Unpleasant and pleasant referential thinking: Relations with self-processing, paranoia, and other schizotypal traits

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ABSTRACT

Referential thinking is the tendency to view innocuous stimuli as having a specific meaning for the self and is associated with personality traits and disorders. In three studies, this research examined the relations among referential thinking, self-processing, and paranoia. In Study 1, follow-up questions on the Referential Thinking Scale (Lenzenweger, Bennett, & Lilenfeld, 1997) revealed that referential thoughts are experienced as unpleasant and pleasant. In Study 2, unpleasant referential thinking was more strongly associated with paranoia and maladaptive self-processing and personality. CFAs in Studies 1 and 2 found that unpleasant and pleasant referential thinking loaded on different factors. In Study 3, a group of participants with elevated schizotypal personality reported more unpleasant and pleasant referential thoughts than a control group.

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1. Introduction

Referential thinking is a common feature of schizophrenia-spectrum conditions (Lenzenweger et al., 1997), which includes schizophrenia, Cluster A personality disorders, which represent odd or eccentric behavior and include schizotypal, schizoid, and paranoid personality disorders (The American Psychiatric Association, 2000), and schizophrenia-like symptoms thought to reflect liability for schizophrenia (i.e., schizotypy; Chapman, Chapman, Raulin, & Edell, 1978; Meehl, 1962; Raine, 2006). Research has found that over two-thirds of people with schizophrenia experience delusions of reference (Frith, 1992), and ideas of reference are frequently reported in schizotypal personality disorder (Raine, 1991). Researchers interested in the development of schizophrenia have also suggested that irregularities in self-concept are one of the most important features of the onset of the disorder (e.g., Moller & Husby, 2000; Raballo, Saebye, & Parnas, 2009). At the same time, referential thinking might be related to other personality traits such as reliance on intuition (King & Hicks, 2009). Despite the potential importance of referential thinking in basic personality and schizophrenia-spectrum personality disorders, relatively little research has focused on what psychological mechanisms might contribute to referential thinking (Lenzenweger et al., 1997).

Given that referential thoughts reflect viewing information as self-relevant, researchers have suggested that referential thinking might be related to problems in self-relevant information process-ing (Lenzenweger et al., 1997). One self-processing variable that may be associated with referential thinking is self-esteem. Self-esteem is broadly defined as how people feel about themselves (Kernis, 2003). It is possible that referential thoughts might reflect either low or high self-esteem. For instance, people might have unpleasant referential thoughts, such as thinking they are being blamed by others, because of a low sense of self-worth. In contrast, some referential thoughts might reflect increased self-esteem. For instance, people might have pleasant referential thoughts, such as people playing songs on the radio just for them, because of a high sense of self-worth. However, to our knowledge no previous research has examined the relation between referential thinking and self-esteem.

In addition, based on previous research it is unclear whether referential thinking can be discriminated from paranoia. As mentioned, the central feature of referential thinking is the over-interpretation of stimuli as having a special meaning for the self (Lenzenweger et al., 1997). Similarly, paranoia is the tendency to be inappropriately suspicious of other people's motives and behaviors directed towards oneself (Fenigstein & Vanable, 1992). Although the term "paranoia" has been used to denote any type of delusional thought (see Lewis (1970) for an historical review), the current research uses the term to reflect the more narrow definition related to suspiciousness, distrust, and persecutory ideation (Combs & Penn, 2004; Fenigstein & Vanable, 1992). Researchers have hypothesized that both referential thinking and paranoia are personality traits that are associated with cluster A personality disorders and are related to self-relevant information processing (Lenzenweger et al., 1997). Previous research has found that referential thinking is strongly correlated with paranoia (e.g., Meyer &

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Lenzenweger, 2009; Stefanis et al., 2004). Furthermore, research on the factor structure of schizotypy has found at least three factors: paranoid, cognitive-perceptual, and negative (e.g., Compton, Goulding, Bakeman, & McClure-Tone, 2009; Stefanis et al., 2004). Among these three factors, referential thinking has been found to most frequently load on the paranoid factor. However, in part due to limited measurement of referential thinking, none of these studies actually examined whether referential thinking could form a factor separate from paranoia. A recent study that could examine this found that referential thinking formed a factor separate from paranoia (Cicero & Kerns, 2010). Hence, this suggests that referential thinking and paranoia might be distinct constructs.

