

1 Running Head: Interpersonal beliefs in persecutory delusions

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4 Relationships between self, others and persecutors in individuals with persecutory delusions:

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A Repertory Grid Analysis.

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1 Relationships between self, others and persecutors in individuals with persecutory delusions:
2 A Repertory Grid Analysis.

3 Abstract

4 The purpose of the current study was to examine the way individuals with persecutory
5 delusions construe the self, others and their main persecutor with reference to the constructs
6 of malevolence and omnipotence, and examine the extent to which these interpersonal beliefs
7 link to distress, self-esteem and delusion conviction. Repertory grid methodology was used
8 to explore interpersonal beliefs about malevolence and omnipotence in a sample ($N=30$) of
9 individuals with current persecutory delusions (mean age 36.4 years; 62% male and 53% of
10 white ethnicity). Participants also completed measures of emotional distress (depression and
11 anxiety) and self-esteem. The findings suggested that persecutors were construed as more
12 omnipotent and malevolent than both the self and others; others in turn were construed as
13 more omnipotent and malevolent than the self. Beliefs about self as powerful were
14 associated with lower anxiety, depression and higher self-esteem, and beliefs about
15 persecutors' omnipotence predicted delusion conviction. As with voices, the concepts of
16 power/omnipotence and malevolence/benevolence appear to be important constructs when
17 seeking to understand the relationship between individuals and their perceived persecutors.
18 These findings support working therapeutically with negative schematic beliefs about self,
19 others and persecutors, which is consistent with a person-based cognitive therapy model of
20 distressing psychosis.

21 *Keywords:* Interpersonal Beliefs, persecutory delusions, Anxiety, Depression,
22 repertory grid.

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1 Interpersonal beliefs about the self and others are important, both theoretically in the
2 formation and maintenance of persecutory beliefs and in clinical practice as important targets
3 in cognitive-behavioural therapy (Chadwick et al, 1996; Garety et al, 2001, Freeman et al,
4 2002; Trower & Chadwick, 1995). The first empirical study of interpersonal beliefs was
5 conducted by Chadwick and Trower (1997), who compared individuals with current
6 persecutory beliefs (n=23) with people with depression (n=22) and matched controls (n=23).
7 The study found negative other-self (e.g. other people see me as a bad person) and self-
8 evaluative beliefs (e.g. I am a bad person) were highest in those with depression; those with
9 persecutory beliefs were higher than nonclinical controls. Negative self-other beliefs (e.g.
10 other people are worthless) were higher in those with persecutory delusions than in both other
11 groups, who did not differ on this dimension. Further research suggests that the significance
12 of negative interpersonal beliefs is through their link with both delusional and emotional
13 distress (Smith et al, 2006), such that individuals with more negative beliefs about themselves
14 and others were also more preoccupied with, and distressed by, their delusion. In addition,
15 exposure to an urban environment has been shown to be associated with more negative views
16 of others in individuals with persecutory delusions (Ellett, Freeman & Garety, 2008). These
17 studies support the proposal by Chadwick et al. (1996, Chapter 1) that distress in psychosis
18 results from a combination of ‘delusional’ and negative interpersonal beliefs.

19 Where much of the research on auditory hallucinations has explored people’s
20 relationship with their voices, research has yet to examine interpersonal beliefs as one aspect
21 of people’s relationship with their perceived persecutors. In relation to voices, Chadwick and
22 Birchwood (1994) described how individuals’ relationships with voices are understandable
23 once key beliefs about voices are laid bare. For example, the majority of voices in clinical
24 settings are perceived as both omnipotent and malevolent, key dimensions in terms of

1 understanding a person's behavioural and emotional relationship with voices (Birchwood &
2 Chadwick, 1997). Only one study has been conducted that examined individuals' beliefs
3 about the power of their persecutors (Green et al, 2006). The majority of participants
4 (77.3%) perceived their persecutor to be more powerful than they themselves – though
5 persecutors in this study were not typically attributed the omnipotence so commonly
6 attributed to voices – and the power differential between self and persecutor was significantly
7 associated with depression. This is consistent with empirical evidence in the voices
8 literature, which suggests that individual beliefs about the omnipotence (power) and
9 malevolence of voices are associated with both distress and behavioural disturbance
10 (Birchwood & Chadwick, 1997).

11 The present study uses repertory grid methodology, developed from Personal
12 Construct Theory (PCT: Kelly, 1955), to explore in a dynamic way people's interpersonal
13 relationships with their perceived persecutors. A fundamental premise behind PCT is that
14 people actively construct their social worlds by organising experience according to bipolar
15 constructs – for example, good-bad, malevolent-benevolent, or attractive-unattractive.
16 According to PCT, two key motivations for this construction are a wish to predict and to
17 control the world. A person's construct system is a complex social template made up of
18 relationships among key constructs, which are tested and refined through experience. Within
19 PCT, the main methodology for understanding a person's construct system is use of the
20 repertory grid technique. This is an interviewing technique for identifying the ways in which
21 a person construes, or makes sense of, their experiences. There are different applications of
22 repertory grid technique, though all involve rating key people (termed elements) against key
23 bipolar constructs. The data generated consist of a set of Likert ratings, which allows for both
24 individual and collective analysis. Data can be presented visually to create a map of a

1 person's construct system – for example, depicting spatially the respects (i.e. constructs) in
2 which one person (e.g. a persecutor) is similar to and different from another (e.g. self). It is
3 this unique combination of individual richness allied to statistical analysis of group data that
4 makes repertory grid technique so valuable. Also, the structure inherent in the methodology
5 minimises researcher interpretation and bias. A final benefit of the methodology is in its
6 simplicity and ease of use. Repertory grid methodology has been used extensively in
7 psychopathology research to study depression (Haltenhof et al., 1996), obsessive compulsive
8 disorder (Rigdon & Epting, 1983), phobias (Sanz et al., 1996), schizophrenia (Bannister,
9 1965; Bannister & Fransella, 1965) and more broadly within the context of research into
10 psychotherapy (Winter, 2003c) - but never before with individuals with persecutory
11 delusions.

