Chapter 18

Social Anxiety and the Self

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THE SELF

What is the self? This question has been pondered by the foremost scholars in psychology and yielded a variety of answers. William James, writing in 1890, viewed the self as multi-faceted and proposed distinctions between the "me" self (self as known) versus the "I" self (self as knower) and the private versus the social (public) self. The prominent interpersonal theorist Harry Stack Sullivan conceptualized the self as the distillation of one's relationships with significant others (e.g., Sullivan, 1953). Erik Ericksen (1968), working in the ego-analytic tradition, argued that the development of self-identity was essential to psychological adjustment and well-being and proposed that those who failed to achieve a sense of personal identity remained in a state of identity diffusion, fated to stumble through life caught up in hollow relationships and the pursuit of goals not of their own choosing. In sharp contrast, radical behaviorists operationalized the self as simply the set of verbal behaviors that contain the term "self" (Staats & Staats, 1964). The neuroscientist Joseph LeDoux (2002) suggested that the self is the sum total of the molecular changes in CNS synaptic receptor sites that occur in response to life experiences. Whether the self is viewed as an essential goal in psychological development, a set of verbal behaviors, or molecular change, the concept of self is central to psychological theories.

Self-related concepts also figure prominently in contemporary clinical models of social anxiety disorder (SAD; Clark & Wells, 1995; Hofmann, 2007; Rapee & Heimberg, 1997). Recent years have witnessed a burgeoning of empirical studies examining these constructs. An exhaustive review of this literature goes beyond the scope of this chapter; however, we will describe major topics related to the self and SAD. To guide our efforts, we begin with a brief discussion of the notion of the self-schema presented in the social cognition literature. We then summarize the empirical literature on the self and social anxiety, addressing four domains: self-schema content, self-referent processing, self-protective motives and behavioral strategies, and self-schema characteristics as they relate to social anxiety. Our goals are to draw attention to the breadth and complexity of this literature and to suggest some directions for future research.

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A SOCIAL COGNITIVE PERSPECTIVE

Social cognitive theorists view the self as an organized knowledge structure, or cognitive schema, that contains all known information about oneself, including past experiences, current knowledge, feelings, beliefs, and self-related evaluations, as well as imaginary elements, such as our notions of the possible selves that we could become (e.g., Bargh, 1982; Markus, 1977; Markus & Nurius, 1986). This self-knowledge is said to be organized in multiple, context-specific structures contained in an interrelated memory network, with specific self-facets increasing in salience when activated by contextual cues (see reviews by McConnell, Shoda & Skulborstad, 2012; Ellemers, Spears, & Doosje, 2002). Social cognitive scientists have examined a variety of issues related to the self-schema, most notably: (1) the nature of the information most central to an individual's sense of self; (2) the effects of the self-schema on cognitive processes, such as attention and judgment; (3) the influence of the self-schema on motives and goals and the behavioral strategies selected to achieve them; and (4) the way that self-schema characteristics such as clarity and structure influence cognitive, affective, and behavioral processes. Following this guide, we will address four broad issues as they relate to SAD: self-schema content, self-referent processing, self-related motives and behavioral strategies, and finally, self-schema characteristics in the domain of social anxiety.

SELF-SCHEMA CONTENT

The largest body of research in the domain of social anxiety addresses the content of the self-schema. Researchers have variously studied schema content through self-statements, maladaptive beliefs, and self-images, as well as via global assessments of self-worth (self-esteem) and self-efficacy.

