
to others	1	2	3	4	5	6	7		to me

**4. You experience a major personal injury.**

A. Write down the one major cause.

B. Is the cause of this injury due to something about you or to something about other people or circumstances? circle one number)

totally due								totally due
to others	1	2	3	4	5	6	7	to me

**5. Going on a journey to a strange place you get there very quickly.**

A. Write down the one major cause.

B. Is the cause of getting there quickly due to something about you or to something about other people or circumstances? circle one number)

totally due								totally due
to others	1	2	3	4	5	6	7	to me

**6. Your spouse (girlfriend/boyfriend) has not been paying you much attention lately.**

A. Write down the one major cause.

B. Is the cause of them not paying you much attention due to something about you or to something about other people or circumstances? circle one number)

totally due								totally due
to others	1	2	3	4	5	6	7	to me

**7. You are asked to make a farewell speech at a colleagues leaving party.**

A. Write down the one major cause.

B. Is the cause of being asked to make the speech due to something about you or to something about other people or circumstances? circle one number)

totally due									totally due
to others	1	2	3	4	5	6	7		to me

**8. You are involved in a car accident.**

A. Write down the one major cause.

B. Is the cause of the accident due to something about you or to something about other people or circumstances? circle one number)

totally due									totally due
to others	1	2	3	4	5	6	7		to me

**9. You win money in game of cards.**

A. Write down the one major cause.

B. Is the cause of you winning money due to something about you or to something about other people or circumstances? circle one number)

totally due									totally due
to others	1	2	3	4	5	6	7		to me



10. Your room-mate tells you that s/he is switching to another room.

A. Write down the one major cause.

B. Is the cause of your room-mate moving due to something about you or to something about other people or circumstances? (circle one number)

totally due									totally due
to others	1	2	3	4	5	6	7		to me

11. You enjoy yourself at a social event.

A. Write down the one major cause.

B. Is the cause of you enjoying yourself due to something about you or to something about other people or circumstances? (circle one number)

totally due									totally due
to others	1	2	3	4	5	6	7		to me

12. You have trouble with one of your instructors.

A. Write down the one major cause.

B. Is the cause of you having trouble due to something about you or to something about other people or circumstances? (circle one number)

totally due									totally due
to others	1	2	3	4	5	6	7		to me

## Appendix VIII

### ANGLICISED VERSION OF THE PRAGMATIC INFERENCE TASK (Transcript of Vignettes presented on audio-tape)

A. You decide to open your own dry cleaning shop in a small but growing part of town near the border. Your shop will be the only one of its kind for miles around. In the first year of business, the town's population doubles and your business prospers. Your advertising campaign is a big success and the reactions from your customers indicate that the cleaning is of good quality. Your gross sales exceed expectations. You wonder whether it would be to your advantage to open chain of shops, so you go to the bank and apply for a loan. As you had hoped, the bank approves the loan.

B. You have been looking unsuccessfully for a job as a factory worker. The unemployment rate has risen lately and sales have been hurt because of foreign competition. You decide to talk to friend about the situation. He reminds you that you've had difficulties with management in the past because of tardiness and a poor performance record. Your search for a job is frustrating and you go for six weeks without finding a job.

C. You pride yourself on your appearance. You recently spent some money on new clothes and a new hair style. The next day you receive a number of compliments at work, especially from one colleague. However, this person angers you later on in the day, by asking you for a lift home. This is a great inconvenience because this person lives quite a distance from your destination.

D. A neighbour mentions to you that their teenager has a drinking problem. You wonder if the neighbour is going to ask you for advice. This neighbour is an independent and headstrong person who rarely seeks advice from others. You are uncomfortable because you do not have any children of your own and are not very good at counselling people. The neighbour leaves without asking for your advice.

E. You and a colleague decide to go out one night for a bite to eat. You wonder whether you will have a good time since your colleague is a moody person. The night starts out badly when you forget to call a taxi for both of you and you also fail to make dinner reservations. You and the colleague decide to go elsewhere for a meal. The food and service are unsatisfying at the other place, especially for the colleague. On the trip home the colleague asks you a lot of questions about how you were able to receive a recent promotion from the boss and mentions that no one else in the office has received such a promotion in over two years. The questioning indicates a hostile tone.

F. You have a date with somebody new. You go to a film and your date has a poor opinion of it. And for most of the evening, your date does not say much. You also do not initiate much conversation, and when you do talk you have a difficult time keeping up your end of the conversation. When the evening is over, your date expresses disappointment about how the evening went.

G. A lonely, elderly person sits next to you on a park bench while you are reading a book and begins to talk to you. You are not surprised by this, since strangers are often friendly towards you. After some small talk, you find out this person is down on their luck and needs help. You and the person talk for some time, and it seems to you that this person continues to enjoy your company.

H. The company you work for is always busy around the holiday time. It is the day before the Christmas holiday and everyone in the office is exhausted. At short notice you decide to throw an office party. You prepare an interesting mix of gin and fruit punch, which draws a number of compliments from others. Everyone seems to enjoy themselves. You make friends with a couple of new colleagues and everyone laughs at your jokes.

I. You give an important talk on a controversial topic to a group of town residents. You present a point of view that in the short term is unpopular, but will probably benefit the town in the long run. The audience reacts negatively, especially to your suggestion that the town ought to purchase more lorries. The next speaker presents a point of view that is opposite to your own. As you listen to the speech, you notice that this individual is a very fluent and persuasive speaker. It becomes quite obvious that the second speaker receives a positive reaction from the audience.

