Chapter 19

Positivity Deficits in Social Anxiety: Emotions, Events, and Cognitions

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By definition, people with emotional disturbances experience significant distress and impairment. Thus, when there is an opportunity to engage in activities that could generate positive experiences, people with emotional disturbances may be expected to be less successful than others. Although this proposition is appealing, there is reason to believe that attenuated positive experiences are of central relevance to a select number of disturbances. In this chapter, we discuss recent advances in the understanding of the phenomenology of social anxiety. This includes data showing that social anxiety is associated with less intense, short-lived positive experiences, infrequent positive events, and distinct cognitive biases that restrict quality of life.

For decades, psychologists advocated a single, bipolar continuum with positive emotions and approach behavior at one endpoint and negative emotions and avoidance behavior at the other endpoint. However, recent research in personality, motivation, and social neuroscience suggests that there are two separate biobehavioral systems reflecting very different purposes (Carver, Sutton, & Scheier, 2000; Gray & McNaughton, 1996). On the one hand, we have an *avoidance* system, the main purpose of which is to prevent us from being hurt, whether physically or emotionally. To meet this aim, the avoidance system inhibits behavior that might lead to pain, punishment, or other undesirable outcomes. As a signal of possible danger, this system activates negative emotions that, in turn, increase the likelihood of avoiding or escaping that danger. On the other hand, independent from the avoidance system, we have an *approach* system, the main purpose of which is to guide people towards opportunities for pleasure or rewards. To meet this aim, the approach system mobilizes attention and energy to pursue activities that could generate resources such as food, social cooperation, romantic endeavors, and knowledge that provide an evolutionary

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advantage for survival or reproduction. Whereas the onset of negative emotions operates by narrowing our options in self-defense, evidence suggests that the experience of positive emotions—a component of the approach system—widens the array of thoughts, behaviors, and executive functioning capacities at our disposal (Fredrickson, 1998). In other words, positive emotions allow us to remain attentive and open to rewarding opportunities and to possess sufficient stamina to exploit them.

Given the relatively independent roles of these systems, it is not surprising that positive and negative emotions show only a small relation to each other and are associated with distinct experiential, cognitive, physiological, and behavioral processes (Keltner & Kring, 1998). Consequently, in the absence of additional information, the degree to which people are sensitive to pain and punishment offers little insight into the pleasure, engagement, and meaning in their lives. However, there are meaningful exceptions to this rule. The emotional disturbances that have received the most attention for deficient positive experiences are depression and schizophrenia (e.g., Berenbaum & Oltmanns, 1992; Blanchard, Mueser, & Bellack, 1998; Rottenberg, 2005). Researchers have paid less attention to the role of social anxiety and its pathological variant, social anxiety disorder (SAD), in impeding elements of a positive, enriching existence. Traditionally, researchers characterized diminished positive experiences as being part of the structure of depression, but not anxiety disorders (D. A. Clark, Steer, & Beck, 1994; L. A. Clark & Watson, 1991). This conclusion was premature, because studies examining how anxiety and mood disorders relate to positive affect systematically failed to include people with social anxiety problems.

DIMINISHED POSITIVE EXPERIENCES IN SOCIAL ANXIETY

Having satisfying social relationships is one of the most robust sources of well-being, and is linked to greater happiness, better health, and longer life in comparison to social isolation (for a review, see Berscheid & Reis, 1998). Any psychological condition that directly interferes with social relationships has the potential to disrupt a primary source of positive events and experiences. A growing body of literature suggests that diminished positive experiences are a distinct feature of the social anxiety spectrum, from subclinical symptoms to SAD. This evidence has important implications not only for the phenomenology of SAD but also for the etiology, maintenance, prevention, and treatment of the disorder.

The earliest indication that social anxiety might be an "exception to the rule", in that reduced positive affect is relevant to depression but not anxiety disorders, came from a study by Watson, Clark, and Carey (1988). Based on 21 individuals with SAD (out of 150 outpatients with various anxiety and mood diagnoses), these researchers found a –.23 correlation of SAD diagnostic status with a global trait measure of positive affect, as well as significant correlations with relevant symptoms of: speaking to strangers (–.22), speaking in public (–.19),

and nervousness (–.25). Moreover, controlling for positive affect, negative affect did not improve the prediction of a SAD diagnosis (*pr* = .12). Although intriguing, the small sample size and relatively basic measurement approach (cross-sectional general surveys) of this study failed to inspire changes to the social anxiety landscape.

After a different set of researchers demonstrated that, uniquely among types of anxiety, social anxiety related to diminished positive affect even after controlling for the contribution of depressive symptoms (T. A. Brown, Chorpita, & Barlow, 1998), a proliferation of research emerged on the relationship of social anxiety to positive experiences, with an emphasis on positive emotions and curiosity. Kashdan (2007) conducted a meta-analysis on 19 studies and 2976 participants, revealing a stable, moderate, inverse relationship between social anxiety and positive affect ($r = -.36$; 95% CI: –.31 to –.40). Based on 15 studies and 2091 participants, Kashdan found a similar relationship of social anxiety with curiosity and exploratory behavior ($r = -.24$; 95% CI: –.20 to –.28). The unique links between social anxiety and dampened positive affect ($r = -.21$; 95% CI: –.16 to –.26) and curiosity ($r = -.21$; 95% CI: –.08 to –.32) could not be explained by the presence or severity of depression. Notably, tests of construct specificity, wherein the shared variance among these emotional disturbances is removed, are problematic—by removing the conceptual overlap between these conditions, we remove part of the social anxiety construct. In other words, co-occurrence may be meaningful and not an artifact or "noise". This is particularly problematic for this line of inquiry, because anhedonia—the inability to experience pleasure from previously enjoyable events—is a diagnostic component of depression that overlaps with the construct of positive affect that is our outcome of interest. Researchers should be careful when interpreting partial correlations, given that the results based on residual variance tend to have a chimerical nature in that they capture a construct that may not actually exist (Miller & Chapman, 2001). Despite these caveats, we now have convincing evidence that diminished positive affect and dampened curiosity play a distinct role in social anxiety symptomology.