Self-related thoughts

Early attempts to examine self-schema content assessed state-like thoughts obtained via thought listing procedures or self-statement inventories administered prior to or following social situations (e.g., Cacioppo, Glass & Merluzzi, 1979; Glass, Merluzzi, Biever, & Larsen, 1982). This work focused primarily on valence rather than content per se. Under conditions of social threat, clinical and non-clinical socially anxious populations were consistently found to report more negative and fewer positive thoughts than non-clinical or low socially anxious individuals (e.g., Heimberg, Bruch, Hope, & Dombeck, 1990). In particular, the frequency of negative self-statements was found to be strongly associated with social anxiety severity whereas positive self-statements displayed a weaker, negative association (Beazley, Glass, Chambless & Arnkoff, 2001; Dodge, Hope, Heimberg, & Becker, 1988). Importantly, only negative self-statements were associated with observers' ratings of behavioral signs of anxiety and performance (Glass & Furlong, 1990) and with reductions in SAD symptoms (e.g., Chambless, Tran, & Glass, 1997).

Maladaptive self-beliefs. Subsequent cognitive models conceptualized self-schema content in terms of maladaptive beliefs, which were hypothesized to be critical factors in the etiology and maintenance of SAD (e.g., Clark & Wells, 1995; Rapee & Heimberg, 1997). Beliefs were viewed as stable, trait-like cognitions, albeit made more salient by social threat. Research arising from these models placed greater emphasis on thematic content with various researchers identifying different underlying themes. Turner and his colleagues proposed that maladaptive beliefs reflect two themes, "social comparison", i.e., beliefs that others are more socially competent and capable, and "social ineptness", i.e., beliefs that the person would behave awkwardly or appear anxious in front of others (Turner, Johnson, Beidel, Heiser, & Lydiard, 2003). Consistent with cognitive models, these dimensions were found to be stable (trait-like) and to distinguish clinical SAD samples from other anxiety disordered samples and healthy controls. Moreover, the two dimensions displayed stronger relationships with social interaction anxiety and interpersonal impairment than the more prominent construct of fear of negative evaluation (Fergus et al., 2009). Only social comparison, however, was unique to social interaction anxiety as opposed to depression and other conditions (Fergus et al., 2009; Koerner, Antony, Young, & McCabe, 2013). Changes in social comparison also predicted treatment change (Koerner et al., 2013).

Wong and Moulds (2011a) measured the three types of maladaptive self-beliefs proposed by Clark and Wells (1995): (1) high standards self-beliefs ("I must be able to convey a favorable impression to everyone"), (2) conditional self-beliefs ("If people see I'm anxious, they'll think I'm weak"), and (3) unconditional self-beliefs ("People think badly of me"). Consistent with the notion of situational activation, impending social threat increased the strength of maladaptive self-beliefs (Wong & Moulds, 2010b), whereas past threat deactivated them (Wong & Moulds, 2010a). Interestingly, conditional and high standard self-beliefs were activated prior to a social event, whereas unconditional beliefs which reflect more stable negative self-views, were stronger after the event. Although all three types were associated with social anxiety, only high standards self-beliefs was unique to social anxiety compared to depression. However, subsequent work indicated that this type predicted *less* behavioral avoidance of social situations, a finding seemingly inconsistent with theoretical propositions (Wong & Moulds, 2011b).

A third example of thematic content was provided by Rodebaugh (2009) in his Core Extrusion Schema (CES) measure. Building on evolutionary theories of SAD, he assessed beliefs hypothesized to motivate self-concealment (see self-related motives below). Four themes emerged, two of which, "rejection of true self" ("If people really knew me they wouldn't like me as much") and "hidden self" ("I rarely act 'like myself' around others"), were unique from related constructs and predicted social interaction anxiety and interpersonal difficulty.

It is notable that the beliefs implicated in SAD reflect what social cognitive researchers term a *relational* sense of self, i.e., self as defined by one's relationship

with others, as opposed to an independent sense of self. Further work is needed to determine which of these thematic domains are most central to SAD. Furthermore, to the extent that maladaptive beliefs are hypothesized to form the base that gives rise to other SAD-related processes, it is also crucial to either identify beliefs specific to SAD or else to specify how the same set of beliefs can result in SAD in one person and a different disorder in another.