12 The aim of the current study was to use repertory grid methodology to explore
13 similarities and differences in how individuals construe themselves, their main persecutor,
14 other people in general, and how they believe others construe their main persecutor. Beliefs
15 known to be important in the voices literature, namely the concepts of malevolence and
16 omnipotence (Chadwick & Birchwood, 1994; Birchwood & Chadwick, 1997) were used as
17 supplied constructs to address the following research questions: (1) is there a difference in the
18 way individuals with persecutory delusions construe the self, others and their main
19 persecutor, in terms of the constructs of malevolence and omnipotence? (2) is there a
20 difference between the way individuals view their persecutors, and how they believe other
21 people view their persecutors? (3) are the constructs of malevolence and omnipotence
22 associated with emotional distress (depression and anxiety), and self-esteem? and (4) do
23 beliefs about the malevolence and omnipotence of persecutors predict delusion conviction?

24

Method

Participants

Participants with persecutory delusions were recruited from inpatient (n=15) and outpatient (n=15) services in two London NHS Foundation Trusts. In total, 80 people were approached to take part in the study; 22 did not meet criteria for presence of a current persecutory delusion. Of those eligible for the study, 30 (52%) gave consent. The primary inclusion criteria were diagnosis of a psychotic illness, as identified for the purposes of the research by a Consultant Psychiatrist in the participant's clinical team, and a current persecutory belief, established through clinical interview and a score of 3 or above on item 8 (persecutory delusion item) of the Scales for the Assessment of Positive Symptoms (SAPS; Andreasen, 1984). Exclusion criteria were a primary diagnosis of alcohol or substance misuse, intellectual disability and known brain injury. Mean length of illness was 11.6 years (sd=8.53), with an average of four episodes (range = 2-10, sd=2.09). Sample size was based on published repertory grid research.

Measures

Positive and Negative Syndrome Scale (PANSS; Kay, 1991) – Positive Symptom Subscale. To assess for the presence of the positive symptoms of psychosis, the positive subscale of the PANSS was administered. The PANSS is a semi-structured interview measuring 32 symptoms divided into three groups: positive symptoms, negative symptoms and general psychopathology. Symptoms are measured over the past 72-hours on a seven-point Likert scale (anchored absent to extreme). Each scale contains a detailed description for each symptom and rating point. For the purpose of the present study, only the positive subscale was used. Kay et al. (1987) reported good internal consistency for the positive scale

1 ($\alpha = .73$), and test-retest reliability (0.8 across a 3 to 6 month period). Further studies reported
2 satisfactory inter-rater reliability, criterion rated validity and construct validity (Kay et al.,
3 1988). Internal consistency for the positive scale was found to be acceptable in the present
4 sample ($\alpha = .70$).

5 **Psychotic Symptom Rating Scales (PSYRATS; Haddock et al., 1999).** The
6 PSYRATS is a 17-item multidimensional measure of delusions (6 items) and auditory hallucinations
7 (11-items). The researcher rates the dimension being measured on a 5 point scale (0-4) according to
8 how the participant felt over the past week. Higher scores reflect higher levels of the dimension being
9 measured. Inter-rater reliability for the scale is regarded as very good (intra-class correlation
10 coefficients for items range from 0.79 to 1.0). For the purpose of the present study, only the
11 conviction item on the delusions scale was used. The delusions scale is reported to correlate
12 significantly with the PANSS delusion item (0.43), positive subscale (0.20) and total score (0.18)
13 indicating satisfactory concurrent validity (Drake, Haddock, Tarrier, Bentall & Lewis, 2007). Ratings
14 were made by two doctoral researchers, who both received training in how to administer the measure
15 prior to data collection.

16 **Depression Anxiety and Stress Scale (DASS; Lovibond & Lovibond, 1995).** The
17 DASS is a self report scale with three subscales designed to measure the negative emotional
18 states of depression, anxiety and stress. The 42-item measure was used in the current study,
19 although only the subscales of depression and anxiety were used. Each subscale consisted of
20 14-items with a 0-3 scale, with higher scores representing higher levels of emotional distress.
21 The Depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation,
22 lack of interest/involvement, anhedonia, and inertia. The Anxiety scale assesses autonomic
23 arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious
24 affect. Participants are asked to rate the frequency/severity of each item over the past week.
25 Clinical cutoff scores for the two scales are as follows: Depression: normal (0-9); mild (10-

1 13); moderate (14-20); severe (21-27) and extreme (28+). Anxiety: normal (0-7); mild (8-9);
2 moderate (10-14); severe (15-19) and extreme (20+).

3 The scales of the DASS have been shown to have high internal consistency with
4 Cronbach's alpha for anxiety and depression, .90 and .95 (Crawford & Henry, 2003). The
5 DASS has previously been used in studies with people with persecutory delusions (Freeman
6 et al., 2005). Internal consistency was high in the present sample for both the depression ($\alpha =$
7 .96) and anxiety ($\alpha = .88$) subscales.