J. Recently you haven't done all the work your boss expects of you. The boss begins to complain about your performance. The job is sometimes difficult for you because it is quite technical and the hours are a burden. Also you recently discover through the office grapevine that the boss' nephew is very interested in your position.

K. You take a college course in English Literature because you like to write. One of your assignments is to write a paper on one famous contemporary English author. You chose John Fowles, a decision which is met with praise by the teacher who is a great fan of Fowles. The teacher tells you that Fowles is perhaps the most influential contemporary writer. You work hard on the paper and think it is well written. You are pleased when the paper is returned. The teacher comments that your interpretation of Fowles' work is consistent with her own, and you receive an excellent mark.

L. You recently receive a salary increase at work. While you are a bit surprised by this since you had no prior notice about such a raise, you do feel that you have been a reliable worker. Indeed, others have received wage increases in the past when you did not. The day after you receive this news, a memo is sent to all workers indicating that in the last few months a number of employees have voluntarily left the company. The company's owner offers to be sensitive to suggestions to improving job satisfaction.

A 1. What kind of shop do you open?

- A. Hardware.
- B. Dry cleaning.

A 2. In what part of the country is the town located?

- A. Birmingham.
- B. Carlisle.

A 3. Where is the loan obtained?

- A. A Finance company.
- B. Bank

\*A 4. What is the reason for the success of your business?

- A. You are a clever businessman.
- B. You had no competition.

B 1. Why do you discuss your situation with a friend?

A. Need advice.

B. Your friend is recruiting staff.

B 2. How long do you go for without finding work?

A. Six weeks.

B. Six months.

\*B 3. Why do you have trouble finding work?

A. Poor job record.

B. Poor job market.

B 4. What kind of job interests you?

A. A big company.

B. A small company.

\*C 1. Why do you receive a compliment from your colleague?

A. Your appearance is genuinely perceived as worthy of a compliment.

B. This person needs a favour from you.

C 2. Why do you spend money on your appearance?

A. Self pride.

B. You enjoy compliments.

C 3. Who gives you the most compliments at work?

A. Same sexed people.

B. Opposite sexed people.

C 4. On what do you spend your money?

A. Shoes.

B. Hair style.

D 1. Who comes to you for advice?

A. Colleague.

B. Neighbour.

D 2. What is the nature of the problem?

A. Stealing.

B. Drinking.

D 3. What gender is the person with the problem?

A. Male.

B. Female.

\*D 4. Why doesn't the neighbour ask you for advice?

A. This person is the type not to ask for advice.

B. You are inexperienced in this area.



E 1. Where do you and the colleague go?

A. To a film.

B. To a restaurant.

E 2. At what time of day does the activity take place?

A. Afternoon.

B. Evening.

\*E 3. Why does the colleague act hostilely towards you?

A. The person is jealous of you.

B. The person is angry that you forgot to call a taxi and make dinner reservations.

E 4. Who initiates the activity?

A. You.

B. The colleague.

F 1. With whom do you have a date?

A. A close friend.

B. A new acquaintance.

F 2. Where do you go on the date?

A. To a film.

B. For dinner.

\*F 3. Why does the date go badly?

A. Your date was a boring person.

B. You were not interesting enough for the person.

F 4. Where did you go after the date?

A. For a drive.

B. Nowhere.

G 1. Who starts the conversation with you?

- A. A tourist.
- B. A stranger.

\*G 2. Why does this person talk with you for so long?

- A. You are friendly.
- B. This person wants your help.

G 3. What are you doing when you are approached by this individual?

- A. Reading a newspaper.
- B. Reading a book.

G 4. Why is this person down on their luck?

- A. Illness.
- B. Deserted by family.

\*H 1. Why is the party a success?

- A. Your colleagues are in the mood to unwind.
- B. You know how to throw a good party.

H 2. What is popular at the party?

- A. The drink.
- B. The food.

H 3. At what time of year is the party?

- A. Christmas.
- B. Summer.

H 4. Is the party well attended?

- A. Yes.
- B. No.

I 1 Where do you give the speech?

A A political convention.

B A town hall meeting.

I 2. Why does the audience react negatively to your speech?

A. You were an ineffective speaker.

B. The second speaker took the less controversial viewpoint.

I 3. How do you learn about the audience's reaction to the second speaker?

A. Someone tells you.

B. You witness it.

I 4. What is being discussed at the meeting?

A. Road repair.

B. Rubbish removal.

J 1. With whom do you talk about your problems at work?

A. No one.

B. Your spouse.

J 2. What kind of skill does this job require?

A. Manual.

B. Technical.

\*J 3. Why does your boss complain about your work performance?

A. You have poor technical skills.

B. The boss wants you to leave to make room for a relative.

J 4. What shift do you work?

A. Day.

B. Night.

K 1. What kind of course do you take?

A. English Literature.

B. Writing course.

K 2. Why do you take the course?

A. Compulsory.

B. Pleasure.

\*K 3. Why does the teacher like your paper?

A. You are a good writer.

B. Your viewpoints are similar to the teachers.

K 4. Why do you choose to write about Fowles?

A. He is your favourite author.

B. The teacher tells you to.

L 1. What type of income raise do you receive?

A. Bonus payment.

B. Wage increase.

L 2. How do you hear about the raise?

A. A memo.

B. Told personally.

\*L 3. Why do you get the raise?

A. Company wants to prevent further resignations.

B. You deserve the raise because of good performance.

L 4. Who else gets a raise?

A. No one.

B. Everyone.