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Self-concept certainty in social phobia

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Abstract

Two studies are reported which examined the content of beliefs about self-attributes in social phobia, and the level of certainty with which these beliefs are held. The results of both studies indicated that individuals with social phobia held less positive beliefs about their personality characteristics in comparison to non-anxious individuals. In addition, social anxiety was associated with reduced subjective confidence in self-descriptiveness ratings for personality attributes (Study 1), as well as longer reaction times in making self-descriptiveness decisions relative to general decisions about trait adjectives (Study 2). The association between social anxiety and reduced certainty in negative attribute ratings was evident after controlling for depression, general anxiety, stress, and the extent to which negative attributes were endorsed as being self-descriptive. Results are discussed in terms of the potential role that reduced self-concept certainty may play in social phobia.

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Introduction

Recent cognitive theories of social phobia propose that negative self-evaluative thought processes during social situations play an important role in the development and maintenance of the disorder (e.g. Clark & Wells, 1995; Rapee & Heimberg, 1997). Such theories are supported by a large number of studies showing that socially anxious individuals report a higher frequency of

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negative self-statements during social situations in comparison to non-anxious controls (e.g. Beidel, Turner, & Dancu, 1985; Cacioppo, Glass, & Merluzzi, 1979; Glass, Merluzzi, Biever, & Larsen, 1982; Stopa & Clark, 1993), more negative mental images of themselves as they appear to other people (Hackmann, Surawy, & Clark, 1998), and more negatively biased subjective judgments of their social performances relative to observer ratings (e.g. Alden & Wallace, 1995; Rapee & Lim, 1992; Stopa & Clark, 1993). Similarly, evidence has shown that socially anxious individuals are more likely than non-anxious controls to make self-blaming attributions for the causes of negative social events (e.g. Anderson & Arnoult, 1985; Arkin, Appelman, & Burger, 1980; Teglasi & Hoffman, 1982), and to interpret such events to mean that they possess undesirable personality characteristics (Stopa & Clark, 2000; Wilson & Rapee, 2005a, *in press*). Reductions during treatment in the extent to which individuals believe that negative social events are indicative of negative self-characteristics have also been found to predict longer-term outcome in social phobia (Wilson & Rapee, 2005b), further supporting the view that negative self-related judgments may be an important factor underlying anxiety in social situations.

As suggested by several authors, it may be the case that negative self-evaluative cognitions during social situations at least partially reflect more negative underlying views of the self among socially anxious individuals compared to non-anxious individuals (e.g. Alden, Mellings, & Ryder, 2001; Clark & Wells, 1995). For instance, according to the theoretical model by Clark and Wells (1995), individuals with social phobia may hold generalised maladaptive assumptions about themselves (such as the belief that they are inadequate), which become activated during situations in which they may potentially be evaluated by other people. Consistent with the notion that socially anxious individuals hold more negative underlying views of the self compared to non-anxious individuals is evidence showing that shyness and social anxiety are associated with lower scores on measures of general self-esteem (e.g. Cheek, Melchior, & Carpentieri, 1986; Jones, Briggs, & Smith, 1986; Kocovski & Endler, 2000), and that socially anxious individuals rate words denoting positive personality traits as less self-descriptive, and words denoting negative personality traits as more self-descriptive, compared to non-anxious controls (e.g. Mansell & Clark, 1999). In addition, research suggests that unfavourable biases in self-perceptions among socially anxious individuals apply to a range of self-concept dimensions, with evidence showing that shyness is negatively associated with self-ratings of attributes such as likeability, intelligence, and physical attractiveness, even though objective indices of these attributes show no association with scores on shyness measures (e.g. see Cheek et al., 1986; Jones et al., 1986; Montgomery, Haemmerlie, & Edwards, 1991; Paulhus & Morgan, 1997).

Notwithstanding evidence indicating that socially anxious individuals may hold less positive underlying beliefs about the self in comparison to non-anxious individuals, there is some research suggesting that such beliefs are not highly negative, and do not influence self-related judgments in non-social situations. For instance, studies that have examined self-ratings of personal attributes among socially anxious individuals have shown that they do not strongly endorse negative characteristics as being self-descriptive, or strongly reject positive attributes as being self-descriptive, but instead give ratings for each type of attribute that are more moderate than those of non-anxious individuals (e.g. see Mansell & Clark, 1999). In addition, research has indicated that the tendency of socially anxious people to attribute failure outcomes to personal attributes is specific to social situations, as opposed to events of a non-interpersonal nature (e.g. Anderson & Arnoult, 1985; Teglasi & Hoffman, 1982; see also Wilson & Rapee, *in press*).

Finally, there is some evidence to suggest that negatively biased views of the self among socially anxious individuals are not impervious to the effects of positive social information, at least in studies that have investigated interpretations of hypothetical success outcomes. For instance, research has shown that individuals with social phobia are as likely as non-anxious individuals to attribute positive events to aspects of themselves, and similarly, to interpret positive social events as indicating that they possess positive personality characteristics, when analyses have controlled for the effects of concurrent depression (Heimberg et al., 1989; Wilson & Rapee, *in press*; but see Wallace & Alden, 1995, 1997). Such evidence of variability in self-evaluations according to situational type and outcome may reflect uncertainty among socially anxious individuals with regard to whether they possess negative characteristics or lack positive characteristics, thus indicating that their self-concepts—whether primarily negative or positive—are not well-defined.

The notion that people may differ in terms of the certainty of their self-concepts has been suggested by a number of authors. Campbell and her colleagues (e.g. Campbell, 1990; Campbell & Lavalley, 1993; Campbell et al., 1996), for instance, differentiate the contents of an individual's self-concept (which include subjective beliefs about one's specific attributes, and global evaluations of the self that constitute self-esteem) from structural aspects of the self-concept, which encompass the way in which contents are organised. According to this view, important structural elements of the self-concept include “the extent to which the contents of an individual's self-concept...are clearly and confidently defined, internally consistent, and temporally stable” (Campbell et al., 1996, p. 141), referred to overall as self-concept “clarity”. A potential role of uncertain or unstable self-concepts in social anxiety has also been implied by several theorists. Arkin (1987), for instance, proposed that shy people are characterised by “chronic self-doubt”, while Clark and Wells (1995) have suggested that “unstable self-schemata” are typical of many individuals with social phobia (see also Alden et al., 2001). In addition, Campbell (1990) has proposed that people with uncertain self-concepts “should be more dependent on, susceptible to, and influenced by external self-relevant stimuli” (p. 539), which may account for evidence suggesting that the outcome of social events impacts on feelings of self-worth among individuals with social phobia to a greater extent than among non-anxious individuals or those with other anxiety disorders (Gilboa-Schechtman, Franklin, & Foa, 2000).