Hence, social anxiety and positive experiences are linked; however, what is the nature of this relationship? Evaluating the variables that strengthen or weaken this relationship would be illuminating. Kashdan's (2007) meta-analysis found that the magnitude of dampened positive affect was strongest when researchers used the *Anxiety Disorder Interview Schedule for DSM-IV* (DiNardo, Brown, & Barlow, 1994) or *Social Interaction Anxiety Scale* (Mattick & Clarke, 1998), which are among the gold standards for discriminating among individuals with and without SAD. In addition, the meta-analysis showed that effect sizes were largest in clinical samples, followed by college students, and then combat veterans and other adults in the community without social anxiety disorder. These findings suggest that the relationship of social anxiety to dampened positive experiences is most clearly visible when assessing social anxiety with specificity and when studying people experiencing functional impairment.

Although the evidence is promising, most of these studies relied on relatively crude methods. Nearly all of the studies used a single-occasion global questionnaire asking people to estimate how often they experienced positive emotions on average. This retrospective approach cannot disentangle actual positive responses to events from the information-processing biases associated with social anxiety (e.g., Garner, Mogg, & Bradley, 2006). At the time of this meta-analysis, only two studies had assessed positive emotions in response to a laboratory social interaction experiment (Kashdan & Roberts, 2004; Wallace & Alden, 1997). Four studies used an experience-sampling approach to evaluate the presence of positive emotions in the everyday lives of socially anxious people (Kashdan & Collins, 2010; Kashdan, Julian, Merritt, & Uswatte, 2006; Kashdan & Steger, 2006; Vittengl & Holt, 1998). Experience-sampling approaches (e.g., daily diary designs) maximize ecological validity (by measuring experiences in their naturalistic environment), minimize retrospective biases (by limiting the time between occurrence and reporting), and allow modeling of situational parameters that might moderate relationships.

Experience-sampling studies have confirmed what was found with trait questionnaires, and have begun to extend this understanding with a focus on how and when social anxiety alters the presence, intensity, and longevity of positive emotions and other rewarding experiences such as curiosity and exploratory behavior. Kashdan and Steger (2006) found that socially anxious people (i.e., 1 SD above the mean) experience less intense positive emotions and 39% fewer positive events in their daily lives compared to non-anxious people. Kashdan, Collins & Elhai (2006) further found that social anxiety predicted fewer daily positive emotional and social experiences, even beyond the contribution of posttraumatic stress disorder or trait negative affect. One study (Kashdan & Collins, 2010) used random prompts for emotional experiences in-the-moment using electronic recording (versus paper diaries). Not only was social anxiety associated with less intense positive emotions during these random assessments but also, interestingly, being around other people (versus being alone) did not significantly alter these effects. This line of research clarifies how social anxiety influences both the positive emotions and the number of rewarding opportunities (positive events) available to glean positive emotions.

Taken together, these studies suggest that socially anxious people show a general dampening of positive experiences in their daily lives, across various contexts. Other work showed that the attenuation of positive experiences holds fairly constant even when socially anxious people are interacting with others who are close and/or familiar, whereas these people reported greater negative affect and self-consciousness when socializing with unfamiliar people (L. H. Brown, Silvia, Myin-Germeys, & Kwapil, 2007; Vittengl & Holt, 1998). Even the most intimate of relationships appear to be affected by these positivity deficits. In a 21-day experience-sampling study of sexual activity, socially anxious people reported less intense pleasure and feelings of connectedness during sexual encounters, regardless of the closeness of their relationship (Kashdan et al., 2011). It is

noteworthy that gender moderated the effects of social anxiety on the *frequency* of sexual experiences, while the degree of relationship closeness moderated the effects of social anxiety on the *quality* of social experiences. These findings emphasize the importance of exploring the contextual variables relevant to social anxiety and positivity deficits.

A crucial issue is the causal nature of the relationship between social anxiety and attenuated positive experiences. Are there features of SAD that lead to less intense reactions to positive events? Do dampened positive emotions contribute to the development of social anxiety symptoms? Or perhaps both of these processes unfold reciprocally. Evidence from epidemiological studies show that SAD tends to have an early onset and usually precedes other psychological problems (Merikangas & Angst, 1995). Thus, in terms of temporality, perhaps for socially anxious adults, sources of positive experiences have already eroded to the point that there is little room for further deterioration. Studies across early lifespan stages will be necessary to better understand the development and nature of positivity deficits.

A SELF-REGULATORY MODEL OF SOCIAL ANXIETY

The next goal of this inquiry is to understand the mechanisms through which social anxiety might contribute to attenuated positive experiences, as it might be overly simplistic to focus on bivariate relationships between social anxiety and positive experiences and events. Fitting with a self-regulatory perspective (Leary, 2001; Vohs, Baumeister, & Ciarocco, 2005), these relationships might vary as a function of how much energy and effort are devoted to managing anxiety. People have a limited amount of physical stamina, attention, and self-control at any given point in time, and over-exertion tends to drain this pool of resources (Muraven & Baumeister, 2000). With depleted self-regulatory resources, people are likely to have difficulty attending to and exploiting rewarding opportunities and thus experience diminished positive affect.

Socially anxious people are hyper-focused on making a good impression on others, but fear that they are deficient in some important way (Moscovitch, 2009) and thus doubt their ability to do so (Schlenker & Leary, 1982). Part of this doubt stems from concern that their anxiety and extreme self-awareness will disrupt their social performance (Roth, Antony, & Swinson, 2001; Voncken, Alden, & Bögels, 2006). In response, socially anxious people devote considerable cognitive resources to anticipating, avoiding, and controlling anxiety-related thoughts, feelings, and behaviors. This includes engaging in safety behaviors such as excessive rehearsal, self-censorship, and deflecting attention by asking questions intended to minimize the possibility of feared consequences (D. M. Clark & Wells, 1995). Recurrent, intense efforts to control anxiety and manage impressions put socially anxious people in prevention mode, where the avoidance of threat and failure take precedence. Unfortunately, prevention mode requires emotion regulation and cognitive processes that are liable

to deplete self-regulatory resources and, eventually, to disrupt socially anxious people's ability to respond to situations appropriately as well as their capacity to enjoy social encounters (Vohs et al., 2005). Within this framework, we discuss two possible mechanisms by which social anxiety may suppress positive experiences.