8 **Rosenberg Self-Esteem Scale (RSES: Rosenberg, 1965).** The RSES is a measure of
9 global self-esteem and consists of 10 items. Participants indicate the extent to which they
10 agree with each item on a scale of 1 "strongly agree" to 4 "strongly disagree". The RSES has
11 good psychometric properties, with test-retest correlations ranging from .82-.88 and
12 Cronbach's alpha ranging from .77-.88 (Rosenberg, 1986). In the present sample,
13 Cronbach's alpha was good ($\alpha = .85$).

14 **Repertory Grid (Kelly, 1955).** A repertory grid matrix was developed by the
15 researchers, based on the principles of repertory grid construction, which contained four basic
16 components: the topic, elements, constructs and ratings (Jankowicz, 2004). The topic
17 represents the focus of the investigation, and in the present study this corresponded to
18 negative interpersonal beliefs.

19 **Element Selection.** Elements are the objects that are the focus or examples of a
20 particular topic. The elements included in the current study were predefined by the
21 researchers in order to evaluate relationships of interest based on previous literature (e.g.
22 Smith et al., 2006), and in order to allow statistical analysis across multiple participant grids.
23 The participant's relationship with the persecutor was the primary interest, and therefore

1 represented one element. We were also interested in how the persecutor was construed
2 against ratings of both the self and other people in general. In addition, participants were
3 asked to make judgements about how they believed other people would rate their persecutor.
4 Therefore, in the current study, there were four elements: the self, others in general, main
5 persecutor and others' view of main persecutor.

6 ***Construct Selection.*** Constructs are the units of description or ideas that are held
7 about the elements - in the current study, there were two identified constructs, beliefs about
8 malevolence and omnipotence. Constructs were predefined by the researchers in order to
9 allow statistical analysis across multiple participant grids. This approach to construct
10 selection (i.e. using predefined constructs as opposed to eliciting them directly from
11 participants) is typical when making comparisons between participants' responses on a
12 particular set of elements (Edwards et al., 2009), and is acceptable provided that they are
13 relevant to the area of interest, unambiguous, and meaningful (Fransella et al, 2004). To
14 ensure the constructs were relevant to the area of interest they were derived from an
15 established measure of interpersonal beliefs in the voices literature, the Beliefs About Voices
16 Questionnaire – Revised (BAVQ-R, Chadwick et al, 2000), which specifically measures
17 omnipotent and malevolent beliefs about voices. Each construct was therefore measured
18 using six bipolar items with two contrasting poles. The six bipolar items measuring the
19 malevolence construct were: kind-evil; protective-threatening; harmless-dangerous; friendly-
20 hostile; respectful-disrespectful; helpful-unhelpful. The six items measuring omnipotence
21 were: weak-powerful; inferior-superior; submissive-dominant; gentle-controlling;
22 unimportant-important; unknowledgeable-knowledgeable. Items from the BAVQ-R were
23 therefore used to define the emergent construct pole (i.e. evil, dangerous etc) for malevolence
24 and omnipotence items. To define the contrasting pole, opposite descriptors were used (i.e.

1 kind, harmless), which is typical when supplying constructs to facilitate statistical analysis
2 (Edwards, McDonald & Young, 2009).

3 **Ratings.** Individuals were required to rate each element against each bipolar item, on
4 a Likert scale from one to five. Items were scored such that the emergent construct pole (e.g.
5 evil, threatening, dangerous) always had a rating of 5 and the contrast pole always had a
6 rating of 1. Total scores for the two construct groups were calculated by summing Likert
7 ratings for each of the six bipolar items. Total scores for each construct therefore ranged
8 from 6-30, with higher scores indicating higher levels of malevolence and omnipotence.

9 **Reliability of constructs**

10 We conducted three analyses to assess reliability of constructs. First, to calculate
11 inter-rater reliability, two independent raters were given the list of 12 bipolar items and asked
12 to assign them to either the malevolence or omnipotence construct. This revealed a kappa
13 value of 0.86, indicating a very good level of agreement between raters (Altman, 1991).
14 Second, we calculated internal consistency of the six bipolar items measuring each construct,
15 which we would expect to be high. This revealed alpha coefficients of .76 for malevolence
16 and .84 for omnipotence, indicating good internal consistency (alpha coefficients of 0.7 or
17 above are classed as acceptable – see Kline, 1999). Third, reliability of constructs was
18 assessed by computing an intensity correlation for each of the two constructs, as
19 recommended when conducting repertory grid analyses (e.g. Fransella et al, 2004). An
20 intensity correlation measures the degree of integration of the individual bipolar items (e.g.
21 kind-evil, weak-powerful etc) that form each construct (malevolence & omnipotence), such
22 that the average correlation coefficient across all participants is taken to determine how
23 integrated the constructs are. We would therefore expect the coefficients to be moderate-

1 high, reflecting the degree of integration of the bipolar items. This revealed correlation
2 coefficients (Pearson's r) of .59 for malevolence, and .47 for omnipotence. This indicates a
3 high degree of correlation among bipolar items pertaining to each of the two constructs.
4 Taken together, these analyses suggest the items forming the two construct groups reliably
5 measure each construct.