Empirical evidence regarding structural aspects of the self-concept suggests that “clarity” of one's view of the self is associated with psychological well-being (e.g. Campbell et al., 1996), although there is a paucity of research that has directly examined the potential relationship between social anxiety and structural features of the self-concept. To date, there appears to be only one published study that has investigated this issue, with the results indicating that higher levels of social anxiety in a non-clinical population were associated with lower scores on a measure of self-concept stability (Franzoi, 1983). Other research among unselected samples has shown that self-concept clarity correlates positively with self-report measures of more general constructs such as self-esteem and positive affectivity, and negatively with measures of constructs such as neuroticism and negative affectivity (e.g. Baumgardner, 1990; Campbell, 1990; Campbell et al., 1996). Such results raise the possibility that uncertainty or instability of the self-concept may be associated with psychopathology more generally, and may be particularly characteristic of disorders that involve negatively biased self-evaluations, such as depression (e.g. Beck, 1976). This possibility, combined with evidence indicating that social anxiety and depression show substantial comorbidity (e.g. Lepine & Lellouch, 1995; Merikangas & Angst, 1995) and similar cognitive

features (e.g. Alden, Bieling, & Meleshko, 1995; Heimberg et al., 1989), suggests that it is important for research regarding the factors underlying either disorder to control for the potential effects of the other (e.g. Alden et al., 1995; Ingram, 1989a, b; Sanz & Avia, 1994).

The primary aim of the present research was to investigate one structural aspect of the self-concept among individuals with social phobia: namely, the level of certainty associated with beliefs about the self. Two studies were conducted in which different measures of self-concept certainty were employed: one which relied on subjective self-reports, and one which relied on a less obtrusive measure, in the form of reaction times to self-descriptiveness decisions about personality characteristics. In view of theory and evidence outlined above, it was hypothesised that individuals with social phobia would show higher levels of uncertainty in their beliefs about their personality attributes than would non-anxious controls, and that this difference would be evident even after controlling for differences in depressive symptoms between the two groups. Self-reported beliefs about general personality attributes were also examined, in order to determine whether less favourable beliefs about the self are associated with social phobia independently of concurrent depression.

Study 1

Method

Participants

Participants consisted of 38 individuals who met criteria of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994) for a principal diagnosis of generalised social phobia, and 25 non-clinical controls. All clinical participants sought treatment for social anxiety at the Macquarie University Anxiety Research Unit in Sydney, Australia. Control participants were recruited from the undergraduate (predominantly mature-age) psychology student population at Macquarie University, and from the general community. Undergraduate controls received course credit in return for participating in the study, while community controls received a small monetary reward. Both groups of control participants responded to flyers requesting participation by people who felt reasonably confident in social situations, and who had never sought help from a mental health professional.

Diagnostic status for both clinical and control groups was established at initial assessment interviews using the Anxiety Disorders Interview Schedule for DSM-IV (ADIS-IV; DiNardo, Brown, & Barlow, 1994), a semi-structured interview that assesses anxiety, mood, somatoform and substance use disorders according to DSM-IV criteria, and screens for additional disorders such as psychosis. Recent evidence has shown that the ADIS-IV is associated with good inter-rater reliability for current diagnoses (Brown, DiNardo, Lehman, & Campbell, 2001), and data from the Macquarie University Anxiety Research Unit has yielded a kappa of 0.92 for a principal diagnosis of social phobia (Abbott & Rapee, 2002). Diagnostic interviews were conducted by graduate psychology students trained in the use of the ADIS-IV. Among the clinical participants included in the study, 26 (68.4%) met criteria for at least one additional Axis I disorder (primarily other anxiety disorders, and/or mood disorders), and 19 (50.0%) met criteria for Axis II Avoidant Personality Disorder, as assessed by DSM-IV criteria. Among control participants, 2 (8.0%) met

criteria for a specific phobia, although no other diagnoses were present. Given that the research questions relate only to differences in self-perceptions between people with, versus without, social phobia and depressive symptoms, the two control participants with specific phobias were included in the study.

Measures

Social interaction anxiety scale and social phobia scale (SIAS and SPS; Mattick & Clarke, 1998). The SIAS¹ and SPS are self-report instruments that were designed as companion measures to assess social interaction and scrutiny/performance fears, respectively. Scores on each measure range from 0 to 80, with higher totals reflecting greater anxiety. Psychometric data have indicated that the scales are reliable and valid (e.g. Brown et al., 1997; Heimberg, Mueller, Holt, Hope, & Liebowitz, 1992; Mattick & Clarke, 1998).

Depression anxiety stress scales—21 item version (DASS-21; P.F. Lovibond & S.H. Lovibond, 1995; S.H. Lovibond & P.F. Lovibond, 1995):. The current study employed the trait version of the DASS-21, a self-report measure which yields three relatively distinct scores corresponding to individuals' characteristic levels of depression, anxiety and stress/tension, and which has been shown to be psychometrically sound (Antony, Bieling, Cox, Enns, & Swinson, 1998). Scores on each scale range from 0 to 42, with higher scores reflecting increasing levels of each emotional state.

Self-ratings of personality attributes. Participants were asked to rate each of 22 personality attributes in terms of how they would personally describe themselves on 7-point Likert-type scales, where 0 = much less than average, 3 = about average, and 6 = much more than average. The attributes consisted of 11 negative characteristics (boring, cruel, greedy, ignorant, insignificant, lazy, selfish, unappealing, unfriendly, unimaginative, and unproductive) and 11 positive characteristics (admirable, attractive, competent, efficient, good-natured, honest, humorous, intelligent, kind, warm, wise). An attempt was made when selecting the characteristics to cover a range of potential facets of the self-concept (for instance, social, moral, physical and intellectual attributes; e.g. see Marsh, 1986), and to specifically exclude characteristics describing individuals' trait levels of anxiety (e.g. nervous, shy, calm). It was assumed that the clinical group would clearly endorse anxiety-related characteristics to a greater extent than controls, so that excluding these characteristics would provide a clearer picture as to whether the two groups held different beliefs about their personality attributes more generally.

In addition to rating the attributes in terms of self-descriptiveness, participants were also asked to indicate “how confident or sure” they felt about the accuracy of each of these ratings, in order to gauge the degree of certainty associated with beliefs about self-characteristics. Confidence ratings were made on 5-point Likert-type scales where 0 = not at all confident, 2 = moderately confident, and 4 = extremely confident. This procedure was based on that used by Campbell (1990, Study 1).

¹The SIAS has been revised to include only 19 items, although the original 20-item version was used in the current study.

Procedure

All measures were administered to undergraduate controls when they came in for assessment interviews. Clinical participants and community controls were sent the measures of anxiety and depression following an initial telephone conversation in which they were briefly screened for social anxiety and depression. They returned these questionnaires when they attended their initial assessment interviews, at which time they also completed the self-ratings of personality attributes.

Results

Demographic characteristics

Demographic characteristics of the social phobia and control groups are presented in Table 1. Chi-squared analyses indicated that the groups did not differ significantly in terms of sex composition, $\chi^2(1, n = 63) = 1.20, p > 0.05$, level of education, $\chi^2(4, n = 62) = 2.88, p > 0.05$, or marital status, $\chi^2(2, n = 63) = 1.74, p > 0.05$. An independent samples *t*-test also indicated that the difference in mean ages of the two groups was not significant, $t(61) = 0.91, p > 0.05$. Thus, the groups were comparable demographically.