One issue in examining the relation between referential thinking with both self-processing variables and paranoia is that, as suggested by a number of psychopathologists, referential thinking could be multidimensional (Startup & Startup, 2005; Wing, Cooper, & Sartorious, 1974). In particular, referential thoughts might vary in terms of their experienced emotional valence. For example, the most comprehensive measure of referential thinking, The Referential Thinking Scale, was designed to include both positively and negatively valenced referential thoughts (Lenzenweger et al., 1997, Study 1). In contrast, paranoia might involve exclusively negatively valenced thoughts. This is because paranoia involves a threat to self. Hence, paranoid thoughts always involve some unpleasant emotional content. On the other hand, referential thoughts do not necessarily involve a threat to the self and could be either unpleasant or pleasant (Lenzenweger et al., 1997). For example, referential thinking may include unpleasant thoughts, such as "when I see something broken, I often wonder if people blame me for it." However, it may also include pleasant thoughts, such as "when I hear a favorite song, I often wonder if it was written with me in mind." Thus, although paranoia seems to always involve negatively valenced thoughts, referential thinking can refer to negatively or positively valenced thoughts. The current research builds on the work of Lenzenweger and colleagues (1997) by empirically testing whether referential thoughts can be experienced as positively valenced, as opposed to exclusively unpleasant.

The first goal of the current research was to empirically test whether referential thoughts are experienced as both unpleasant and pleasant. The second goal was to examine whether unpleasant and pleasant referential thoughts could be discriminated from each other and whether they could be discriminated from paranoia. Finally, the third goal of the current research was to examine whether unpleasant and pleasant referential thinking had differential relations with facets of self-relevant information processing, paranoia, other schizotypal personality traits, and Big-five personality traits.

In the current research, we hypothesized that unpleasant and pleasant referential thoughts, although correlated, could be discriminated from each other and could be discriminated from paranoia. In addition, we expected to find that unpleasant referential thinking would be more strongly correlated with paranoia than pleasant referential thinking would be. We hypothesized that unpleasant referential thoughts would be associated with unpleasant self-relevant information processing including lower explicit and implicit self-esteem, higher self-consciousness, and lower facets of narcissism. In contrast, we expected to find that pleasant referential thoughts would be associated with higher implicit and explicit self-esteem, lower self-consciousness, and higher facets of narcissism. Finally, we expected to find that unpleasant referential thinking would be associated with maladaptive Big-five personality traits while pleasant referential thinking would be more associated with adaptive personality traits. In general, we expected unpleasant referential thinking and paranoia to display similar relations with self-processing and big-five personality.

The current research examined the relations among referential thinking, self-processing, paranoia, and other schizotypal characteristics in three studies. In Study 1, follow-up questions were added to the Referential Thinking Scale (Lenzenweger et al., 1997) to determine whether items were sometimes experienced as pleasant as well as unpleasant. In Study 2, ratings of the items from Study 1 were used to create unpleasant and pleasant subscales of the Referential Thinking Scale and these subscales were used to examine the relations between unpleasant and pleasant referential thinking with self-processing, paranoia, other schizotypal characteristics, and Big-five personality. In addition, we also tested a series of confirmatory factor analyses that examined whether unpleasant referential thinking, pleasant referential thinking, and paranoia could be discriminated from each other. Finally, in Study 3, we tested whether participants with elevated schizotypal personality had a higher level of both unpleasant and pleasant referential thoughts than a control group.

2. Study 1

2.1. Method

2.1.1. Participants

Participants ($n = 348$) were native English-speaking undergraduate college students at the University of Missouri who completed the study as partial completion of a course requirement. Twenty-six participants were excluded for having Chapman Infrequency scores of 3 or higher (see below), which resulted in a final sample of 322 participants. Participants ranged from 18 to 37 years old, with an average age of 19.16 (SD = 1.55). Participants were 47% female, 87.9% White, 9.0% African–American, 0.6% Asian–American, and 2.7% other.

2.2. Measures

2.2.1. Referential Thinking

The Referential Thinking Scale (REF; Lenzenweger et al., 1997) is a 34-item *true–false* questionnaire that measures referential thinking. For Study 1, the administration of the REF was modified to further assess the experience of referential thoughts. None of the items in the REF were modified. Instead, participants were asked two follow-up questions for each "true" response. First, they were asked, "to what extent was this experience positive?" on a scale from 0 (not at all positive) to 6 (extremely positive). Second, they were asked "to what extent was this experience negative?" on a scale from 0 (not at all negative) to 6 (extremely negative). This allowed for the calculation of unpleasant and pleasant referential thinking scores, by summing the 0–6 scores for the follow-up unpleasant and pleasant questions. Additionally, this modification made it possible to empirically examine the valence associated with specific referential thoughts.

2.2.2. Paranoia

Paranoia was measured with the Paranoia and Suspiciousness Questionnaire (Rawlings & Freeman, 1996), a 47 item yes–no questionnaire designed to measure paranoia in a non-psychiatric sample (e.g., Would you have been more successful if others around you had not put difficulties in your way?). The scale contains five subscales including interpersonal suspiciousness/hostility, negative mood/withdrawal, anger/impulsiveness, mistrust/wariness, and perceived hardship/resentment. The PSQ was developed from several existing paranoia scales: the PEN Psychoticism scale (Eysenck & Eysenck, 1975), the Paranoia scale of the MMPI (Hathaway & McKinley, 1989), the Buss Hostility scale (Buss & Perry, 1992),