6 **Procedure**

7 The study received full ethical approval, and all participants gave written informed
8 consent. Fifteen community-based Mental Health Teams and fifteen Inpatient Teams were
9 approached to identify participants who met the initial inclusion criteria. Participants were
10 approached by their keyworker and provided with an information sheet that outlined the
11 study and permission was sought to be contacted by the researcher regarding the study. If
12 permission was gained, an initial meeting was arranged to determine eligibility and provide
13 the participant with a clear description of the study and an opportunity to ask questions.

14 Participants took part in a standardised structured interview with one of two doctoral
15 researchers. Prior to data collection, both researchers received training in repertory grid
16 methodology by the supervisor to ensure consistent and standardised administration.
17 Participants were all offered the same introductory information prior to commencing the
18 interview. The structured interview consisted of three parts: (1) To elicit their persecutory
19 belief, participants were first asked to describe the harm that was occurring or about to occur,
20 which included asking them to identify their main persecutor. This ensured that the main
21 persecutor was identified reliably prior to participants completing the repertory grid; (2)
22 participants then completed the supplied repertory grid, and were asked to rate the 12 bipolar
23 items for each of the four elements (self, main persecutor, others in general, others' view of

1 persecutor) on a scale of 1-5. Prior to conducting the ratings, the researcher confirmed the
2 main persecutor identified by the participant in the first part of the interview, and clarified
3 that “others in general” referred to any persons that did not form part of their persecution (i.e.
4 so that others did not include secondary or tertiary persecutors), and (3) following completion
5 of the repertory grid, participants then completed all remaining measures.

6 **Data Analysis**

7 All analyses were conducted using IBM SPSS Statistics 19.0 (2010). First, to address
8 research question one concerning differences between beliefs about self, others in general and
9 the main persecutor, all 12 bipolar items were analysed using an individual difference
10 unfolding solution. This is a form of multidimensional scaling, in which distances are
11 calculated between the constructs (malevolence, omnipotence) and elements (self, others,
12 persecutor) across participants, and organised in a multi-dimensional space. This provides a
13 visual representation of the relationship between the elements and construct groups across the
14 entire dataset. Next, scores for the two construct groups were calculated by summing the
15 Likert ratings for each of the six bipolar items. Therefore, total scores for each of the two
16 constructs ranged from 6-30. Differences between the elements (self, others, persecutor)
17 across the two construct groups (malevolence & omnipotence) were then computed using
18 one-way analysis of variance (ANOVA). To address the second research question regarding
19 whether individuals with persecutory delusions believe that other people share the same view
20 of their persecutor, paired samples t-tests were conducted to examine differences between the
21 two elements (persecutor and others’ view of persecutor) across the constructs of
22 malevolence and omnipotence. To address the third research question concerning whether
23 there were any associations between the three elements (self, others in general and main
24 persecutor) and clinical measures (anxiety, depression & self-esteem), a series of correlations

1 were computed. Finally, to address the fourth research question about whether beliefs about
2 persecutor malevolence and omnipotence predicted conviction in delusions, a multiple
3 regression analysis was performed. All hypothesis testing was two-tailed.

4 **Results**

5 **Clinical and Demographic Data**

6 Demographic and clinical data are presented in Table 1. Participants were aged between
7 23 and 64 years of age, ($M_{age} = 39.6$, $sd = 11.1$), the majority were male (62%), of a white
8 ethnicity (55%), unemployed (93%) and with a diagnosis of Paranoid Schizophrenia (76%).
9 In terms of the clinical characteristics of the sample, mean total scores indicated that the
10 sample reported moderate levels of both depression and anxiety.

11 *Insert Table 1 about here*

12 **How do individuals with persecutory delusions construe the self, others and their main** 13 **persecutor?**

14 To determine how individuals with persecutory delusions construe the self, others and
15 their main persecutor in relation to the constructs of malevolence and omnipotence, the
16 repertory grid data were analysed using an individual differences unfolding solution. This is
17 a form of multidimensional scaling, and provides a visual representation of the relationship
18 between constructs and elements across the entire dataset. First, it is necessary to determine
19 the goodness of fit of the solution, which is determined by calculating a stress score (ϕ) and
20 the percentage of variance accounted for by the solution. The stress score is calculated using
21 a phi coefficient, in which scores range from zero to one (Kruskal & Wish, 1978). The stress
22 score is essentially a sum of the inaccuracies in the solution, therefore a lower score
23 represents a better fit. The solution produced an acceptable stress score ($\phi = 0.12$). The

1 less malevolent ($M=15.5$) and omnipotent ($M=14.9$) than they themselves see them
2 (malevolence $M=23.8$, omnipotence $M=22.7$).

3 **Are there associations between elements and clinical outcome measures across construct**
4 **groups?**

5 Correlations between elements (self, persecutor, others) and clinical measures across
6 construct groups were computed (see table 3). To protect against familywise error, a
7 Bonferroni corrected alpha level of 0.002 (i.e. 0.05/18) was employed. Of note is that the
8 more individuals saw themselves as omnipotent or powerful, the lower their anxiety and
9 depression, and the higher their self esteem. In addition, others being construed as malevolent
10 was associated with increased anxiety, although this effect did not remain significant
11 following Bonferroni correction.