Emotion Dysregulation as a Mechanism for Positivity Deficits

There are individual differences in how people react to emotional experiences. When people experience uncomfortable or unpleasant emotional states, they may engage in efforts to alter those states through emotion regulation strategies (Gross, 1998). Most people generally enjoy positive emotional experiences and even engage in strategies to sustain and savor them (Tugade & Fredrickson, 2007). However, socially anxious people are more likely to fear positive emotions (Turk, Heimberg, Luterek, Mennin, & Fresco, 2005; Weeks, Heimberg, & Rodebaugh, 2008) and use strategies to down-regulate them (Eisner, Johnson, & Carver, 2009; Farmer & Kashdan, 2012). In fact, social anxiety is related to more frequently suppressing the expression of both positive and negative emotions (Spokas, Luterek, & Heimberg, 2009; Turk et al., 2005; Werner, Goldin, Ball, Heimberg, & Gross, 2011). The belief that expressing emotions (both positive and negative) has negative consequences has been found to indirectly link social anxiety with reduced positive affect (Juretic & Zivcic-Becirevic, 2013). Furthermore, the strategy of suppressing the expression of emotions requires enormous effort and energy relative to other ways of altering emotions (Richards & Gross, 1999), and thus its use (particularly in already stressful contexts) contributes to depleted self-regulatory ability.

Fearing public scrutiny of their anxiety, socially anxious people spend considerable energy to limit the visibility of any outward signs of nervousness (Scholing & Emmelkamp, 1993) and avoid the unpleasant private experiences of anxious thoughts and feelings (Kashdan, Morina, & Priebe, 2009). As for why people with SAD would want to suppress positive emotions, theorists have suggested that the intense expression of any emotion draws public attention. One person's positive emotions can elicit social comparison, jealousy, envy, and rivalries in observers, and people with SAD are interested in avoiding harm/rejection from other people (Gilbert, 2001). Building on this model, Weeks and colleagues (2009) argued that people with SAD might behave submissively, including concealing the presence of positive events and the expression of positive emotions in order to decrease the risk of triggering the attention and possible reprisals from other people.

Empirical evidence supports the contribution of these emotion dysregulation strategies to understanding SAD. A study that sampled social encounters in daily life with handheld computers (i.e., Palm Pilots) found that experiential avoidance and deficient positive emotions reported during social interactions helped distinguish people with SAD above and beyond social anxiety, other

negative emotions, and feelings of belonging reported during those interactions (Kashdan, Farmer, et al., 2013). Excessive focus on emotion regulation diminishes contact with present experiences and interferes with progress towards other valued goals (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). Moreover, experience-sampling research has shown that devoting limited time and energy to regulating emotions yields impairments in the frequency and quality of positive events (Kashdan, Breen, & Julian, 2010). This research supports the relation of excessive emotion regulation—particularly *emotion suppression*—to reduced positive experiences, but we have yet to see how suppression may function to diminish positive experiences in the context of social anxiety.

Several experience-sampling studies have tested this nuanced model by examining whether levels of social anxiety and the manner in which emotions are regulated might operate together to predict positive emotions and events in people's daily lives. Over a 21-day assessment period, Kashdan and Steger (2006) found that, of people at the high end of social anxiety, those reporting the most daily social anxiety and the greatest tendencies to suppress their emotions on average reported 24% fewer positive events than other people classified as low in social anxiety. These results suggest that a preoccupation with suppressing emotions may lead people to not pursue activities that generate positive affect, and point to conditions under which socially anxious people are most vulnerable to a loss of rewards (i.e., positive experiences). Building on this study, Farmer and Kashdan (2012) used a two-week daily diary method to study the spill-over effects of emotion regulation strategies. They found that when socially anxious people used more positive emotion suppression, they tended to experience less intense positive emotions and fewer positive social experiences the following day. This finding supports the notion that emotion suppression has lasting effects on well-being, likely by eroding resources that allow people to capitalize on opportunities for pleasurable experiences. Lastly, Kashdan and Breen (2008) found that emotion suppression moderated the relation between social anxiety and positive affect three months later (measured by global self-report measures), though mainly for people at the lower end of the social anxiety spectrum. Taken together, the above findings suggest that the tendency to suppress emotions (versus accepting them) is a critical component of the relationship between social anxiety and diminished positive experiences.

People who inefficiently allocate resources to impression management and the regulation of anxiety symptoms tend to deplete their self-regulatory resources and thus show impairments in other goal-directed behaviors that require effort and intention (Baumeister, 2002; Vohs et al., 2005). Furthermore, having depleted resources compromises people's subsequent ability to effectively manage their impressions (Vohs et al., 2005). The resulting paradox is that while socially anxious people are making strenuous attempts to make a positive impression, in order to be less anxious and to avoid rejection, they are depleting the very resources they need to effectively engage in the interaction and prevent undesirable outcomes (e.g., inappropriate self-disclosure, unresponsiveness).

Within this framework, socially anxious people effectively lower their likelihood of having a positive social interaction experience (and accompanying positive affect) by their very efforts to prevent a negative outcome.

Impaired Attention as a Mechanism for Positivity Deficits

Within the self-regulatory framework, another possible mechanism of the relationship between social anxiety and attenuated positive experiences is through impairments in cognitive processes. Particularly when in prevention mode (Vohs et al., 2005) or during anxiety-provoking social interactions, socially anxious people tend to be hypervigilant for detecting social threat in their environment (e.g., Berenson et al., 2009; Mogg, Philippot, & Bradley, 2004). Excessive bias toward negative cues has been theorized to play a role in the maintenance of impairing levels of social anxiety. In an experiment where researchers trained people to turn their attention away from threatening stimuli, participants consequently experienced less social anxiety (Amir et al., 2009). Preferentially allocating attention to the detection of threat devotes less attention to the processing of positive cues in the environment, leading people to miss information that could lead to positive experiences (e.g., positive feedback). A threat-detection bias may compromise the ability of socially anxious people to encode positive information, leading to the experience of less positive emotion.

In addition to biased attention toward threat in socially anxious people, there may actually be a corollary bias *away* from positive stimuli (e.g., Bögels & Mansell, 2004; Pishyar, Harris, & Menzies, 2004). In fact, the degree of bias away from positive information mediated the effect of social anxiety on increases in state anxiety during an impromptu speech (C. T. Taylor, Bomyea, & Amir, 2010). One possible reason for this effect is that attention to positive information promotes the use of adaptive emotion regulation strategies, even in stressful situations (Lee & Telch, 2008). Consistent with this, researchers have found that the ability to notice and respond to positive information helps protect against stress (Joormann, Talbot, & Gotlib, 2007). Training people to bias attention toward positive stimuli has been shown to strengthen positive emotional reactivity (C. T. Taylor, Bomyea, & Amir, 2011). Thus, this attentional bias may serve as a mechanism for deficits in positive affect in social anxiety.