Self-images

An emerging research area involves studying self-schema content through self-reported images of oneself, which in the case of SAD tend to be negative (e.g., Hackmann, Clark, & McManus, 2000). Compared to purely verbal cognitions, images are proposed to share similar properties to direct experiences and therefore to more readily trigger emotional arousal and negative associations (see review by Holmes & Mathews, 2010). Negative self-images (NSI) were found to be related to individuals' feared outcomes rather than actual outcomes (e.g., Hackmann et al., 2000; Hackmann, Surawy, & Clark, 1998). Some work suggested that NSI images are usually viewed from an outside observer's perspective, and despite being overly critical and distorted, are nevertheless taken to be realistic and true (e.g., Hackmann & Holmes, 2004; Hackmann et al., 2000). Given that socially anxious individuals are often concerned about the impression they are making on others, the observer perspective might reflect a shift in attention towards monitoring themselves from a third party perspective. Similarly, some NSI are associated with memories of traumatic social experiences (e.g., being embarrassed in public, being bullied, etc.). The rates of reported NSI corresponding with early traumatic experiences range from as low as 13% (Harvey, Ehlers, & Clark, 2005) to 100% (Hackmann et al., 2000).

NSI are theorized to influence social anxiety via several pathways. Firstly, NSI increase the experience of anxiety in social situations, regardless of other mechanisms (e.g., Hirsch, Clark, Mathews & Williams, 2003; Hirsch, Mathews, Clark, Williams, & Morrison, 2006; Vassilopolous, 2005). Secondly, NSI increase negative cognitive processes in social situations, including self-focused attention, negatively-biased information-processing and memory retrieval, and inaccurate self-evaluation (e.g., Hirsch, Clark, Williams, Morrison, & Mathews, 2005; Hirsch et al., 2006; Makkar & Grisham, 2011; Stopa & Jenkins, 2007). For example, when socially anxious individuals held a negative self-image in their mind, they rated their anxiety symptoms as more noticeable, and were rated by objective observers as performing more poorly on a speech task (Hirsch et al., 2003; Makkar & Grisham, 2011). NSI have also been found to lead to more self-related negative cognitions both during social situations and post-event processing, with one study finding both increases in negative rumination and decreases in positive self-appraisals (Makkar & Grisham, 2011). NSI were found to decrease positive self-esteem and increase negative self-esteem, which might amplify and reinforce the effects of negative self-evaluative cognitions (de Jong, 2002; Hulme, Hirsch, & Stopa, 2012). Interestingly,

Moscovitch, Gavric, Merrifield, Bielak, and Moscovitch (2011) found no differences in the *frequency* of negative or positive images between low and high socially anxious individuals; however, socially anxious participants reported experiencing greater negative affect, diminished positive affect, and greater influence of the images on their views of themselves, others, and the world. Therefore, regardless of their frequency, negative self-images appear to have a greater impact on socially anxious individuals relative to others. Similarly, these effects do not appear to be constrained to the social situation, but rather can lead to detrimental effects after the event, such as post-event rumination and negative self-appraisals (Makkar & Grisham, 2011).

More recently researchers have begun to address *positive* self-imagery. Some studies indicate that the presence of negative images inhibits individuals' abilities to retrieve positive autobiographic memories (Stopa & Jenkins, 2007), which would be particularly problematic for a socially anxious individual attempting to overcome anxiety and negative cognitions. Moscovitch et al. (2011) found no differences between high- and low-trait social anxiety groups in the reported frequency of positive images; however, when the ratio of negative to positive images was calculated within groups, the socially anxious group displayed a higher ratio of negative to positive images. Moreover, the positive images of socially anxious participants tended to be deprived of episodic detail. Finally, Hulme et al. (2012) tested the Self-Memory System model, which proposes that NSI represent a part of the self that is retrieved in response to social threat. They found that holding a positive self-image in mind buffered the negative effects of being excluded, with individuals reporting higher explicit self-esteem after being ostracized, relative to those who held a negative self-imagery.