12 *Insert Table 3 about here.*

13 **Do beliefs about persecutors' malevolence and omnipotence predict delusion**
14 **conviction?**

15 A multiple regression was conducted, with delusion conviction as the dependent
16 variable and beliefs about persecutor's malevolence and omnipotence as predictor variables.
17 The aim was to see what the combined predictive power of these variables was and also to
18 determine the extent to which persecutor malevolence and omnipotence accounted for
19 variance in delusion conviction, after the effects of anxiety and depression had been
20 accounted for. Therefore, anxiety and depression were entered as the first step in the model,
21 and were not found to explain a significant amount of variance in delusion conviction (F
22 $(2,28) = .609, p=.55, R^2 = .045, \text{adjusted } R^2 = .029$). More importantly, the predictor variables

1 entered at step 2 (persecutor malevolence and omnipotence) contributed a significant increase
2 in variance explained from 4% to 36% (adjusted $R^2 = .247$), a change that was significant (F
3 $(2,28) = 3.29$, $p = 0.027$). In the final equation, beliefs about persecutor omnipotence made a
4 significant unique contribution to explaining delusion conviction ($t(28) = 2.804$, $p = 0.01$),
5 and beliefs about persecutor malevolence was a trend ($t(28) = 1.82$, $p = 0.08$).

6 **Discussion**

7 The present study involving people with current persecutory delusions, used repertory
8 grid methodology to examine the construed interpersonal relationships among self, main
9 persecutors, and other people in general. Specifically, these relationships were examined with
10 reference to omnipotence and malevolence, and the extent to which these interpersonal
11 beliefs link to distress, self-esteem and delusional conviction. Individuals with persecutory
12 delusions construed their persecutors as significantly more malevolent and omnipotent than
13 themselves – replicating and extending the findings of Green et al (2006). The present study
14 provides the first data to show that people with persecutory delusions construed their
15 persecutors as more omnipotent and malevolent than other people in general. Thus,
16 participants' construct systems revealed how persecutors are perceived as more powerful and
17 malevolent than others, who in turn are perceived as more powerful and malevolent than the
18 self. This finding clarifies that people with persecutory delusions face two challenges – that
19 is, first, living with their perceived persecution at the hands of specific powerful persecutors,
20 and second, living in a social world where they experience people in general to be more
21 powerful and malevolent.

22 One of the strengths of repertory grid analysis is that it displays visually the degree to
23 which different people are perceived as being like or unlike one another. Whilst it might
24 have been expected that participants would locate themselves and their persecutors far apart

1 on the grid, it is striking that they also felt very different from other people in general. This
2 finding may shed light on the sense of social isolation and mistrust that so characterises
3 paranoia (Cameron, 1959). The finding that others in general, and not only specific
4 persecutors, were seen as more malevolent and omnipotent than the self can be understood in
5 terms of a distinction between schematic and symptomatic paranoia (Chadwick, 2006).
6 Symptomatic paranoia refers to specific delusional beliefs about specific persecutors.
7 Schematic paranoia is a general cognitive/affective template (or schema) underpinned by a
8 central assumption that other people *in general* are hostile or malevolent. Although the
9 findings clearly need to be replicated, data from the current study show for the first time the
10 presence and potential impact of both symptomatic and schematic paranoia in individuals
11 with persecutory delusions.

12 The present study also examined empirically for the first time the degree to which
13 those with persecutory delusions believe that their views of their persecutors are shared by
14 other people. The data showed that for the present sample, participants believed that other
15 people viewed their persecutor as less malevolent than they themselves viewed them, and
16 there was a trend towards seeing them as less omnipotent – though as raw scores and the grid
17 template show, participants still believed that others would recognise persecutors’
18 malevolence and power, even if in an attenuated form. This finding indicates that whilst
19 bizarreness and falseness might be attributes used to conceptualise delusions, at least in the
20 eyes of the person, aspects of their beliefs about their persecutor are congruent with other
21 people’s perception, which may serve to maintain delusion conviction. Again, and in a
22 similar vein, participants construed themselves in very similar ways to how they believed
23 others saw them – that is, their self-self and other-self perceptions (Chadwick & Trower,
24 1997) were comparable. This congruence is consistent with both exploring and working

1 directly with negative self-schematic beliefs in psychological therapy for psychosis (e.g.
2 Chadwick, 2006).

3 We also examined whether the concepts of malevolence and omnipotence were
4 associated with emotional distress (anxiety and depression), self-esteem and delusion
5 conviction. Three key findings emerged. First, beliefs about others' malevolence were
6 associated with increased anxiety. This provides the first evidence of an association between
7 schematic paranoia (i.e. beliefs that others in general are hostile, Chadwick, 2006) and
8 distress, and supports recent empirical and theoretical emphasis on examining anxiety
9 processes in persecutory delusions (e.g. Freeman et al, 2002, 2011; Ellett et al, 2008). This
10 also has potentially important clinical implications. Reality testing has long been recognised
11 as a key element in alleviating paranoia (e.g. Cameron, 1959), and research has explored its
12 direct effect on delusional dimensions (Chadwick et al., 1994). Consistent with the findings
13 from the present study, future research might usefully determine whether reality testing
14 schematic beliefs about the malevolence and power of other people in general (i.e. not the
15 specific persecutor) might also offer a means to ease distress without the need to focus on
16 specific paranoid delusions. Acceptance-based approaches, which have been gaining
17 increasing support in the psychosis treatment literature, may also be appropriate (e.g.
18 Gaudio et al, 2010). Second, the more people construed themselves as powerful, the less
19 they felt anxious and depressed and the higher their self-esteem. When working with voices,
20 it has been argued that a central first challenge is to decrease a voice's perceived
21 omnipotence, and increase a person's sense of personal control and autonomy (e.g. Chadwick
22 & Birchwood, 1994; Chadwick et al., 2000). The data from the present study suggest that a
23 similar focus on increasing personal control and autonomy may be an important early
24 therapeutic focus when addressing paranoia, though this will need to be demonstrated in