Table 1
Demographic variables and scores on symptom measures by group (Study 1)

Demographic variables	Group	
	Social phobia	Non-clinical controls
	Mean (SD)	Mean (SD)
Age	32.9 (9.7)	35.2 (9.4)
Sex	<i>N</i> (%)	<i>N</i> (%)
Male	19 (50.0%)	9 (36.0%)
Female	19 (50.0%)	16 (64.0%)
Education	<i>N</i> (%)	<i>N</i> (%)
Less than high school	3 (8.1%)	4 (16.0%)
Completed high school	12 (32.4%)	4 (16.0%)
Technical certificate	8 (21.6%)	7 (28.0%)
Undergraduate degree	11 (29.7%)	7 (28.0%)
Postgraduate degree	3 (8.1%)	3 (12.0%)
Marital Status	<i>N</i> (%)	<i>N</i> (%)
Never Married	25 (65.8%)	13 (52.0%)
Married or De Facto	8 (21.0%)	9 (36.0%)
Separated or divorced	5 (13.2%)	3 (12.0%)
Symptom measures	Mean (SD)	Mean (SD)
SIAS	57.22 (11.3)	14.60 (8.3)
SPS	36.61 (15.5)	5.96 (4.3)
DASS-Depression	20.58 (10.2)	6.40 (6.1)
DASS-Anxiety	16.89 (7.5)	4.24 (4.8)
DASS-Stress	20.67 (8.1)	12.62 (7.9)

Note: Information regarding educational status was missing for one clinical participant.

Measures of anxiety and depression

Means and standard deviations on the SIAS, SPS, and DASS-21 for the clinical and control groups are presented in Table 1. Independent-groups *t*-tests revealed that the mean scores for clinical participants were significantly higher than those for the control group on all measures [SIAS: $t(61) = 16.4$, $p < 0.001$; SPS: $t(61) = 9.6$, $p < 0.001$; DASS-Depression: $t(61) = 6.2$, $p < 0.001$; DASS-Anxiety: $t(61) = 7.5$, $p < 0.001$; DASS-Stress: $t(61) = 3.9$, $p < 0.001$].

Self-descriptiveness ratings for positive and negative attributes

Cronbach's alphas were computed for the total sample to assess the internal consistency of self-descriptiveness ratings for positive and negative personality characteristics. Ratings for both types of attributes showed high internal consistency, with alpha coefficients of 0.81 for positive attributes, and 0.85 for negative attributes.

Mean self-descriptiveness ratings for positive and negative attributes were analysed in a two-way Group (social phobia, control) \times Valence (positive, negative) Analysis of Variance, with Group as a between subjects factor, and Valence as a within-subjects factor. The means for each group are presented in Fig. 1. The analysis revealed a significant Group by Valence interaction, $F(1, 61) = 58.45$, $p < 0.001$, $\eta^2 = 0.49$. Between-groups comparisons (using a Bonferroni-adjusted critical alpha of 0.025 in order to avoid inflation of the Type I error rate) indicated that the clinical group gave significantly lower self-descriptiveness ratings for positive attributes, $t(61) = 5.85$, $p < 0.001$, Cohen's $d = 1.57$, and significantly higher self-descriptiveness ratings for negative attributes, $t(61) = 6.72$, $p < 0.001$, Cohen's $d = 1.73$, than did control participants. Inspection of the frequency of extreme self-descriptiveness ratings (i.e. ratings of 0 or 6) suggested that these differences between groups were not due to participants with social phobia giving ratings of "much more than average" for negative attributes, or "much less than average" for positive attributes more often than controls, with these strongly unfavourable ratings being given very infrequently by both groups (average frequency of both types of ratings approximately 0.1 for each group). Instead, the between-group differences may have been at least partially due to the

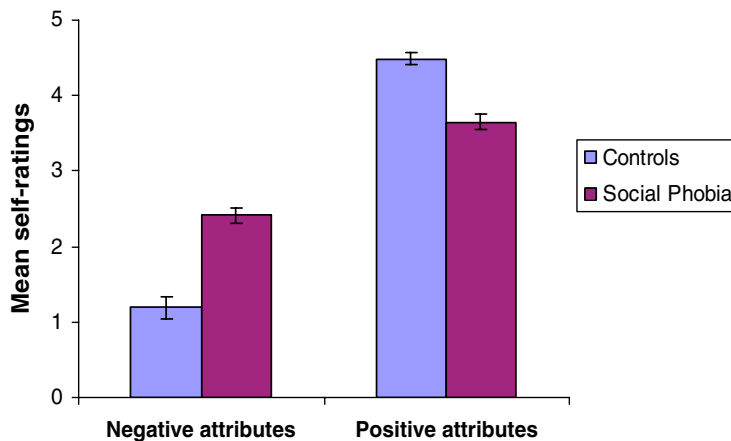


Fig. 1. Mean self-descriptiveness ratings for negative and positive personality attributes by group (Study 1). Note: Error bars show mean \pm 1.0 SE.

control group strongly endorsing positive attributes more frequently than participants with social phobia (average frequencies of 2.16 versus 0.55), and strongly rejecting negative attributes more frequently (average frequencies of 4.44 versus 1.03). Furthermore, within-groups comparisons (again using a Bonferroni-adjusted critical alpha of 0.025) showed that both groups gave significantly higher self-descriptiveness ratings for positive attributes than for negative attributes [$t(37) = 6.88$, $p < 0.001$ for clinical participants, and $t(24) = 17.14$, $p < 0.001$ for controls], suggesting that people with social phobia are not characterised by a strongly negative self-image.

The above analysis was repeated using DASS-Depression scores as a covariate, in order to partial out the potential effects of varying levels of depression on self-descriptiveness ratings. The pattern of results, however, remained the same as those obtained when depression was excluded from the analysis.

Confidence in self-descriptiveness ratings

Internal consistency. Cronbach's alphas were computed for level of certainty associated with self-descriptiveness ratings for positive and negative attributes across the total sample, and showed that both scales were characterised by high internal consistency [confidence ratings for positive attributes: $\alpha = 0.85$; confidence ratings for negative attributes: $\alpha = 0.92$].