In addition to a direct effect of attentional biases, recent theories suggest that the ability to modulate attention may contribute to positivity deficits in social anxiety. Moriya and Tanno (2008) found socially anxious undergraduates to display diminished attentional control—the ability to voluntarily shift focus or attention—even when controlling for depression and state anxiety. Attentional control is an important component in self-regulation, particularly in social interactions, where there are numerous possible targets of attention. Evidence suggests that when this process is impaired, a person's attention is more likely to be driven by salient stimuli and not by volition (Eysenck, Derakshan, Santos, & Calvo, 2007). For socially anxious people, these salient

stimuli are likely to be threat-relevant cues or internal cues of anxiety and fear-related thoughts. Disproportionately stimulus-driven attention reduces the ability to process external cues, which is perhaps why Simonds et al. (Simonds, Kieras, Rueda, & Rothbart, 2007) found that attentional control is important for appropriate social behavior. Impaired attentional control may not only reduce the processing of positive information for socially anxious people, but also force them to exert significant effort to attend adequately to social interactions, making them exhausting and depleting of self-regulatory resources. In turn, this depletion adversely affects interpersonal behavior (possibly leading to poor social performance) and openness to rewarding experiences (leading to less approach behavior). Providing initial support for this conceptualization, using cross-sectional and longitudinal designs, Morrison and Heimberg (2013) showed that attentional control mediated the relationship between social anxiety and reduced positive affect.

The emerging literature supports a self-regulatory model of SAD in which depletion not only inhibits positive experiences that may otherwise aid in corrective learning, but also helps to maintain symptoms. With self-regulatory resources continually depleted (whether by emotion dysregulation or overexertion to pay attention in social situations), socially anxious people will be less reactive to positive events, and thus, less likely to view them as rewarding or pleasurable, making them more likely to choose to avoid them in future scenarios. In sum, these mechanisms may play a role in the vicious cycle of social anxiety that contributes to the chronicity of SAD (e.g., Wittchen & Fehm, 2003).

IMPAIRED POSITIVE COGNITIONS IN SOCIAL ANXIETY

Besides positive emotions and events, there is a large body of research on how social anxiety affects positive cognitions in response to social situations. The past 15 years have witnessed an emerging reform of SAD models that initially focused on negative interpretation biases, anticipation of negative outcomes, and negative self-views as core features of social anxiety (D. M. Clark & Wells, 1995; Hofmann, 2007; Rapee & Heimberg, 1997). Recent findings suggest that cognitive proccesses in SAD are dysfunctional in how socially anxious people repond to positive information. This research can be broadly encapsulated by two separate principles: social anxiety is characterized both by (1) an *absence* of a normative, positive interpretation bias with regard to *ambiguous* social cues, self-views, and future expectations; and (2) *increased* apprehension and anxiety in response to *overtly positive* social events or possible outcomes.

In-the-Moment: Absence of Positive Interpretation Bias

In the general population, positive and negative evaluative responses are governed by distinct underlying motivational systems. The positive approach system (described earlier) is characterized by a positivity offset. Essentially, when

impending threat is weak or absent, most people show a slight motivational trend toward actively seeking and engaging in various environmental rewards. This general approach or exploratory system ensures that adequate energy is devoted to learning and accruing knowledge of the world (Cacioppo, Gardner, & Berntson, 1997; Ito & Cacioppo, 2005; Panksepp, 1998). Embracing beneficial stimuli is rewarding for its own sake and also as a means to other positive endstates. Available evidence (e.g., Boucher & Osgood, 1969; Cacioppo et al., 1997) suggests that, even in the absence of threats to social or physical survival, socially anxious people might lack this normative and potentially protective positive outlook about the world.

One of the functions of a positivity offset is to help make routine decisions quickly, allowing people to make "on-line" inferences, or, assess and process ambiguous information offered in the present moment. People may tend towards positive inferences, since they are more likely to be adaptive for relational and psychological well-being (S. E. Taylor & Brown, 1988). Hirsch and Mathews (2000) suggested that people with SAD are instead more likely to make judgments retrospectively—evaluating information and performance in the aftermath of situations based on pre-existing beliefs and expectations, as well as ruminations on prior mistakes and failures. Providing evidence for this theory, they exposed participants to social vignettes that were ambiguous until the last word and then asked them to decide whether the final word was grammatically possible, while varying the nature of the interpretation conveyed by the final world (i.e., making the vignette a threatening or benign social situation). Socially anxious and non-anxious participants showed similar response times for the threatening condition, whereas non-anxious participants displayed a speedier response when the interpretation was benign (Hirsch & Mathews, 1997). This effect was replicated in participants with SAD compared to matched controls (Hirsch & Mathews, 2000), suggesting that social anxiety inhibits the ability to make positive on-line decisions about social situations. Lacking a positivity bias for in-the-moment decisions may contribute to social interactions being anxiety-proking and to fewer positive interpersonal outcomes.

This deficit is evident even at the neurobiological level. In a study of event-related brain potential reactivity to social decisions, socially anxious people failed to demonstrate a P600 signal, which indicates an unexpected outcome (Moser, Hajcak, Huppert, Foa, & Simons, 2008). This suggests that socially anxious people expect positive and negative endings equally, compared to less anxious participants who demonstrated increased P600 to negative outcomes, indicating that they preferentially expect positive endings. In a set of related studies of implicit expectations (de Jong, de Graaf-Peters, van Hout, & van Wees, 2009), participants were asked to make on-line predictions of whether descriptions of social events (or nature events, for comparison) would be followed by happy, disgusted, or neutral faces. Socially anxious people were less likely to predict happy faces to follow ambiguous social events; this effect was even stronger for overtly negative social event descriptions. In sum, the interpretative

bias of socially anxious people appears to be driven not only by greater negative bias, but also by reduced positive interpretations and expectations.

Even when socially anxious people do display a positivity bias—as when stimuli are overtly positive—it appears to be short-lived, waning over the course of experiments (e.g., Garner et al., 2006) or in the days following exposure to stimuli (Brendle & Wenzel, 2004). In the absence of threat, a positivity offset not only encourages people to seek out rewarding opportunities (Cacioppo et al., 1997) but also serves to protect people's self-esteem and well-being, and it aids social relationships by fostering likelihood to help others, to initiate conversations, and to cooperate with others (S. E. Taylor & Brown, 1988). Thus, its relative absence in socially anxious people is likely to inhibit the development and maintenance of relationships. Consistent with this theory, Campbell et al. (2009) found participants with SAD to rate happy faces as less approachable than a healthy comparison group, with severity of social anxiety relating to lower approachability ratings. Perceiving outwardly friendly (smiling) faces as less approachable is consequently likely to hinder behavior aimed at initiating conversations.