1 future research. Consistent with a person-based cognitive therapy model of distressing
2 psychosis (e.g. Chadwick, 2006; Dannahy et al, 2011; Ellett, 2013), the findings also suggest
3 that working therapeutically to strengthen positive beliefs about the self might help to reduce
4 negative affect and increase self-esteem. Third, consistent with findings in the voices
5 literature (e.g. Birchwood & Chadwick, 1997), beliefs about persecutors' omnipotence and
6 malevolence (the latter was a trend only) were found to predict delusion conviction. When
7 working with voices, a central aspect of therapy involves working with individuals' beliefs
8 about their voices (e.g. Chadwick & Birchwood, 1994). The findings from the present study
9 suggest that a similar focus on working with beliefs about persecutors might also be helpful,
10 and might serve to reduce conviction in delusional beliefs. Taken together, these findings
11 provide preliminary evidence of the importance of working therapeutically with beliefs about
12 self, others and persecutors, which is consistent with a person-based cognitive therapy model
13 of distressing psychosis (Chadwick, 2006; Dannahy et al., 2011; Ellett, 2013).

14 It is interesting in the present study that persecutor malevolence and omnipotence
15 were not found to be associated with either depression or anxiety. This is perhaps especially
16 surprising given the finding that power and malevolence are linked to depression amongst
17 individuals who hear voices (Birchwood & Chadwick, 1997). However, the present study
18 did not examine relationships with persecutors and others with reference to the distinction
19 between Poor Me and Bad Me paranoia (Trower & Chadwick, 1995). This is important
20 because we would expect depression to be more closely associated with Bad Me paranoia, in
21 which the individual believes their persecution is deserved. It might be that significant
22 relationships between persecutor malevolence, omnipotence and emotional distress would
23 have emerged, had we distinguished between these two paranoia subtypes.

References

- Altman, D.G. (1991). *Practical statistics for medical research*. London: Chapman and Hall.
- Andreasen, N.C. (1984). *The scale for the assessment of positive symptoms (SAPS)*.
University of Iowa: Iowa City, IA.
- Bannister, D. (1965). The rationale and clinical relevance of repertory grid technique. *British Journal of Psychiatry*, *111*, 977-982.
- Bannister, D., & Fransella, F. (1965). A repertory grid test of schizophrenic thought disorder. *British Journal of Social and Clinical Psychology*, *2*, 95-102.
- Birchwood, M., & Chadwick, P. (1997). The omnipotence of voices: testing the validity of a cognitive model. *Psychological Medicine*, *27*, 1345–1353.
- Cameron, N. (1959). The paranoid pseudo-community revisited. *Journal of Sociology*, *65*, 52-58.
- Chadwick, P. (2006). *Person-based Cognitive Therapy for Distressing Psychosis*. John Wiley & Sons: Chichester.
- Chadwick, P., & Birchwood, M. (1994). The omnipotence of voices – A cognitive approach to auditory hallucinations. *British Journal of Psychiatry*, *164*, 190-201.
- Chadwick, P.D.J., Lowe, C.F., Horne, P.J., & Higson, P. (1994). Modifying delusions: The role of empirical testing. *Behaviour Therapy*, *25*, 35-49.
- Chadwick, P., Birchwood, M., & Trower, P. (1996). *Cognitive Therapy for Delusions, Voices and Paranoia*. John Wiley: Chichester.
- Chadwick, P., Lees, S., & Birchwood, M. (2000). The revised Beliefs About Voices Questionnaire (BAVQ-R). *British Journal of Psychiatry*, *177*, 229 – 232.
- Chadwick, P.D.J., & Trower, P. (1997). To defend or not to defend: A comparison of paranoid and depression. *Cognitive Psychotherapy: An International Quarterly*, *11*, 63-71.

- Crawford, J.R., & Henry, J.D. (2003). The Depression Anxiety Stress Scales (DASS): Normative data and latent structure in a large non-clinical sample. *British Journal of Clinical Psychology, 42*, 111–131.
- Dannahy, L., Hayward, M., Strauss, C., Turton, W., Harding, E., & Chadwick, P. (2011). Group person-based cognitive therapy for distressing voices: Pilot data from nine groups. *Journal of Behaviour Therapy and Experimental Psychiatry, 42*, 111-116.
- Drake, R., Haddock, G., Tarrier, N., Bentall, R., & Lewis, S. (2007). The psychotic symptom rating scales: Their usefulness and properties in first episode psychosis. *Schizophrenia Research, 89*, 119-22.
- Edwards, H.M., McDonald, S., & Young, S.M. (2009). The repertory grid technique: Its place in empirical software engineering research. *Information and Software Technology, 51*, 785-798.
- Ellett, L. (2013). Person-based cognitive therapy for distressing psychosis. In E.Morris, L.Johns, & J. Oliver (Eds.). *Handbook of ACT and Mindfulness*. Wiley.
- Ellett, L., Freeman, D., & Garety, P.A. (2008). The psychological effect of an urban environment on individuals with persecutory delusions: The Camberwell walk study. *Schizophrenia Research, 99*, 77-84.
- Fransella, F., Bell, R., & Bannister, D. (2004). *A Manual for Repertory Grid Technique*. John Wiley: Chichester.
- Freeman, D., Dunn, G., Garety, P.A., Bebbington, P., Slater, M., Kuipers, E., et al (2005). The psychology of persecutory ideation I: A questionnaire study. *Journal of Nervous and Mental Disease, 193*, 302-308.
- Freeman, D., Garety, P.A., Kuipers, E., Fowler, D., & Bebbington, P.E. (2002). A cognitive model of persecutory delusions. *British Journal of Clinical Psychology, 41*, 331-347.