Main analyses. Mean confidence levels for self-descriptiveness ratings are presented in Fig. 2, and were analysed in a two-way Group (social phobia, control) \times Valence (positive attributes, negative attributes) Analysis of Variance, with Group as a between subjects factor and Valence as a within-subjects factor. The main effect for group was significant, $F(1, 61) = 24.0$, $p < 0.001$, $\eta^2 = 0.28$, as was the Group by Valence interaction, $F(1, 61) = 4.28$, $p < 0.05$, $\eta^2 = 0.07$. Between and within-groups comparisons were conducted to further investigate the nature of the interaction, using Bonferroni-adjusted critical alpha levels of 0.025 (0.05/2). Between-groups comparisons indicated that the group with social phobia were significantly less confident than control participants in their self-descriptiveness ratings for both positive attributes, $t(61) = 4.83$,

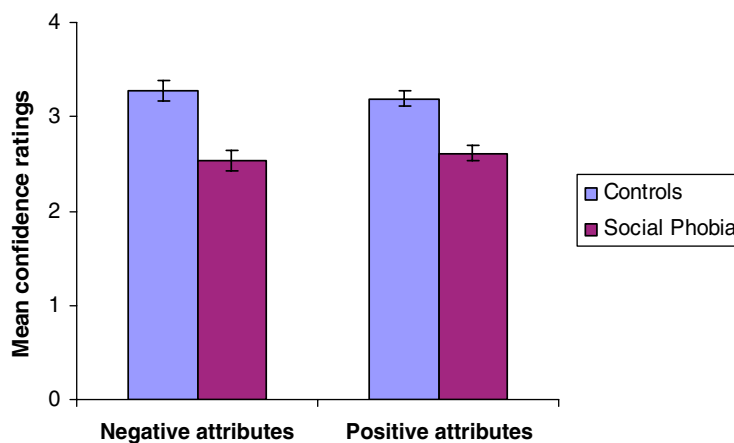


Fig. 2. Mean confidence levels for self-descriptiveness ratings of negative and positive personality attributes by group (Study 1). Note: Error bars show mean \pm 1.0 SE.

$p < 0.001$, Cohen's $d = 1.27$, and negative attributes, $t(61) = 4.69$, $p < 0.001$, Cohen's $d = 1.23$. Inspection of the number of times the groups endorsed extreme response categories suggested that these differences may have been at least partially due to controls more frequently endorsing "extremely confident" for self-descriptiveness ratings given to both types of attributes (mean frequencies of 5.48 versus 1.76 for negative attributes, and 4.48 versus 1.76 for positive attributes), rather than the social phobia group more frequently endorsing ratings of "not at all confident" in comparison to controls (for both groups, mean frequencies of such ratings were less than 0.22 for both types of attributes). Although confidence levels for self-descriptiveness ratings of negative attributes were slightly higher than those for positive attributes among control participants, while the group with social phobia showed the opposite pattern, within-group comparisons indicated that the differences in confidence levels for each type of attribute were not significant for either group [$t(37) = 1.56$, $p > 0.05$, and $t(24) = 1.41$, $p > 0.05$, for clinical and control participants, respectively].

As was the case for self-descriptiveness ratings, the analysis for confidence ratings was repeated with DASS-Depression scores included as a covariate. This analysis revealed that the Group by Valence interaction was no longer significant, $F(1, 60) = 2.10$, $p > 0.05$. However, the main effect of group remained significant after partialling out the effects of depression, $F(1, 60) = 9.25$, $p < 0.01$, $\eta^2 = 0.13$, again indicating that clinical participants were significantly less confident than controls in terms of their self-descriptiveness ratings for both positive and negative attributes.

Regression analyses. As noted earlier, previous evidence suggests that reduced certainty about the self is generally associated with less positive self-evaluations (e.g. Baumgardner, 1990; Campbell, 1990; Campbell et al., 1996). Simple correlations across the total sample in the present study between mean confidence scores and self-descriptiveness ratings indicated that there was a significant negative correlation between the degree to which individuals believed that negative attributes were descriptive of them and their certainty in these self-descriptions ($r = -0.61$), and a significant positive correlation between the degree to which individuals endorsed positive attributes as being self-descriptive and their certainty in these ratings ($r = 0.66$). A further question of interest was therefore whether confidence ratings for positive and negative attributes were significant predictors of social anxiety after controlling for overall self-descriptiveness ratings for each type of attribute. In addition, the clinical group in the present study differed from controls on the DASS-Anxiety and DASS-Stress scales in addition to the DASS-Depression scale, raising the possibility that general anxiety and stress may have accounted for differences between groups in terms of confidence in self-descriptiveness ratings.

Separate hierarchical, multiple regression analyses were conducted in order to determine whether levels of certainty in self-descriptiveness ratings for positive and negative attributes were associated with social anxiety independently of general anxiety, stress and depression, and overall self-ratings for each type of attribute. To assess the unique contribution of social anxiety to confidence in self-descriptiveness ratings for negative attributes, a regression analysis was conducted in which the predictor variables were mean negative attribute ratings (entered into the equation first), scores on each of the three DASS-scales (entered second, as a set), and SIAS scores (entered last). Mean confidence scores for negative attribute ratings were entered as the dependent variable. This analysis revealed that social anxiety remained a significant predictor of confidence in self-descriptiveness ratings for negative attributes after controlling for the degree to which

negative attributes were endorsed, as well as the effects of depression, general anxiety and stress [change in $R^2 = 0.07$, $F(1, 57) = 7.35$, $p < 0.01$]. A similar regression analysis was conducted for confidence in positive attribute ratings. This analysis, however, showed that social anxiety did not significantly predict confidence in beliefs about positive self-characteristics after controlling for positive attribute ratings, as well as the effects of depression, general anxiety and stress [change in $R^2 = 0.02$, $F(1, 57) = 2.04$, $p > 0.05$].²

Finally, in order to further examine the question of whether confidence in self-descriptiveness ratings may be associated with psychopathology more generally, further regression analyses were conducted to determine whether depression, general anxiety, or stress were significant in predicting confidence in self-descriptiveness ratings after partialling out the effects of social anxiety. In separate analyses, scores on each of the DASS subscales were entered into the equation after SIAS scores, with confidence in self-descriptiveness ratings for positive and negative attributes entered as the dependent variables. The results showed that depression, general anxiety, and stress all failed to predict confidence in self-ratings for either positive or negative attributes after controlling for variance attributable to social anxiety [*DASS-Depression*: change in $R^2 = 0.00$, $F(1, 60) = 0.22$, $p > 0.05$, and change in $R^2 = 0.00$, $F(1, 60) = 0.01$, $p > 0.05$, for confidence in positive and negative attributes, respectively; *DASS-Anxiety*: change in $R^2 = 0.01$, $F(1, 60) = 0.76$, $p > 0.05$, and change in $R^2 = 0.00$, $F(1, 60) = 0.10$, $p > 0.05$, for confidence in positive and negative attributes, respectively; *DASS-Stress*: change in $R^2 = 0.00$, $F(1, 60) = 0.44$, $p > 0.05$, and change in $R^2 = 0.00$, $F(1, 60) = 0.01$, $p > 0.05$, for confidence in positive and negative attributes, respectively].

Discussion

In summary, the results of Study 1 suggest that individuals with social phobia hold less favourable beliefs about the personality characteristics they possess in comparison to non-anxious controls, even after controlling for the effects of depression. In addition, their self-reported confidence levels in self-descriptiveness ratings for positive and negative attributes were generally lower than those of controls, indicating that their self-concepts may be characterised by less certainty in comparison to the self-concepts of people low in social anxiety. The regression analyses further indicated that people with higher levels of social anxiety were subjectively less certain with regard to whether or not they possessed negative personality attributes, even after controlling for the effects of other forms of psychopathology and differences in the extent to which negative attributes were endorsed as being self-descriptive. In contrast, self-reported confidence levels in self-descriptiveness ratings were not associated with depression, general anxiety or stress after partialling out the effects of social anxiety, suggesting that reduced self-concept certainty is not a concomitant of psychopathology in general.