This research begs the question of whether interpretation biases can be altered in socially anxious people to allow them to use a protective social bias to their advantage. Initial findings suggest that socially anxious people are able to adopt a benign interpretation bias with training. Cognitive Bias Modification for interpretative biases (CBM-I) involves having participants repeatedly respond to ambiguous passages in favor of either positive or negative outcomes (Mathews & Mackintosh, 2000). Following training, these individuals show less negative interpretations of new ambiguous social situations and predict that they would be less anxious in future social situations, in comparison to an untrained high social anxiety control group (Murphy, Hirsch, Mathews, Smith, & Clark, 2007). Repeated training has resulted in reduced social anxiety symptoms, which may last for at least one month following training (see Mobini, Reynolds, & Mackintosh, 2013). This research suggests that positive interpretation deficits are indeed an important feature of social anxiety, and augmenting this positive bias leads to changes in symptoms that may persist (at least in the short-term). However, altering interpretations of either negative or ambiguous information to be more positive may not capture the full range of deficits associated with social anxiety. Similar attention-training for enhancing positive interpretation of overtly positive stimuli may show incremental usefulness in reducing symptoms and improving well-being.

After the Fact: Atypical Post-Event Processing of Positive Information

Instead of making decisions and inferences on-line, people with SAD tend to engage in *post-event processing* (PEP), a post-mortem analysis which tends to follow social interactions or occurs in the anticipation of similar upcoming

interactions. Brozovich and Heimberg (2008) reviewed research on PEP, concluding that socially anxious people tend to process situations in an overly negative fashion. Furthermore, severity of social anxiety during a videotaped social interaction predicted greater PEP over the following week (Laposa & Rector, 2011). PEP can diminish the enjoyment of positive experiences, as rumination and analysis tends to emphasize mistakes or negative aspects of events for people with SAD (Hofmann, 2007).

Interpreting positive social events in a negative fashion is particularly characteristic of generalized SAD. The *Interpretation of Positive Events Scale* (IPES) was developed specifically to measure this process (Alden, Taylor, Mellings, & Laposa, 2008). Using this scale, researchers found a greater impairment of positive event processing in generalized SAD than in patients with panic disorder, generalized anxiety disorder, or healthy adults (Laposa, Cassin, & Rector, 2010). Ruminating on past social events tends to occur in response to upcoming events. Thus, it makes sense that the priming of negative aspects of past interactions would increase worry that one will eventually fall short of heightened expectations.

It is worth noting that theorists have suggested that acute concerns over positive events pertain primarily to the *eventual* fear of negative appraisal (Alden, Mellings, & Laposa, 2004). Consistent with this, the majority of IPES items specify concerns of future negative evaluation (e.g., "… I will disappoint them in the future"). Social interaction anxiety has been shown to account for unique variance in interpreting positive events as threats of future failure (i.e., IPES scores) beyond general negative affect. In addition, these negative interpretations of positive events were elevated after a positive social interaction task for clients with generalized SAD compared with healthy community controls, even upon controlling for depressive symptoms (Alden et al., 2008). Notably, interpretations of positive events as threats of future failure also predicted higher PEP in treatment-seeking clients with SAD (Laposa et al., 2010). This makes intuitive sense, given that both PEP and interpretations of positive events as threats of future failure involve a negative focus on social interactions. Both cognitive events occur following a social event and both involve distal (i.e., past or future) rather than proximal (i.e., present) social processing.

The Self: Lack of Normative Positive Self-Evaluations

Thus far we have examined how socially anxious people interpret and respond to external social information, but they may also have positivity deficits in how they view themselves. Research suggests that people generally have a positive illusion bias about themselves, seeing themselves as somewhat more attractive, smarter, and more in control of their future than average (e.g., J. D. Brown, 1986). This illusion may be helpful in maintaining psychological well-being (for a review, see S. E. Taylor & Brown, 1988), and there may be internal maintenance mechanisms to maintain a relatively high level of self-esteem

(Tesser, 1988). In contrast, socially anxious people tend to rate themselves less positively across all these dimensions (Moscovitch, Orr, Rowab, Reimera, & Antony, 2008). Moreover, they have significantly lower global self-esteem (e.g., Baños & Guillén, 2000; Izgiç, Akyüz, Doğan, & Kuğu, 2004; Leary, 2001) and lower average daily levels of self-esteem (Farmer & Kashdan, 2014). Indeed, the DSM-IV-TR includes low self-esteem as an associated feature of SAD (American Psychiatric Association, 2000) and recent theoretical models have highlighted the role of deficient positive self-views in the disorder (Heimberg, Brozovich, & Rapee, 2010).

Deficient positive self-views in SAD are important beyond just having more negative self-views. Goldin et al. (2013) found that positive self-views (but not negative self-views) mediated improvement in symptoms after cognitive-behavior therapy. It is likely that a lack of positive inferences from external cues described earlier (e.g., positive feedback, signs of approval) inhibits the modification of negative self-beliefs. In contrast, non-anxious individuals tend to make positive inferences even of possibly threatening cues, which serves to maintain self-esteem levels and prevent the development of excessive social anxiety.

Fear of Positive Evaluation

Negative self-views have long been considered a core cognitive feature of social anxiety (D. M. Clark & Wells, 1995; Rapee & Heimberg, 1997). In fact, these perceived deficiencies have been theorized to be the underlying causes of social interaction anxiety, since interactions present the opportunity for these deficiencies to be discovered, leading to negative evaluation (Moscovitch, 2009). Emerging evidence suggests that people with SAD have a more *general* fear of evaluation—both positive and negative (Weeks, Heimberg, Rodebaugh, & Norton, 2008; Weeks, Heimberg, & Rodebaugh, 2008). Fear of positive evaluation (FPE) is a construct distinct from, albeit strongly related to, the fear of negative evaluation (FNE). Specifically, FPE pertains to the sense of dread associated with being evaluated favorably and publicly; this evaluation begs a direct social comparison of the self to others. The *Fear of Positive Evaluation Scale* (FPES) was developed to study the role of this fear in psychopathology (Weeks, Heimberg, & Rodebaugh, 2008). In contrast, FNE pertains to the sense of dread associated with being evaluated unfavorably. Both social-evaluative fears independently contribute to social anxiety (e.g., Fergus et al., 2009; Weeks, Heimberg, Rodebaugh, Goldin, & Gross, 2012).