- Freeman, D., McManus, S., Brugha, T., Meltzer, H., Jenkins, R., & Bebbington, P. (2011). Concomitants of paranoia in the general population. *Psychological Medicine*, *41*, 923-936.
- Garety, P.A., Kuipers, E., Fowler, D., Freeman, D., Bebbington, P.E. (2001). A cognitive model of the positive symptoms of psychosis. *Psychological Medicine*, *31*, 189-195.
- Green, C., Garety, P.A., Freeman, D., Fowler, D., Bebbington, P., Dunn, G., et al (2006). Content and affect in persecutory delusions. *British Journal of Clinical Psychology*, *45*, 561-577.
- Gaudiano, B. A., Herbert, J. D., & Hayes, S. C. (2010). Is it the symptom or the relation to it? Investigating potential mediators of change in Acceptance and Commitment Therapy for psychosis. *Behavior Therapy*, *41*, 543-554.
- Haddock, G., McCarron, J., Tarrier, N., & Faragher, E.D. (1999). Scales to measure dimensions of hallucinations and delusions: The Psychotic Symptoms Rating Scales (PSYRATS). *Psychological Medicine*, *29*, 879-889.
- Haltenhof, H., Stapenhorst, J., Krusel, R. (1996). Personal construct approach to depressive disorders: a short review of the literature and preliminary results of two studies. In J.W.Scheer & A.Catina (eds.). *Empirical Constructivism in Europe: the Personal Construct Approach*. Giessen: Psychosozial-Verlag.
- IBM Corp. (2010). *IBM SPSS Statistics for Windows, Version 19.0*. IBM Corp: Armonk NY.
- Jankowicz, D. (2004). *The Easy Guide to Repertory Grids*. Chichester: John Wiley & Sons.
- Kay, S. (1991). *Positive and Negative Syndromes in Schizophrenia: Assessment and Research*. Brunner/Mazel: New York.
- Kay, S.R., Fiszbein, A., & Opler, L.A. (1987). The positive and negative syndrome scale for schizophrenia. *Schizophrenia Bulletin*, *13*, 261-276.

- Kay, S.R., Opler, L.A., & Lindenmayer, J.P. (1988). Reliability and validity of the positive and negative syndrome scale for schizophrenics. *Psychiatry Research*, 23, 99-110.
- Kelly, G. (1955). *The Psychology of Personal Constructs*. Routledge: London.
- Kline, P. (1999). *The handbook of Psychological Testing (2nd Ed)*. Routledge: London.
- Kruskal, J.B., & Wish, M. (1978). *Multidimensional Scaling*. Sage Publications: CA.
- Lovibond, P.F., & Lovibond S.H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, 33, 335-343.
- Melo, S., & Bentall, R.P. (2012). Poor me versus Bad Me paranoia: the association between self beliefs and the instability of persecutory ideation. *Psychology and Psychotherapy: Theory, Research and Practice*, DOI: 10.1111/j.2044-8341.2011.02051.x
- Rigdon, M.A., & Epting, F.R. (1983). A personal construct perspective on an obsessive client. In J.Mancuso & J.C.Mancuso (eds.). *Applications of Personal Construct Theory*. Academic Press: Ontario.
- Rosenberg, M. (1965). *Society and the Adolescent Self Image*. Princeton University Press Princeton NJ.
- Rosenberg, M. (1986). *Conceiving the Self*. Krieger: Malabar, FL.
- Sanz, J., Avia, M.D., & Sanchez-Bernardos, M.L. (1996). The structure of the construct system in social anxiety: qualifications due to affective confounding. *Journal of Constructivist Psychology*, 9, 201-212.
- Smith, B., Fowler, D.G., Freeman, D., Bebbington, P., Bashforth, H., Garety, P., et al (2006). Emotion and psychosis: Links between depression, self-esteem, negative schematic beliefs and delusions and hallucinations. *Schizophrenia Research*, 86, 181-188.

Sturrock, K., & Rocha, J. (2000). A Multidimensional Scaling Stress Evaluation Table. *Field Methods, 12*, 49-60.

Trower, P., & Chadwick, P. (1995). Pathways to defence of the self: A theory of two types of paranoia. *Clinical Psychology: Science and Practice, 2*, 263-278.

Winter, D.A. (2003c). Repertory grid technique as a psychotherapy research method. *Psychotherapy Research, 13*, 25-42.