Notwithstanding these results, it is possible that lower levels of certainty associated with self-ratings of personality traits merely reflects decreased confidence among individuals with social phobia in all types of decisions they make, rather than those specifically related to self-description.

²When SPS scores were substituted for SIAS scores as the measure of social anxiety, the regression analyses for both positive and negative attributes were non-significant. This suggests that lower levels of certainty with respect to negative attribute ratings may be associated with social interaction fears rather than scrutiny/performance concerns.

Study 2 was conducted in order to control for this possibility, as well as to provide a measure of self-concept certainty among people with social phobia in a manner that was less overt than self-reported confidence ratings. To this end, reaction times in making decisions about self-characteristics were assessed in Study 2, with longer reaction times assumed to be indicative of lower certainty (as per Baumgardner, 1990; Study 3; Campbell, 1990, Study 4).

Study 2

Method

Participants

Twenty-eight individuals who met DSM-IV criteria for a principal diagnosis of generalised social phobia, and 26 non-clinical controls participated in the study. As was the case for Study 1, clinical participants consisted of individuals seeking treatment for social anxiety at the Macquarie University Anxiety Research Unit, while control participants were recruited from the general community and from the undergraduate psychology student population at Macquarie University. Diagnostic status for all participants was established in the same manner as in Study 1, using the ADIS-IV (see above for description).

Measures

Questionnaires. The SIAS, SPS and DASS-21 were again employed in Study 2 as standard measures of social phobia, depression, general anxiety and stress.

Adjective lists. An experimental list of 56 adjectives denoting personality attributes (28 positive attributes, and 28 negative attributes) was compiled, and participants were required to make binary (yes/no) decisions as to whether each word was characteristic of them in general. As in Study 1, an attempt was made to ensure that these attributes represented a range of different dimensions of the self-concept (e.g. physical, intellectual and social aspects of the self), and were not synonymous with anxiety, in order to examine beliefs about the self other than those regarding dispositional anxiousness.

A second list of 56 words describing personality characteristics was compiled in order to control for potential reaction-time differences between groups in terms of decision-making in general. Each of the words in the control list was matched to one of the words in the experimental list as closely as possible in terms of valence (i.e. in terms of whether the word described a positive versus negative attribute), frequency of usage, number of syllables, and length (number of letters). Information regarding word frequency was derived from the CELEX Lexical Database (Baayen, Piepenbrock, & Gulikers, 1995). Participants were required to make binary (yes/no) decisions as to whether the words comprising the control list represented positive or negative personality characteristics in general. Thus, the experimental and control tasks were designed to differ only in terms of the type of decision that participants were required to make. The words comprising both the experimental and control lists are presented in Appendix A.

As an index of self-concept certainty, the response times for general desirability decisions about each attribute on the control list were subtracted from response times for self-descriptiveness

decisions about the corresponding attributes on the experimental list, and the mean differences in reaction times for positive and negative attributes were calculated for each participant. A larger positive difference was interpreted as indicating greater hesitancy in self-descriptiveness decisions, thus indicating uncertainty. By examining response times for decisions regarding self-characteristics relative to response times for making self-irrelevant decisions about trait words, it was assumed that any general differences between clinical and control participants in terms of the time required to make decisions would be controlled. In addition, the types of decisions made in both the experimental and control tasks were chosen such that they required participants to read words and access their meaning. This was done in order to ensure that the only difference in terms of the “level of processing” (e.g. see [Craig & Lockhart, 1972](#)) required by each task related to whether the words were self-descriptive versus whether they generally referred to positive or negative characteristics, thus controlling for the possibility that clinical participants may have been slower than controls in responding to the experimental task due to anxiety-related interference in the recognition and general semantic access of words.

Procedure

Participants were tested individually, seated approximately 45 cm from a monochrome computer monitor. The experiment was run under the control of an IBM compatible computer using DMASTR ([Forster & Forster, 1990](#)) software. Words comprising the experimental and control lists were presented one at a time in the centre of the monitor. All words were printed in large (1200 mm high) uppercase letters. The word disappeared from the screen once the subject had made their response, and there was an interval of approximately 1100 ms before the onset of the next word.

The experimental and control lists were presented to participants in blocks, with words comprising each list appearing in random order. The order of the two lists was counterbalanced in order to control for practice effects and fatigue, such that half the participants within each group received the experimental list first, and half the participants received the control list first. For both tasks, participants responded to seven practice items prior to the main trials.

Instructions for responding to the experimental word list were as follows:

In this task, you will (again) see words on the screen that represent personality characteristics, or ways of describing people. I would like you to look at each word, and decide whether or not you believe that each characteristic describes you in general. Please respond as quickly as you can, without spending too long thinking about any item.

In an attempt to counteract the effects of self-presentational concerns (e.g. responding in order to present oneself in a modest light; see [de Jong, 2002](#)), all participants were assured that the experimenters would not be examining individuals’ responses, and would only be interested in comparing the mean scores of different groups.

Instructions for responding to the control word list were as follows:

In this task, you will (again) see words on the screen that represent personality characteristics or ways of describing people. In this task, I would like you to look at each word, and decide whether or not you think that each characteristic is a desirable characteristic for anyone to

have—in other words, whether it is generally a positive attribute. Please respond as quickly as you can, without spending too long thinking about any item.

Participants made both types of decisions by pressing a “yes” button with their right hand, or a “no” button with their left hand, with buttons located on separate hand-held devices. The target remained on screen until the person responded, or until the time out period of 8 s had elapsed. If participants failed to respond to a word within 8 s, the item was excluded from the analyses. Reaction times and yes/no responses for each item were recorded by the DMASTR program (Forster & Forster, 1990).

Results

Demographic characteristics

Demographic characteristics for the social phobia and control groups are presented in Table 2. Statistical comparisons revealed that the clinical and control groups did not differ significantly in

Table 2
Demographic variables and scores on symptom measures by group (Study 2)

Demographic variables	Group	
	Social phobia	Non-clinical controls
	Mean (SD)	Mean (SD)
Age	30.9 (8.6)	35.1 (9.3)
Sex	<i>N</i> (%)	<i>N</i> (%)
Male	13 (46.4)	10 (38.5%)
Female	15 (53.6)	16 (61.5%)
Education	<i>N</i> (%)	<i>N</i> (%)
Less than high school	3 (11.1%)	4 (15.4%)
Completed high School	10 (37.0%)	4 (15.4%)
Technical certificate	4 (14.8%)	7 (26.9%)
Undergraduate degree	9 (33.3%)	8 (30.8%)
Postgraduate degree	1 (3.7%)	3 (11.5%)
Marital status	<i>N</i> (%)	<i>N</i> (%)
Never married	17 (60.7%)	13 (50.0%)
Married or De Facto	8 (28.6%)	10 (38.5%)
Separated or divorced	3 (10.7%)	3 (11.5%)
Symptom measures	Mean (SD)	Mean (SD)
SIAS	55.83 (12.1)	14.85 (8.2)
SPS	35.6 (16.5)	5.92 (4.2)
DASS-Depression	19.29 (10.6)	6.38 (6.0)
DASS-Anxiety	16.36 (6.8)	4.46 (4.8)
DASS-Stress	18.32 (7.1)	12.51 (7.8)

Note: Information regarding educational status was missing for one clinical participant.