Self-esteem

Self-esteem refers to the extent to which one values oneself. Although correlated with self-schema content, the two constructs are conceptually distinct. It is possible to believe one has negative features and still consider oneself to be worthwhile (e.g., "I am awkward but I mean well and am a good person.") Self-esteem can be measured either through explicit or implicit methods. Individuals with social anxiety and SAD consistently display lower explicit self-esteem than non-socially anxious controls (de Jong, 2002; de Jong, Sportel, Hullu, & Nauta, 2012; Rasmussen & Pidgeon, 2010). There is also empirical support for explicit self-esteem as a risk factor for the development of SAD (Acarturk et al., 2009). Implicit measures of self-esteem paint a more complex picture. In nonclinical samples, socially anxious individuals displayed generally positive implicit self-esteem (were faster in responding to pairings of positive words with self), although they displayed significantly less self-favoring than non-socially anxious controls (de Jong, 2002; Tanner, Stopa, & De Houwer, 2006). Surprisingly few studies have examined clinical samples; however, some evidence indicates that individuals with SAD display negative implicit self-esteem

relative to healthy controls and, to a lesser extent, those with panic disorder (Glashouwer, Vroling, de Jong, Lange, & Keijser, 2013).

Self-efficacy

Researchers have also addressed self-efficacy, which is defined as the person's judgment that they are capable of effectively accomplishing some task or goal. Two types of self-efficacy judgments have been examined: social self-efficacy (SSE), the judgment that one can implement effective social behavior, and cognitive reappraisal self-efficacy (CR-SE), the judgment that one can regulate one's emotions through cognitive reappraisal. SSE was found to predict response to CBT (e.g., Gaudiano & Herbert, 2007) and behavioral performance in a speech task (Rodebaugh, 2006), although the latter researcher concluded that SSE better reflected judgments about the likely outcome than the person's ability. In terms of CR-SE, SAD was characterized by low CR-SE relative to controls (e.g., Goldin, Manbar et al., 2009). Increases in CR-SE not only predicted treatment change (Delsignore, Carraro, Mathier, Znoj, & Schnyder, 2008), they were found to mediate treatment effects (Goldin, Ziv et al., 2012). The extent to which changes in SSE and CR-SE *reflect* rather than *cause* treatment change remains to be established.

SELF-REFERENT COGNITIVE PROCESSING

One enduring contribution from social cognition research is the recognition that information relevant to the self-schema is more readily processed and remembered (the "self-referent effect"; e.g., Bargh, 1982; Higgins & Bargh, 1987; Klein & Loftus, 1988; Markus, 1977). In the case of SAD, cognitive writers propose that self-referent processing results in selective attention to threat cues, negatively biased self-judgments, and ruminative post-event processing (PEP) of social information, which perpetuate maladaptive self-beliefs.

Selective attention

Self-consciousness

Studies of selective attention have their roots in the seminal work by Duval and Wicklund's (1972) on their theory of *objective self-awareness*, which states that attention can be directed to various self-aspects. Relevant to SAD is the concept of public self-awareness, and its dispositional counterpart public self-consciousness, which refers to awareness of the self as a social object. Heightened public self-awareness is hypothesized to activate a process of self-evaluation in which people compare themselves to a desired standard. Individuals with SAD, who have negative self-views, are hypothesized to be prone to negative self-evaluation, which fuels attempts to withdraw physically or emotionally from social events (Fenigstein, Scheier, & Buss, 1975). Empirical studies confirm that social anxiety is related to a painful state of public self-awareness (e.g., Alden, Teschuck,

& Tee, 1992; Fenigstein et al., 1975; George & Stopa, 2008) and that, consistent with theory, social scrutiny results in negative self-evaluation, impairment in social performance, and social withdrawal (Alden et al., 1992).