There is theoretical support for FPE being a feature of SAD. Gilbert (2001) suggested that social anxiety may be an evolutionary mechanism that facilitates group cohesion by preventing conflict between members of varying levels of social ranking. People who perceive themselves as ranking lower on a social hierarchy are proposed to experience anxiety when interacting with higher-ranking group members, prompting the expression of submissive gestures, and motives to avoid conflict associated with increases in social status. Additionally, Gilbert suggested that socially anxious people fear they will be unable

to maintain or defend social gains in the future. In support of this theory, both FPE and FNE were associated directly with submissive behaviors and indirectly with social self-rankings (Weeks, Jakatdar, & Heimberg, 2010). However, FPE related more strongly to concerns of unwanted social consequences following successes (e.g., envy from people of higher social status) than either FNE or trait social anxiety (Weeks & Howell, 2012). Furthermore, FPE (but not FNE) related positively to discomfort after receiving positive social feedback, and negatively to perceived accuracy of that feedback (Weeks, Heimberg, Rodebaugh, et al., 2008). In fact, FPE (but not FNE) was associated with increased state anxiety in response to dynamic positive stimuli (e.g., smiling), whereas FNE (but not FPE) was associated with increased state anxiety in response to dynamic negative stimuli (Weeks, Howell, & Goldin, 2013).

Although FNE has been related to other psychological conditions (e.g., depression), converging research suggests that FPE is distinctively relevant to social anxiety. In terms of specificity, FPE shows stronger relationships with social anxiety compared with worry, anxiety sensitivity, and depression in undergraduate samples (Weeks, Heimberg, Rodebaugh, et al., 2008; Weeks, Heimberg, & Rodebaugh, 2008). Additionally, clients with SAD exhibit elevated FPE in comparison to people meeting criteria for other anxiety disorders (Fergus et al., 2009), and this fear has been shown to improve with cognitive-behavioral therapy for SAD (Weeks et al., 2012). In sum, social anxiety may be characterized by a self-image simultaneously biased by indicators of not only negative (e.g., Hackmann, Surawy, & Clark, 1998), but also positive (Weeks, Heimberg, Rodebaugh, et al., 2008) aspects of the self. Particularly relevant to our discussion of diminished positive experiences in SAD, FPE (but not FNE) was related to less global positive affect; both were related to fewer positive thoughts prior to and during a social interaction (Weeks & Howell, 2012). However, in contrast to the bias focused on negative aspects of the self-image (i.e., FNE), which are magnified, FPE may lead to a *minimization of positive* aspects of the self. This concept is also consistent with PEP leading to devaluation of positive events as setting unreachably high expectations for the future.

The Future: Predicting a Dearth of Positivity

In general, most people tend to be optimistic about their futures, overestimating the likelihood that pleasant events will occur in their lives and predicting unrealistically positive outcomes of their endeavors (for a review, see S. E. Taylor & Brown, 1988). These illusions contribute to perceived happiness, productivity, and social relationships, since anticipating positive outcomes motivates exploratory and relationship-building behaviors. In contrast, people with SAD expect to experience fewer positive events and anticipate more negative reactions to positive events compared to healthy adults (Gilboa-Schechtman, Franklin, & Foa, 2000). The work of Alden and colleagues (Alden et al., 2004, 2008) also suggested that people with SAD tend to experience *more anxiety* in response

to overtly positive social outcomes, and subsequently anticipate worse future social outcomes. For example, when clients with generalized SAD and matched nonclinical controls engaged in role-plays with confederates (trained to behave either positively or negatively), the clients with SAD who received the positive feedback predicted that their partner would expect more from them in the next interaction. In turn, they feared they would fall short of these heightened expectations (Alden & Wallace, 1995). Furthermore, SAD clients presented with feedback highlighting the *positive* aspects of their performance predicted they would be *more anxious* in a subsequent interaction than SAD clients provided with feedback framed to highlight the *absence of negative* performance qualities (Alden et al., 2004).

These findings suggest that positivity deficits may function in a downward cycle, whereby fewer experiences of positive emotions and experiences combined with less positive interpretations of social events contribute to expecting less positive outcomes. This aligns with findings that socially anxious people engage in less positive thinking while anticipating social events (Weeks & Howell, 2012). In turn, these expectations prime people with SAD towards less positive and more negative biases that prevent processing of positive information that could disconfirm expectations.

Life Satisfaction: Lack of Positive Bias in Perceived Quality of Life

In addition to optimism about the future, most people display a positive illusion about their general well-being (e.g., Klar & Giladi, 1999). Quality of life reflects the degree to which a person believes his or her needs, goals, and wishes are satisfied in meaningful life domains (Frisch et al., 2005). Alongside positive and negative emotions, these cognitive evaluations about one's life can be considered a cornerstone of happiness (Diener, Suh, Lucas, & Smith, 1999). When researchers use generic measures of quality of life, clinic outpatients with SAD show marked deficits that are comparable to outpatients with depression (Wittchen, Fuetsch, Sonntag, Müller, & Liebowitz, 2000). An epidemiological survey of more than 8,000 Canadian residents found that people with SAD endorsed less satisfaction and functioning in nearly every life domain, compared to people without SAD (Stein & Kean, 2000); these findings could not be explained by age, gender, socioeconomic status, or a lifetime history of depression. Even upon accounting for the functionally impairing nature of social anxiety symptoms, people with SAD endorse a poor overall sense of well-being (Hambrick, Turk, Heimberg, Schneier, & Liebowitz, 2003), suggesting that quality of life is not synonymous with disorder-related disability.

Positive Biases in Relationships

A growing body of literature has suggested that viewing relationship partners in a positive light—even more positively than they view themselves—is beneficial

to relationship quality (Martz et al., 1998). In particular, positive illusions about romantic partners have been linked with higher satisfaction with the relationship and less doubt (e.g., Murray, Holmes, & Griffin, 1996). However, socially anxious people may not experience some of the benefits from these positive illusions. For example, socially anxious participants who demonstrated positive illusions about their partners anticipated *more* performance anxiety about making a speech if their partner were to be part of the audience (Gordon, Johnson, Heimberg, Montesi, & Fauber, 2013).