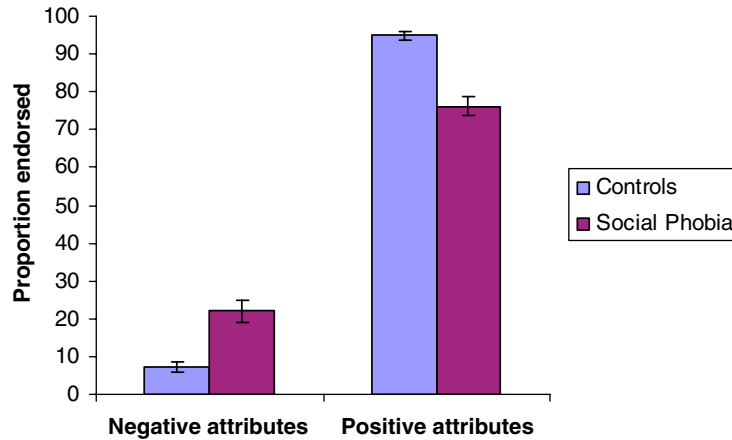


Fig. 3. Mean proportions of negative and positive trait adjectives endorsed as being self-descriptive (Study 2). *Note:* Error bars show mean \pm 1.0 SE.

terms of mean age, $t(52) = 1.71, p > 0.05$, sex composition, $\chi^2(1, n = 54) = 0.35, p > 0.05$,³ marital status, $\chi^2(2, n = 54) = 0.68, p > 0.05$, or level of education, $\chi^2(4, n = 53) = 4.57, p > 0.05$.

Measures of anxiety and depression

Table 2 presents the means and standard deviations on the SIAS, SPS, and DASS-21 for the social phobia and control groups. Independent-groups *t*-tests indicated that the mean scores on each of the measures were significantly higher among the clinical group in comparison to controls [SIAS: $t(52) = 14.4, p < 0.001$; SPS: $t(52) = 8.9, p < 0.001$; DASS-Depression: $t(52) = 5.5, p < 0.001$; DASS-Anxiety: $t(52) = 7.3, p < 0.001$; DASS-Stress: $t(52) = 2.9, p < 0.01$]. Thus, as was the case in Study 1, clinical participants were not only more socially anxious than controls, but also reported higher levels of depression, general anxiety, and stress.

Self-descriptiveness ratings for positive and negative attributes

The overall proportion of positive and negative attributes endorsed as being self-descriptive by the clinical and control groups during the experimental task are presented in Fig. 3. Initial inspection of the data revealed a positively skewed distribution for negative attributes, and a negatively skewed distribution for positive attributes. The data were therefore transformed in order to meet the assumptions required for statistical analyses, such that between-groups analyses were conducted using the square root of the percentage of negative attributes endorsed, and the cube of the percentage of positive attributes endorsed by participants. Separate independent-samples *t*-tests for positive and negative personality characteristics revealed that in comparison to controls, the group with social phobia endorsed a significantly lower proportion of positive attributes as being self-descriptive, $t(52) = 7.38, p < 0.001$, Cohen's $d = 2.03$, and a significantly

³It should be noted that the data were also examined separately by sex, as the numbers of females and males were not identical between groups. However, the pattern of results was the same for both sexes. This also applied to the data from Study 1.

higher proportion of negative attributes as being self-descriptive, $t(52) = 3.77$, $p < 0.001$, Cohen's $d = 1.03$. For both groups, however, non-parametric Wilcoxon paired comparisons indicated that the percentage of positive attributes endorsed as being self-descriptive was significantly higher than the percentage of negative attributes endorsed as being self-descriptive ($z = 4.52$, $p < 0.001$ and $z = 4.47$, $p < 0.001$ for clinical and control participants, respectively).

As was the case for the questionnaire self-descriptiveness ratings in Study 1, analyses concerning the proportions of negative and positive attributes endorsed by participants were repeated using DASS-Depression scores as a covariate, in order to control for the effect of concurrent symptoms of depression on measures of beliefs about self-characteristics. These comparisons again yielded a significant difference for positive attributes, $t(51) = 4.17$, $p < 0.001$, $\eta^2 = 0.25$, with clinical participants reporting a lower proportion of such characteristics as being self-descriptive than controls. The result for negative attributes, however, failed to reach significance when level of depression was held constant, $t(51) = 1.70$, $p > 0.05$, suggesting that depression, rather than social phobia, may have been responsible for the higher endorsement rates of negative characteristics as being self-descriptive among clinical, as compared to control participants.

Reaction-times for self-descriptiveness decisions

As noted above, the index of self-concept certainty employed in the current study consisted of the mean difference between two sets of reaction times: those for self-descriptiveness decisions about trait words in the experimental task, and those for general desirability decisions about matched trait words in the control task. This variable will thus be referred to as “controlled self-descriptiveness reaction times”. Group means are presented in Fig. 4.

Controlled reaction times were analysed via a two-way Group (social phobia, control) \times Valence (positive attributes, negative attributes) ANOVA, with Group as a between subjects factor, and Valence as a within subjects factor. This analysis revealed a significant main effect for group,

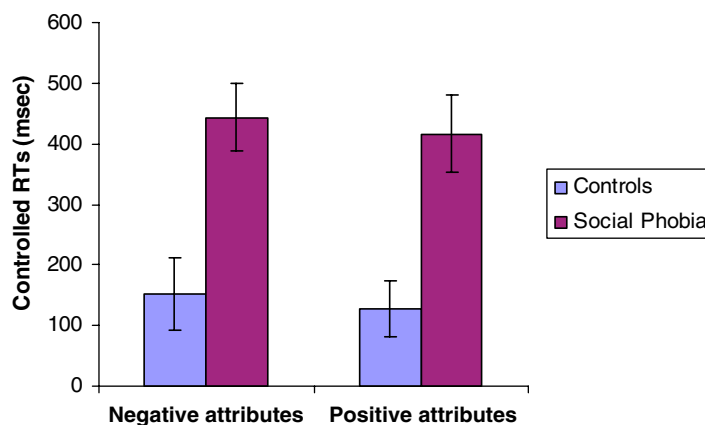


Fig. 4. Mean controlled reaction times (controlled reaction times represent the additional time required to make self-descriptiveness decisions relative to general desirability decisions about matched trait adjectives) for self-descriptiveness decisions for negative and positive personality attributes by group (Study 2). Note: Error bars show mean \pm 1.0 SE.