Self-focused attention

Contemporary cognitive models of SAD emphasize the direction and target of attentional focus. Some writers propose that SAD is characterized by attention directed toward negative internal cues, particularly anxiety-related sensations, whereas others argue that SAD is associated with threat-focused attention directed toward either internal or external self-relevant threat cues (see review by Bögels & Mansell, 2004). Individuals with social anxiety and SAD consistently report higher levels of self-focused attention (SFA) than non-anxious individuals (e.g., Bögels, Rijemus, & De Jong, 2002; Bögels & Mansell, 2004; Mellings & Alden, 2002; Woody, 1996). Moreover, manipulations that increase SFA also increase anxiety and disrupt social performance (e.g., Woody, 1996; Zou, Hudson, & Rapee, 2007). In addition, effective treatments for SAD result in significant reductions in SFA (e.g., Woody, Chambless, & Glass, 1997; Hofmann, 2000).

A growing body of research shows that individuals with social anxiety and SAD also display selective attention to threat-related external cues, e.g., angry facial expressions, which is variously proposed to result in immediate threat avoidance or conversely, in failure to disengage from threat cues (see Bögels & Mansell, 2004; Staugaard, 2010, for reviews). These findings led to attempts to manipulate internal and external cues. These studies generally supported selective attention to internal cues in SAD populations (e.g., Deiters, Stevens, Hermann, & Gerlach, 2013; Mansell, Clark, & Ehlers, 2003; Pineles & Mineka, 2005); however, the paradigms used to examine this issue have been highly artificial (e.g., false heart rate feedback presented on computer screens; lights on heads of observers), which compromises our ability to draw definitive conclusions.

While initial SFA findings appeared clear cut, Bögels and Mansell (2004) pointed out critical methodological limitations in this work. In particular, most SFA manipulations also increased social anxiety, making it difficult to determine whether SFA per se was responsible for heightened fear and performance deficits or whether those effects were due to another social anxiety-related process. Similarly, SAD treatments affect multiple maladaptive processes, raising questions as to whether SFA reduction is the most crucial. To address this limitation, attempts have been made to manipulate SFA without eliciting social anxiety. Jakymin and Harris (2012) found that increasing SFA alone did not affect fear of negative evaluation or anxiety and concluded that reducing SFA per se was not a necessary treatment target. Some researchers have pitted SFA against other factors to determine whether SFA was indeed the strongest mediator of treatment-relevant changes. Voncken and her colleagues, for example, found that negative self-beliefs, not SFA, mediated the relationship between social anxiety and dysfunctional social performance in blush-fearful individuals

(Voncken, Dijk, de Jong, & Roelofs, 2010). Finally, the effectiveness of attention re-training (ATT) has been investigated, albeit with mixed results. Bögels (2006) found that ATT significantly reduced social anxiety in patients whose primary fears were of blushing, trembling, or sweating, whereas McEvoy and Perini (2009) found that ATT did not significantly augment CBT for a cross-section of patients with SAD. Possibly ATT is effective primarily for social fears that center on visibility of physiological symptoms. In summary, selective attention requires further empirical attention.

Judgment Biases

Cognitive theorists propose that self-referent processing biases self-related judgments. Research generally bears out this proposition. Rapee and Lim (1992) found that individuals with SAD underestimated (or discounted) their performance in a speech task relative to observers and significantly more than non-clinical controls (see also Mellings & Alden, 2000; Stopa & Clark, 1993). Alden and Wallace (1995; Wallace & Alden, 1997) found that this discounting effect occurred even during open-ended interactions with a supportive, friendly conversational partner where SAD participants displayed generally skillful social behavior. CBT has been shown to reduce biased judgments with beneficial effects on SAD symptoms (Wilson & Rapee, 2005).

Another body of work examined judgments of the likelihood and cost of negative social outcomes as depicted in hypothetical scenarios. Individuals with SAD were consistently found to overestimate the likelihood and cost of negative social outcomes, relative to non-clinical controls and patients with other disorders (e.g., Foa, Franklin, Perry & Herbert, 1996; Gilboa-Schechtman, Franklin, & Foa, 2000; Voncken, Bögels, & de Vries, 2003). Changes in these negative judgments were found to predict treatment response (e.g., Foa et al., 1996; Hofmann, 2004, 2007) with some studies finding that reductions in perceived cost was the critical factor (e.g., Foa et al., 1996; Hofmann, 2004; Moscovitch et al., 2012) and others concluding that changes in likelihood judgments are more important (McManus, Clark, & Hackmann, 2000; Smits, Rosenfield, McDonald, & Telch, 2006). Further nuance was added by Wilson and Rapee (2005), who addressed *why* negative outcomes are aversive. They concluded that the critical factor in treatment change was reduction in the extent to which negative social outcomes were attributed to negative self-characteristics. These authors proposed that individuals with SAD may not fear negative evaluation per se but rather what negative judgments mean about the self.