Table 1

Demographic & clinical characteristics of the sample

| | | | |
|---|--------------------------|-------|--------|
| Mean Age (sd) | | 36.4 | (11.1) |
| Gender (%) | Male | 18 | (62) |
| | Female | 12 | (38) |
| Ethnicity (%) | White | 16 | (53) |
| | Black Caribbean/African | 3 | (10) |
| | Asian | 8 | (27) |
| | Other | 3 | (10) |
| Education level achieved (%) | Up to secondary (age 16) | 16 | (53) |
| | Further education | 8 | (27) |
| | Higher education | 6 | (20) |
| Employment status (%) | Unemployed | 27 | (93) |
| | Long Term Sick Leave | 2 | (7) |
| Diagnosis (%) | Paranoid Schizophrenia | 23 | (76) |
| | Schizoaffective Disorder | 2 | (7) |
| | Residual Schizophrenia | 1 | (3) |
| | Delusional Disorder | 2 | (7) |
| | Schizophrenia | 2 | (7) |
| Mean PANSS Positive Subscale Score (sd) | | 21.28 | (3.73) |
| Mean Depression (sd) | | 16.6 | (13.4) |
| Mean Anxiety (sd) | | 13.3 | (10.3) |
| Mean Self-Esteem (sd) | | 15.4 | (5.8) |

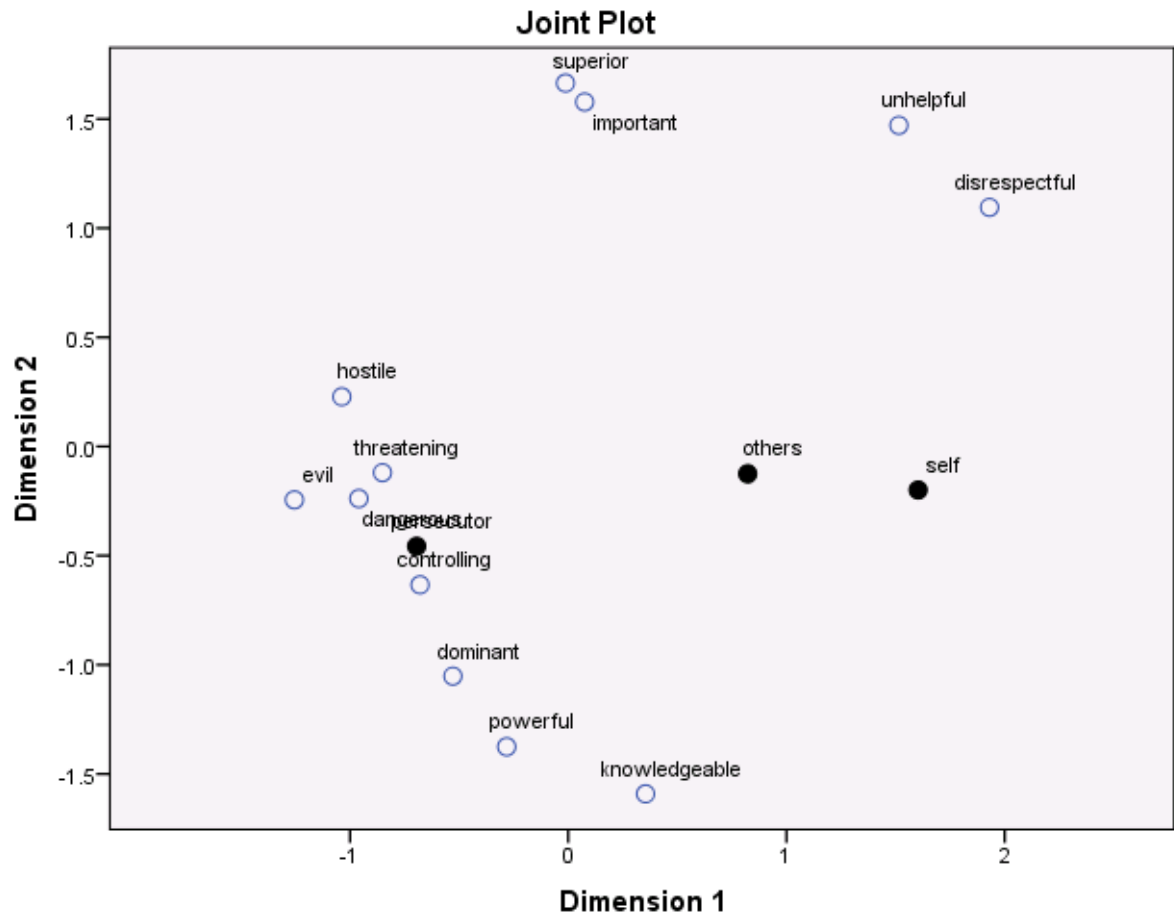


Figure 1. Individual differences unfolding solution.

Table 2

Descriptive statistics for elements (self, other, persecutor) across constructs.

| | Malevolence | | Omnipotence | |
|-------------------------|--------------------|-------|--------------------|-------|
| | Mean (sd) | Range | Mean (sd) | Range |
| Self | 12.4 (4.6) | 6-24 | 15.9 (4.1) | 7-23 |
| Other | 17.9 (4.4) | 12-30 | 19.3 (3.1) | 14-26 |
| Persecutor | 23.8 (2.9) | 15-28 | 22.7 (3.7) | 14-30 |
| Other-Persecutor | 15.5 (4.4) | 6-24 | 14.9 (5.4) | 6-26 |

Table 3

Associations between elements and clinical outcome measures across construct groups.

| | Depression | Anxiety | Self Esteem |
|--------------------|------------|---------|-------------|
| Malevolence | | | |
| Self | .008 | -.042 | -.268 |
| Other | .349 | .435* | -.310 |
| Persecutor | -.081 | -.013 | .055 |
| Omnipotence | | | |
| Self | -.587** | -.605** | .707** |
| Other | .124 | .107 | -.100 |
| Persecutor | .066 | .023 | -.204 |

Significance Level: * $p < 0.01$, **significant following Bonferroni correction