Table 3

Means and standard deviations (in parentheses) of controlled reaction times (in ms) for self-descriptiveness decisions by group, selected response, and attribute valence (Study 2)

	Social phobia		Non-clinical controls	
	No responses	Yes responses	No responses	Yes responses
Positive attributes	889 (473) <i>N</i> = 27	323 (329) <i>N</i> = 28	790 (934) <i>N</i> = 16	98 (240) <i>N</i> = 26
Negative attributes	367 (295) <i>N</i> = 28	768 (443) <i>N</i> = 24	133 (317) <i>N</i> = 26	499 (570) <i>N</i> = 18

Note: Sample sizes vary due to a number of respondents failing to endorse any negative items, or reject any positive items.

$F(1, 52) = 16.40, p < 0.001, \eta^2 = 0.24$, indicating that controlled self-descriptiveness reaction times were higher among clinical participants in comparison to the control group. Neither the main effect for Valence, nor the Group \times Valence interaction were significant (both F 's < 1), indicating that the difference in controlled reaction times applied to both negative and positive attribute ratings.

Comparisons between controlled self-descriptiveness reaction times for “yes” versus “no” decisions to both negative and positive attributes indicated that overall, participants were slower when making unfavourable decisions about themselves (i.e., they took significantly longer to endorse negative characteristics than to reject them, $t(41) = 5.11, p < 0.001$, and took longer to reject positive characteristics than to endorse them, $t(42) = 5.48, p < 0.001$).⁴ This pattern of results applied to both groups of participants (see Table 3). This finding thus supports the previously mentioned evidence suggesting that individuals who describe themselves more favourably may generally be more certain in their beliefs about themselves than individuals whose self-descriptions are less favourable. Moreover, these results raise the possibility that differences between the social phobia and control groups in terms of their controlled self-descriptiveness reaction times merely reflected a greater number of favourable self-descriptiveness decisions among controls.

In order to examine this possibility, as well as to determine whether the observed differences between groups were independent of variance due to depression, general anxiety and stress, separate one-way Analyses of Covariance were conducted for controlled self-descriptiveness reaction times for positive and negative attributes. The covariates included in the analyses were the proportion of positive or negative attributes actually endorsed, and each of the DASS-21 subscales. Results indicated that controlled reaction times for negative attributes remained significantly higher among the clinical group in comparison to controls when scores on the three DASS-scales, and the proportion of negative attributes endorsed, were included as covariates, $F(1, 48) = 5.40, p < 0.05, \eta^2 = 0.10$. In contrast, the difference between groups in controlled reaction times for positive attributes was no longer significant after controlling for DASS scores

⁴Variations in degrees of freedom were due to several people failing to endorse any negative adjectives, and/or failing to reject any positive adjectives, so that their results could not be included in comparisons.

and the proportion of positive attributes endorsed, $F(1, 48) = 1.44$, $p > 0.05$, consistent with the results of Study 1.

Control task

Overall mean reaction times for decisions regarding the general desirability of trait attributes during the control task were also examined, in order to determine whether clinical participants were slower than controls in terms of more general decision-making. An independent samples t -test revealed that the two groups did not differ in their mean reaction times for making general desirability ratings, $t(52) = 1.47$, $p > 0.05$, suggesting that a lower degree of certainty or confidence in responses among the group with social phobia compared to controls was specific to self-descriptiveness decisions. Finally, a non-parametric Kruskal–Wallis comparison indicated that clinical and control participants did not differ in the overall proportions of “correct” responses during the control task (i.e. positive attributes rated as desirable, and negative attributes rated as not desirable), $\chi^2(1, n = 54) = 1.61$, $p > 0.05$, with both groups showing high proportions of correct responses. Thus, there was no evidence to suggest that either of the groups sacrificed accuracy for speed in their decisions.

General discussion

Overall, the results of the two studies reported in the present paper suggest that individuals with social phobia hold less positive beliefs about their personality attributes than do non-clinical controls, but that their views of themselves are characterised by a higher degree of uncertainty. With regard to the content of self-concepts, the results of Study 1 showed that participants with social phobia gave significantly lower self-descriptiveness ratings for positive personality attributes, and significantly higher self-descriptiveness ratings for negative attributes than did controls. Similarly, in Study 2, clinical participants rated a significantly higher proportion of negative attributes as being self-descriptive, and a significantly lower proportion of positive attributes as being self-descriptive, in comparison to controls. These results are consistent with previous research suggesting that socially anxious individuals perceive themselves in a less positive manner than do non-anxious individuals (e.g. Mansell & Clark, 1999).

Between-group differences in self-descriptiveness ratings generally remained evident after controlling for levels of depression, suggesting that less positive beliefs about the self among individuals with social phobia in comparison to controls were not solely attributable to higher levels of depression. The only exception to this was the difference between groups in the proportion of negative attributes endorsed in Study 2, which was no longer significant when scores on a measure of depression were partialled out of the analysis. It is possible that this finding is at least partially due to the forced choice “yes” versus “no” response format in Study 2, as compared to the Likert scales ranging from “much less than average” to “much more than average” employed in Study 1. Thus, while people with social phobia may reject a high proportion of negative personality attributes as being entirely self-descriptive, they may have a less favourable view of their personality characteristics than non-anxious individuals when asked to rate them on a scale in relation to the “average” person. This suggestion received some support in a study of implicit self-esteem by de Jong (2002), who found evidence indicating that social anxiety may be

associated with less “self-favouring” beliefs about the self in comparison to others, rather than negative self-evaluations per se.

Of primary interest to the present discussion, however, were the results concerning the measures of certainty in self-descriptiveness ratings. Overall, the results of the current two studies supported the hypothesis that individuals with social phobia would show less certainty with regard to whether they possessed negative personality characteristics, or lacked positive characteristics in comparison to non-clinical controls. In Study 1, participants with social phobia reported lower subjective confidence levels in self-descriptiveness ratings of positive and negative personality attributes than non-clinical controls. In Study 2, reaction times for making yes/no decisions about whether positive and negative attributes were self-descriptive, relative to reaction times for making general self-irrelevant decisions about trait adjectives, were significantly greater among individuals with social phobia than non-clinical controls.

In view of previous evidence suggesting that more negative evaluations of the self are generally associated with lower levels of self-concept certainty (e.g. Baumgardner, 1990; Campbell, 1990), further analyses were conducted in order to determine whether the effects observed in the present studies may have been attributable to differences between clinical and control participants in the actual contents of their self-concepts, and/or higher levels of general psychopathology. This appeared not to be the case. In both studies, the association between social anxiety and measures of certainty in self-descriptiveness ratings for negative attributes remained significant after controlling for the self-descriptiveness ratings themselves, as well as for scores on measures of depression, general anxiety and stress. In contrast, the relationship between social anxiety and reduced certainty in self-descriptiveness ratings for positive attributes was no longer significant in either study after controlling for mean positive attribute ratings and other forms of psychopathology. Thus, it seems that relative uncertainty with regard to whether or not one possesses negative personality attributes may be a more important factor in social anxiety than being unsure of one’s positive attributes.