Post-event rumination

Cognitive theorists propose that individuals with SAD engage in post-event processing (PEP) following social events, which given their negatively biased judgments, operates to maintain maladaptive self-beliefs and SAD symptoms.

Consistent with these writings, individuals with social anxiety and with SAD were found to engage in more frequent, intense, and longer PEP, relative to non-anxious controls (e.g., Abbott & Rapee, 2004; Clark & McManus, 2002; Mellings & Alden, 2000, see review by Brozovich & Heimberg, 2008 for a full list). PEP about social events was found to be more strongly related to social anxiety than to general anxiety or depression in a student sample (Fehm, Schneider, & Hoyer, 2007). In a clinical sample, however, McEvoy and Kingsep (2006) found stronger links with situational (state) anxiety than with social anxiety. Following anxiety-evoking social situations, PEP fades relatively quickly in non-socially anxious individuals but is prolonged in socially anxious individuals. PEP has been found to maintain negative views of performance for up to three weeks (Abbott & Rapee, 2004) or even lead to more negative self-evaluations over time (Brozovich & Heimberg, 2011). CBT has been shown to reduce PEP, although patients with high levels of PEP display slower rates of treatment response (Price & Anderson, 2011).

Links between processes

A handful of studies provided much-needed examination of the interrelationships among the cognitive factors described above. SFA during a social interaction was found to predict negatively biased social judgments and PEP a day later (Gaydukevych & Kocovski, 2012; Mellings & Alden, 2002; Makkar & Grisham, 2011). Negative self-judgments about social events were also found to predict frequency of PEP (Perini, Abbott, & Rapee, 2006; Zou & Abbot, 2012). In turn, PEP was shown to maintain or increase negative self-judgments (Abbott & Rapee, 2004; Brozovich & Heimberg, 2011) and some types of negative self-beliefs (Wong & Moulds, 2010a). Moreover, SFA increased this effect (Brozovich & Heimberg, 2011).

Rapee and his colleagues considerably advanced research on self-referent processing by using path analysis to place the various processes into a cohesive framework. A first study provided a test of the key assumption of cognitive models, i.e., that the cognitive processes described above mediate the relationship between trait social anxiety and state anxiety in a social situation (Rapee & Abbott, 2007). Consistent with cognitive models, trait social anxiety predicted state anxiety in a public speaking task through its relationships with inappropriate attentional focus, biased self-judgments of performance, and perceived probability and cost of negative social outcomes. In addition, negatively biased performance-appraisals and perceived likelihood and cost of negative outcomes were linked to PEP, which in turn, predicted more negative recall of speech performance one week later (Rapee & Abbott, 2007). A second study used structural equation modeling (SEM) to examine the links between trait social anxiety, the various cognitive processes examined in the first study, and PEP (Chen, Rapee, & Abbot, 2013). The SEM indicated that trait social anxiety displayed both a direct relationship to PEP and an indirect path to PEP through inappropriate attentional focus and biased self-judgments of performance.