A related line of research has investigated the importance of how romantic partners respond to the sharing of positive events (e.g., Gable & Reis, 2010). Providing actively engaged, enthusiastic responses has been associated with relationship quality and maintenance over time. However, socially anxious people not only provide and receive less supportive responses to positive disclosures, but also tend to be more likely to report declines in relationship satisfaction over six months when such support was lacking (Kashdan, Ferssizidis, Farmer, Adams, & McKnight, 2013). More research is needed to understand the mechanism for this deficit (e.g., inadequate processing of positive information, lack of reactivity to the positive information, or interference of anxiety with supportive behaviors).

BIOLOGICAL MARKERS OF DIMINISHED REWARDS IN SOCIAL ANXIETY

If social anxiety and SAD are characterized by attenuated positive experiences and fewer positive events, this effect should not be limited to subjective levels of analysis. Impairments in the neurobiological circuitry linked to positive experiences and approach-oriented exploratory behavior should be observable. Compared with research using self-report methodologies, there is less research on biological reward mechanisms. To date, more research has been devoted to links between SAD and reactivity to negative or anxiety-provoking stimuli, but some research has investigated neurobiological underpinnings of reward reactivity. Specifically, dopaminergic neurotransmission is linked to the motivation for reward—central to the creation and pursuit of goals, as well as exploration and curiosity (e.g., Berridge, 2007; Depue & Collins, 1999; Ikemoto & Panksepp, 1999). People with SAD exhibit lower dopamine reuptake density and less dopamine receptor binding in the striatal regions compared with nonclinical adults (Schneier et al., 2000; Tiihonen et al., 1997). Additionally, during a cognitively challenging fMRI task, people with SAD exhibited similar behavioral performance as the control group but less activity in the striatal brain regions (Sareen et al., 2007). Striatal pathways are particularly integral to the processing of rewarding stimuli and motivating behavior to attain rewards. Thus, impaired dopaminergic activity may contribute to socially anxious people being less reactive to positive events and less curious and approach-oriented in seeking further positive experiences in their daily lives. In fact, Stein (1998)

suggested that impairment in these pathways might impair people's ability to evaluate the risks and benefits of engaging in social interactions, additionally supporting the role of dopamine in social anxiety-related impairment in positive experiences.

In light of these differences in neural circuitry, researchers have begun to investigate how these pathways function in the context of socially relevant reward stimuli. Straube, Mentzel, and Miltner (2005) found patients with SAD to respond with similar amygdala activation—often related to negative emotional arousal—to angry and happy faces. In related research, participants with SAD have been found to have less prefrontal cortical activity while anticipating making a speech in front of strangers (Davidson, Putnam, & Larson, 2000) and during a trust game social exchange (Sripada et al., 2009). These regions have been linked to social judgment, which, as we discussed earlier, is impaired in socially anxious people (i.e., difficulty making online inferences about social situations). In sum, we need greater research on the role of reward-related pathways in social anxiety, including systems that involve opiate and serotonin neurotransmission, as well as oxytocin functioning (Mathew, Coplan, & Gorman, 2001). In particular, it will be important to understand how these pathways respond to feared situations *and* to successful social interchanges, in addition to determining which systems are most amenable to change via psychological and pharmacological treatments.

MEANINGFUL HETEROGENEITY IN SOCIAL ANXIETY

Although this chapter has largely focused on deficits in positive experiences and cognitions, it is worth noting that there is heterogeneity in most disorders. While most people with social anxiety problems can be characterized by diminished positive emotions and infrequent positive events, some initial work (described earlier) suggests that this profile varies according to how people regulate their emotions. There is evidence that diminished positive emotions and curiosity relate primarily to generalized social interaction fears, whereas small to near-zero relationships exist with social performance and observation fears (Hughes et al., 2006; Kashdan, 2002). Furthermore, compared to people with generalized SAD, those with the non-generalized (e.g., primarily public speaking) SAD subtype are *less* likely to be classified with severe impairment in quality of life (Safren, Heimberg, Brown, & Holle, 1996; Stein & Kean, 2000). These findings fit with existing theory and research, suggesting that connections with other people are the primary source of positive experiences in life, from pleasures to profound love and meaning (Reis, Collins, & Berscheid, 2000). Consequently, the impairments we have discussed in this chapter may be particularly relevant to people with the generalized subtype, for whom self-regulatory and cognitive processing impairments may be more pervasive, deteriorating sources of pleasure and meaning.

Consistent with this line of reasoning, a subset of socially anxious people has been found—people who use qualitatively different strategies to regulate their

emotions (and, plausibly, to process socially relevant information) that contribute to risk-prone approach behavior (Hofmann, Heinrichs, & Moscovitch, 2004; Kachin, Newman, & Pincus, 2001; Kashdan, Collins, & Elhai, 2006; Kashdan, Elhai, & Breen, 2008). For instance, a socially anxious individual might argue with an acquaintance—ostracizing them—to gain a sense of dominance before the other person gets a chance to even consider rejecting them. Another socially anxious person might have sex with a stranger to extract immediate sensory pleasure and feelings of belonging. This group of atypically behaving socially anxious people may also be more likely to engage in substance abuse or other destructive behaviors.

These seemingly atypical, uninhibited behaviors differ from the concepts of shyness and inhibition that are stereotypical of social anxiety in the literature. However, the functional goal of these risk-prone approach behaviors may be the same: to temporarily avoid the unwanted experience of anxiety or the likelihood of rejection. These self-regulatory strategies can generate opportunities for temporary positive experiences in the short-term (e.g., a sense of control from aggression, serenity from illegal substance use, orgasmic pleasure from opportunistic sexual encounters, or excitement from thrill-seeking behavior). However, these same behaviors appear to detract from quality of life in the longer term, perhaps by not helping develop enduring sources of pleasure like social relationships (Kashdan, McKnight, Richey, & Hofmann, 2009a; Kashdan & McKnight, 2010). It is worth noting that research has yet to clarify whether these impulsive approach behaviors are a distinctive atypical pattern of social anxiety or if they occur in people who are severely depleted in self-regulatory resources due to biological predispositions or severity of emotion regulation or attentional control impairments discussed earlier in this chapter. Addressing this question will be important in further research, since conclusions about the nature, course, and treatment of the positive spectrum of human functioning in social anxiety may be compromised by failing to account for heterogeneous regulatory styles.