How might uncertainty associated with one’s view of the self contribute to the development and/or maintenance of social anxiety? This question may be answered by referring to social psychology theory and research, which have indicated that other people represent valuable sources of information by which individuals gauge the accuracy of their attitudes and beliefs (e.g. Festinger, 1954a, b; Suls, Martin, & Wheeler, 2000), and that individuals who are uncertain in their attitudes or beliefs may be influenced by others’ opinions to a greater degree than individuals who are more confident in their beliefs (e.g. Maass, Volpato, & Mucchi-Faina, 1996; Moscovici, 1976). Based on this view, it may be the case that others’ opinions of the self may have a greater effect on one’s personal opinion of the self when one’s pre-existing self-beliefs are uncertain (cf. Campbell, 1990). Thus, according to this suggestion, negative evaluation by others may potentially have a more adverse impact upon the global self-concept of individuals who are less confident as to whether they lack positive attributes or possess negative attributes, compared with individuals whose self-beliefs are held with conviction. Indeed, this view corresponds with the aforementioned evidence suggesting that individuals with social phobia are more likely than non-anxious controls to interpret negative social events as being indicative of negative self-characteristics (e.g. Stopa & Clark, 2000; Wilson & Rapee, 2005a, in press), and furthermore, may help to explain why negative evaluation by others represents a central underlying fear among individuals with social phobia (e.g. Butler, 1985).

Nevertheless, it is important to note that this suggestion is largely conjectural, given that the current analyses were correlational, and thus allow few conclusions to be made regarding the nature of the causal relationship between social phobia and biases in the structure of self-related beliefs. Indeed, it is evident that higher levels of social anxiety may also contribute to lower levels of certainty with regard to one's beliefs about the self. Arkin (1987), for instance, has suggested that doubts about self-worth among shy individuals may lead them to behave in a manner that is designed to protect them from evaluation by others, as negative evaluations would be perceived as confirmation of suspected personal shortcomings. By limiting the potential for social feedback, however, such behaviour provides few opportunities for diagnosing self-worth, thus further contributing to uncertainty about the self (Arkin, 1987). Future research that examines the nature of the relationship between biases associated with the self-concept and social anxiety would be of considerable interest.

It is important to note several further limitations that restrict conclusions that may be made regarding the role of self-concept biases in social phobia. First, both studies employed self-report measures of the content of individuals' self-concepts, in the form of subjective self-descriptiveness ratings of personality attributes. The ability of such measures to provide a true indication of subjective beliefs about the self has been criticised, given the potential influence of self-presentational concerns on responses (de Jong, 2002). Although an attempt was made to reduce such concerns among participants by emphasising anonymity, this may have been insufficient in terms of eliminating response biases among participants with social phobia, based on a desire to present themselves to the experimenter in a modest light. Similarly, the possibility that impression management strategies may have also contributed to longer reaction times among clinical participants in Study 2 (e.g. via attempts to control automatic responses that may convey an undesired impression), cannot be ruled out.⁵

Second, the present studies did not directly address the question of whether reduced certainty in beliefs about one's personality attributes is relatively specific to social phobia, or is characteristic of other forms of psychopathology. Although the results of Study 1 showed that scores on measures of stress, general anxiety and depression did not predict self-reported confidence in self-descriptiveness ratings of personality attributes after controlling for scores on a measure of social anxiety, further research comparing different clinical populations is required in order to provide more definitive evidence regarding the issue of specificity. Given the aforementioned evidence that individuals with social phobia and depression show similar biases in terms of the content of self-evaluative cognitions (e.g. see Alden et al., 1995), a particular question of interest is whether structural aspects of the self-concept may be an important factor in differentiating the two conditions.

This notion has indeed been implied in several theoretical accounts of the potential differences between social anxiety and depression. Clark and Wells (1995), for instance, propose that while (non-depressed) individuals with social phobia may be similar to individuals with depression in terms of holding negative beliefs about the self, the self-schemata of those with the latter condition tend to be "relatively stable and persist throughout depressive episodes" (p. 76), in contrast to the hypothesised instability of self-schemata among individuals with social phobia. Similarly, Ingram (Ingram, 1989b, p. 205; see also Kendall & Ingram, 1987) has suggested that depression and social

⁵We thank the helpful comments of an anonymous reviewer for this suggestion.

anxiety may differ in terms of the form of negative self-related thoughts, with negative thoughts in depression being stated in a “declarative” form (e.g. “I am _____”), while negative thoughts in social anxiety are expressed as a possibility (e.g. “Am I _____?”). The latter suggestion, in particular, implies that negative self-related beliefs in depression are held with more certainty than in social phobia, and thus may be less amenable to change following positive events.

Finally, the present studies only investigated the level of certainty associated with beliefs about self-attributes, which represents only one of several potentially important structural aspects of the self-concept. Future research is required in order to determine whether other structural aspects, such as temporal stability and internal consistency (see Campbell et al., 1996), or the complexity of self-representations (see Linville, 1985, 1987), may also differentiate the self-concepts of individuals with social phobia from those of individuals without the disorder.

Notwithstanding these limitations, the present studies provide preliminary evidence that structural elements of the self-concept, in addition to the content of self-related beliefs, distinguish individuals with social phobia from those without the disorder. The potential role that factors such as a lack of certainty associated with beliefs about the self may play in the development and maintenance of social phobia is clearly a topic for future research.

Acknowledgements

We are grateful to Dr. Alan Taylor for his invaluable statistical advice during the preparation of this manuscript.

Appendix A. Experimental and matched control trait adjectives (Study 2)

Experimental list (self-descriptiveness decisions)	Control list (general desirability ratings)
<i>Positive attributes</i>	
Admirable	Honourable
Attractive	Sensible
Capable	Excellent
Caring	Humane
Competent	Authentic
Considerate	Adventurous
Cooperative	Charitable
Courageous	Respectful
Efficient	Confident
Ethical	Amiable
Honest	Clever
Humorous	Talented
Imaginative	Enthusiastic
Intelligent	Remarkable
Interesting	Original

Knowledgeable	Compassionate
Lovable	Eloquent
Loyal	Gifted
Pleasant	Patient
Polite	Decent
Resourceful	Trustworthy
Sexy	Witty
Sincere	Earnest
Successful	Popular
Valuable	Genuine
Warm	Fair
Wise	Calm
Worthy	Refined
<i>Negative attributes</i>	
Annoying	Insecure
Arrogant	Malicious
Boring	Hostile
Cruel	Crude
Deceitful	Conceited
Deficient	Corrupted
Dull	Vague
Foolish	Jealous
Greedy	Unjust
Ignorant	Offensive
Inadequate	Artificial
Ineffective	Insensitive
Inferior	Pathetic
Insignificant	Disagreeable
Irresponsible	Unreasonable
Lazy	Idiot
Selfish	Vicious
Stupid	Anxious
Superficial	Irritating
Tactless	Snobbish
Thoughtless	Heartless
Ugly	Nasty
Unappealing	Uncreative
Uneducated	Derogatory
Unfriendly	Ungrateful
Unproductive	Unscrupulous
Unreliable	Dominating
Weak	Plain

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