SELF-RELATED MOTIVES AND BEHAVIORAL STRATEGIES

Social behavior, like all human behavior, is driven by two partially independent motivational systems: approach, i.e., the desire to garner positive social outcomes, and avoidance, the desire to avoid negative outcomes (e.g., Gable, 2006). Social anxiety is hypothesized to heighten avoidance motivation and fuel self-protective behavioral strategies (e.g., Schlenker & Leary, 1982). In support of that hypothesis, whereas non-anxious individuals primarily endorsed approach motivation, socially anxious individuals reported a combination of approach and avoidance motives, suggesting they have a conflict between the desire for social contact and the desire to avoid negative social reactions (Meleshko & Alden, 1993). Additionally, individuals with speech anxiety were found to identify more specific goals for protective behavior than for prosocial behavior (Rodebaugh, 2007), which suggests they have more pronounced concerns with avoidance. This avoidance focus is believed to arise in part from a hypersensitive behavioral inhibition system (e.g., Levinson, Rodebaugh, & Frye, 2011) and to operate to maintain negative affect (e.g., Rodebaugh & Schmaker, 2012).

Clinical cognitive theorists conceptualize self-protective strategies in terms of safety-seeking behaviors (safety behaviors, subtle avoidance; Clark & Wells, 1995; Rapee & Heimberg, 1997). Two primary types of safety behaviors are subtle avoidance (e.g., reducing eye contact, self-disclosure, and talk time) and impression-management (e.g., excessive rehearsal and control of visible emotion; Plasencia, Alden, & Taylor, 2011). Individuals with SAD report more frequent reliance on safety behaviors when faced with social threat relative to various controls (e.g., Cuming et al., 2009; McManus, Sacadura, & Clark, 2008). Reducing safety behaviors has been shown to reduce fear-related self-beliefs and anxiety (Kim, 2005; Wells et al., 1995) and judgment biases (Taylor & Alden, 2010), and to result in more positive social outcomes (Taylor & Alden, 2010; 2011) in SAD populations. Moreover, reductions in safety behaviors have been shown to predict treatment response in patients with SAD (e.g., McManus et al., 2009).

Safety behaviors that involve subtle avoidance are particularly harmful to social relationships (e.g., Plasencia et al., 2011; Hirsch et al., 2004). Socially anxious individuals fail to reciprocate the intimacy of others' self-disclosures (e.g., Alden & Bieling, 1998; Meleshko & Alden, 1993; Vonken, Alden, Bögels, & Roelofs, 2008; Vonken et al., 2010), even in close relationships (Montesi et al., 2013; Sparrevohn & Rapee, 2009), and avoid expressing emotions (e.g., Gee, Antony, & Koerner, 2013; Kashdan & Steger, 2006; Kashdan, Volkmann, Breen, Han, 2007), both of which impair emotional closeness. Importantly, reliance on either type of safety strategy is associated with a subjective sense of *inauthenticity*, i.e., that one is engaging in behavior that is inconsistent with one's true self (Plasencia et al., 2011), which seems likely to maintain the socially anxious person's negative sense of self. This body of work has led to new

models that implicated self-concealment as a primary drive in individuals with SAD (Moscovitch, 2009; Rodebaugh, 2009).

SELF-SCHEMA STRUCTURE, ORGANIZATION, AND CLARITY

Self-structure

Social cognitive theories suggest that it is not merely the presence of negative self-representations, but rather the ways in which both negative *and* positive information is organized and accessed that determines emotional and cognitive responses to events. For example, some work indicates that socially anxious individuals do not in fact endorse overly strong negative characteristics as reflecting themselves, but rather rate them more moderately than non-anxious individuals (see Mansell & Clark, 1999). Similarly, it is unclear as to whether socially anxious individuals negatively evaluate themselves across all domains.

Self-structure refers to the way self-related knowledge, cognitions, memories, and beliefs, are organized and consolidated. Showers and Zeigler-Hill (2012) suggest that self-representations differ on their (1) availability and (2) accessibility. Evaluative self-organization refers to the ways in which positive and negative beliefs are distributed across different aspects of the self (e.g., parent, scientist). Evaluative compartmentalization refers to when self-aspects are composed of primarily positive or negative information, whereas evaluative integration refers to self-aspects that have both negative and positive attributes. Integrated self-organizations, while requiring more cognitive resources, are theorized to be more adaptive because positive components can buffer the effects of situational threat. In line with this theory, socially anxious individuals were found to have a more compartmentalized self-organization, relative to low-trait socially anxious individuals (Stopa, Brown, Luke, & Hirsch, 2010).