SUMMARY AND TREATMENT IMPLICATIONS

In this chapter, we have discussed numerous lines of research supporting diminished positive experiences, infrequent positive events, and impaired processing of positive social information in the lives of people with excessive social anxiety. In studies that conducted specificity tests, these findings could not be explained by the co-occurrence or severity of depression. In the absence of impending threat or ambiguous situations, most people show a tendency to be approach-oriented and exploratory, to view themselves positively, to interpret ambiguous and even negative cues in a positive light, and to expect positive outcomes. This positive motivational bias appears to be deficient in people with excessive social anxiety, who experience disruptions in their ability to process what is happening in the present moment (regardless of whether the situation is

overtly negative, ambiguous, or positive). They reflect on past situations (even positive ones) with a bias towards recalling faults and failures. Furthermore, they view themselves more negatively and view their lives and relationships as less satisfying compared to others.

Although this profile might be prototypical of people with excessive social anxiety, evidence also suggests the presence of meaningful alternative profiles. A subset of socially anxious people appear to engage in excitable, impulsive, and novelty-seeking behavior patterns, perhaps as a result of similar underlying self-regulatory problems. While this subset reports short-term pleasures such as increased sexual activity and socializing, these experiences fail to translate into lasting satisfaction or well-being (Kashdan et al., 2008, 2009; Kashdan & McKnight, 2010). Consequently, positivity deficits for people with social anxiety appear to be on multiple levels (e.g., generation of positive events, in-the-moment experience of such events, and later reflection on these events), but the degree of impairment at these various levels may differ by person.

Research on the developmental origins of attenuated positive experiences, cognitions, and events has lagged behind research on heightened negative psychological experiences and avoidance. There is reason to suspect that dysfunctional early attachments and extensive peer rejection and ostracism in childhood might precipitate social anxiety problems and, in turn, lead to reduced reward responsiveness to social interactions (Vertue, 2003). Socially anxious children might learn to expect negative outcomes when interacting with other people. As social creatures, losing out on the pleasures of anticipating, experiencing, and savoring contact with other people might dramatically alter their hedonic tone of daily life. There is a need for fine-grained analyses of the type of parenting practices, peer relationships, romantic relationships, and stressors that increase risk for developing excessive social anxiety, particularly for people with predisposing genetic and personality characteristics. As an addition to testing a diathesis-stress model, future work can examine the presence of critical periods for the development of social anxiety problems and diminished positive functioning (under the right conditions). Of course, work on vulnerability should be tempered with an equal emphasis on factors that impart protective effects.

While these deficits are more related to general social interaction anxiety than to circumscribed social anxiety problems (e.g., performance and observation fears), diminished positivity constructs serve to distinguish SAD and elevated social interaction anxiety from other anxiety conditions (T. A. Brown et al., 1998). Initial evidence suggests that the relationship between social anxiety and positive events might vary as a function of how people manage their emotions in everyday life (Kashdan & Steger, 2006; Vohs et al., 2005) and their ability to voluntarily control the focus of their attention (Morrison & Heimberg, 2013). It will be important to conduct additional studies to explore the degree to which these mechanisms uniquely contribute to the greatest vulnerability in terms of infrequent positive emotions, cognitions, behaviors, and events in daily life. The neurotransmitters, cortical regions, and cortical activity

relevant to novelty-seeking and approach behavior (e.g., dopaminergic pathways) are distinct from those relevant to negative affect and avoidance behavior. Thus, future studies may examine the incremental validity of how and when social anxiety is related to the generation of and sensitivity to rewarding events. This research may benefit from attention to heterogeneity in this condition. It will be important to continue constructing the psychological, social, cultural, and biological factors that are most relevant to vulnerability and resilience.

The integration of the positive spectrum of human functioning into the study and treatment of social anxiety is still in its early stages. However, our discussion of positive emotions, cognitions, and events suggests new targets of intervention. Early evidence suggests that current forms of cognitive-behavioral therapy can lead not only to decreases in fears of positive evaluation (Fergus et al., 2009; Weeks, Heimberg, et al., 2012), but also to improvements in positive emotions and quality of life (Eng, Coles, Heimberg, & Safren, 2001, 2005). Importantly, treatment affects more than just the quality of relationships; some of the greatest benefits arose in people's sense of achievement and self-esteem, with additional improvement in the pursuit of activities that provide self-fulfillment, new knowledge, and intrinsic rewards (Eng et al., 2001, 2005). Thus, the tools taught in cognitive-behavioral treatment have broad effects beyond the scope of life domains that are explicitly addressed. However, it is important to recognize that quality of life post-treatment was still far below the normative levels found in the population (Eng et al., 2005), and the improvements were not maintained at the six-month follow-up assessment (Eng et al., 2001). It therefore remains to be seen whether current interventions are efficacious for increasing the frequency of positive events and improving abilities to extract pleasure and meaning from these events.

Future research should explore whether empirically supported adjunct modules that directly target positive deficits provide additional benefits to people with SAD. Thus far, we have evidence that interventions that train people to attend to positive stimuli (e.g., C. T. Taylor et al., 2011), increase attentional control (e.g., Bögels, 2006), and improve interpretation biases (Vassilopoulos, Banerjee, & Prantzalou, 2009) have shown some improvement in social anxiety symptoms. Moreover, interventions that involve mindfulness training (e.g., Goldin & Gross, 2010) show initial success in increasing brain activity in attention-related areas, suggesting that they improve attentional control and thus enhance a positivity offset. Other research suggests that on days when people with SAD devote considerable effort toward meaningful life goals, they experience substantially greater self-esteem, positive emotions, and meaning in life (Kashdan & McKnight, 2013). This research points to the possibility of effective interventions that aim beyond merely achieving statistically significant improvements to improved end-state functioning at levels of functioning similar to successful, psychologically healthy members of society.

The goal of practitioners should be extended beyond the reduction of distress and disorder to helping people discover and maintain sustainable sources

of positive emotions, engagement, and fulfillment in various life domains. We can begin by expanding the repertoire of constructs studied in relation to social anxiety to include neglected elements of a good life, such as the development and appreciation of strengths of character, ability to recognize and respond to cues of rewards in one's environment, and devoting daily effort towards meaningful, approach-oriented strivings. With translational research, we can understand the conditions and intervention modules that best facilitate positive experiences. The supplementation of existing therapies with modules that address positive elements of living might offer incremental benefits to people struggling with excessive social anxiety symptoms. We hope that this chapter inspires clinical scientists interested in social anxiety and related disorders to broaden their research and treatment efforts to the vast, rarely explored territory of the positive.

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