Related to self-organization is self-complexity, which refers to the number of self-aspects in any one individual (Linville, 1985). Greater complexity of self-aspects (i.e., more self-aspects) is generally believed to be beneficial, given that during times of stress, any relevant aspect will be activated. If an individual has more distinct self-aspects, then a smaller proportion of the self will be affected, making any individual stressor less threatening or detrimental. A recent study found no relationship between complexity and social anxiety (Stopa et al., 2010). The authors noted however, that self-complexity effects may only emerge under conditions of stress, and further work is needed.

Another factor that might influence accessibility is how well negative and positive information is consolidated (i.e., organized) within the self. Theoretically, if information is less consolidated, it will be more difficult to access. Research revealed that decreased consolidation of positive schema and increased consolidation of negative schema distinguished socially anxious and

depressed individuals from non-psychiatric controls (Dozois & Frewen, 2006). Furthermore, increased consolidation of negative self-structures was not just isolated to interpersonal content, but included more typically depressive thoughts about general achievement and incompetence.

Self-concept clarity

Self-concept clarity refers to "the extent to which the contents of an individual's self-concept … are clearly and confidently defined, internally consistent, and temporally stable" (Campbell, Trapnell, Heine, Katz, Lavalle, & Lehman, 1996, p. 141). In non-clinical samples, the clarity and certainty of an individual's self-concept has been associated with psychological well-being, self-esteem, and self-directed positive affect (e.g., Baumgardner, 1990; Campbell et al., 1996). Self-clarity is hypothesized to be relevant to socially anxious populations given that these individuals tend to chronically doubt themselves and their abilities. In fact, the aforementioned positive association between social anxiety and compartmentalization was modified by self-concept clarity, such that the two constructs were only associated when self-concept clarity was low (Stopa et al., 2010). Similarly, when compared to self-organization and self-complexity, self-concept clarity was the only unique predictor of social anxiety.

Recent studies found that, compared to healthy controls, socially anxious individuals rated themselves negatively across a broad range of domains, although the largest effect sizes still corresponded to interpersonal domains (Moscovitch, Orr, Rowa, Gehring Reimer, & Antony, 2009). Generally, negative ratings of self-attributes are associated with lower self-concept clarity (e.g., Baumgardner, 1990). Not only did socially anxious individuals see their personality attributes as less positive, but they were more uncertain about their negative self-attributes compared to non-clinical controls (Wilson & Rapee, 2006). This was true even after controlling for depression, general anxiety, and stress. Conversely, Moscovitch et al. (2009) found that socially anxious individuals reported greater certainty and attributed greater importance to the self-attributes they rated negatively. This was in stark contrast to non-clinical controls, who were more certain about and placed greater importance on their positive self-attributes. Both studies found that socially anxious individuals did not frame self-attributes in a positive manner and that there was no relationship between positive attributes and certainty. Increased certainty around negative personality traits may contribute to a more stable and solidified negative self-concept, and reduce an individual's ability to counteract negative cognitions and predictions, particularly in social situations. On the other hand, the contrast between a more stable negative self-concept and a less certain positive self-concept, may create an overall uncertainty about the self, which may lead to negative social self-efficacy and perceived lack of control.

SUMMARY

This brief review highlights both the breadth and the complexity of empirical findings regarding the self and self-related cognitive processes in SAD. Taken as a whole, extant research indicates that the self-schema of socially anxious individuals reflect tightly consolidated negative content, including negative thoughts, beliefs, and images, related to their relationships with others. Once established, the self-schema operates to bias social judgments and to activate self-protective motives and behavioral strategies in social events. Further work is needed to distill and integrate this burgeoning area of research in order to identify the most accurate and parsimonious way to conceptualize the self and to understand the interrelationships among the cognitive, emotional, and behavioral processes related to the self-schema in the domain of SAD.

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