SOCIAL ANXIETY: RELATIONSHIP TO APPROACH AND AVOIDANCE GOALS AND PLANS AND THE EMOTIONAL CONSEQUENTS OF SUCCESS AND FAILURE

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ABSTRACT

Social Anxiety: Relationship to Approach and Avoidance Goals and Plans and the Emotional Consequents of Success and Failure

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Data from 77 undergraduates high in social anxiety and 75 undergraduates low in social anxiety were used to examine between- and within-group differences in idiosyncratic goal generation, plan generation, and anticipated affect related to goal pursuit. The data did not support the hypotheses related to between- or within-group differences in approach and avoidance goal or plan generation; the two groups did not differ in the number of approach or avoidance goals and plans. Both groups reported higher numbers of approach than avoidance goals and plans. Individuals high in social anxiety rated goals as more social. Although, both groups classified more goals as non-social than social, those high in social anxiety were more likely to classify goals as social. Social goals were expected to relate to less net affective cost or gain and have consequents lasting a shorter duration than non-social goals. When imagining goal pursuit, those high in social anxiety reported expecting more negative affect, more deactivated negative affect, less deactivated positive affect, and rated goal pursuit as less pleasant, but they did not differ from those low in social anxiety with respect to positive affect. Individuals high in social anxiety also believed that the consequents of imagining success would have a shorter duration than did those low in social anxiety and tended to believe that the consequences of failure had a longer duration than did the consequences of success, regardless of goal type, whereas individuals low in social anxiety anticipated the opposite pattern. The study concludes with discussion of how anticipated affect as a consequence of goal pursuit relates to the

extant goal and affect research; strengths and limitations of the current research; proposed directions for future research; and potential clinical applications of these findings.

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Finally, I would like to dedicate this paper to our son, my parents, and the memory of my grandparents, Raymond and Modesta Henning.

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CHAPTER 1
INTRODUCTION

Social anxiety disorder is characterized by a fear of negative evaluation across a number of situations in which an individual may be observed by or interact with others (American Psychiatric Association [APA], 1994). Every year, knowledge of social anxiety disorder increases; however, little is known about how social anxiety may affect an individual's personal goals or his or her plans for achieving these goals. The current study sought to fill this gap in the literature by examining the types of goals generated by individuals high in social anxiety compared to the goals generated by non-anxious controls. In addition, the current study examined different types of goals, goals generated to bring one closer to a desired end state (approach goals) and goals generated to avoid an aversive end state (avoidance goals). More specifically, the study examined whether high levels of social anxiety may affect preferences for approach goals and plans or avoidance goals and plans and how increased preference for one type of goal or plan over the other may be related to life satisfaction. Differences between goals related to social and non-social situations were also investigated, as was how success or failure with different types of goals affects one's anticipated emotional experience. Within-group differences in plan generation and specificity of plans were also a focus of this research, but first, it is important to begin with a discussion of what goals and plans are, how they relate to anxiety and other constructs, and what makes them important areas of empirical attention.

Approach and Avoidance Goals

Whether referred to as *current concerns* (Klinger, 1977), *personal projects* (Little, 1983), *life tasks* (Cantor, & Langston, 1989), or *personal strivings* (Emmons, 1986), goals and goal-related constructs have been the focus of innumerable studies. Although each of these constructs differ, in specificity or concreteness of focus for instance, they can be viewed as stemming from the same concept of goals (McIntosh, 1996), defined by Austin and Vancouver (1996, p. 338) as, "…internal representations of desired states, where states are broadly construed as outcomes, events, or processes." Many goal theorists share the view that goals provide energy and direction for activities and provide

meaning to and understanding of an individual's experience and personality (Carver, 2004b), and positive affect and subjective well-being have been related to the past fulfillment of personally relevant goals (Emmons, 1986; Moffit & Singer, 1994; Oishi, Diener, Suh, & Lucas, 1999; Tamir & Diener, 2008). Although there are many ways of examining goals, this study was concerned primarily with the distinction between approach and avoidance goals[1] (Dickson & MacLeod, 2004b). An increasing amount of attention has been devoted to the study of approach goals (those goals which are meant to bring one closer to a desired end state) and avoidance goals (those goals meant to create distance between oneself and an undesirable, aversive end state). The concepts have become an integral component of models of self-regulation and affect (Carver, Avivi, & Laurenceau, 2008; Carver & Scheier, 1998; Higgins, 1997; Scholer & Higgins, 2008) and have provided a framework within which achievement and well-being in academic settings have been studied (Elliot & Sheldon, 1997). Recent work has also begun to use the constructs of approach and avoidance goals to help gain a better understanding of social motives (Gable, 2006) and relationship commitment (Strachman & Gable, 2006).

Although it is believed that individuals form approach and avoidance goals, most research investigating approach and avoidance goals has focused on between-group differences. In an exception to this trend, college students were asked to select eight goals that were the most personally relevant from a list of 51 achievement goals (Elliot & Sheldon, 1997). Over the course of a semester, those who relied more on avoidance goals reported that pursuit of their goals was associated with decreased self-esteem, life satisfaction, and personal control. They also reported less satisfaction with their progress at the end of a semester, found their goal pursuit less fulfilling and enjoyable, and reported a reduction of well-being over the course of a semester. In a study examining between-group differences, greater reliance on avoidance goals was also associated with lower intrinsic motivation and lower course grades among college students, whereas greater reliance on approach goals was associated with higher grades (Elliot &

[1] Numerous terms have been used to by researchers examining approach and avoidance goals: promotion and prevention foci (Higgins, 1997); mastery, performance approach, and performance avoidance achievement goals (Elliot & Harackiewicz, 1996); and the behavioral inhibition and behavioral approach systems (Gray, 1982, 1994a, 1994b), for example. For ease of communication, the terms *approach* and *avoidance* will be used throughout this paper, except when direct comparisons of theoretical models are made.

Church, 1997). Individuals who relied on avoidance goals also experienced greater emotional reactivity to negative life events and were less likely to experience positive life events when compared to those who relied more heavily on approach goals; however, greater reliance on avoidance goals was not related to more negative life events (Gable, Reiss, & Elliot, 2000). There are also differences in attention and recall between those who rely on different goals. Reliance on approach goals was related to a slower shift of attention from positive incentive values, whereas reliance on avoidance goals was related to slower shifts in attention from negative incentive values, fewer positive memories, and increased recall of memories of failed avoidance attempts (Derryberry & Reed, 1994; Moffit & Singer, 1994; Updegraff, Gable, & Taylor, 2004).

Framing instructions in approach or avoidance terms affects the experience and performance of research participants in a number of ways. In an anagram task, individuals were told that they could "demonstrate that you are a good puzzle solver" in the approach condition or "demonstrate that you are not a poor puzzle solver" in the avoidance condition (Elliot & Harackiewicz, 1996, p. 464). Individuals in the approach condition reported more task involvement than those in the avoidance condition, indicating that goals directed towards avoiding being perceived as incompetent reduced intrinsic motivation. Similarly, in a task involving unsolvable anagrams, individuals were instructed to solve a certain number of anagrams (approach) or to avoid not solving a given number (avoidance) (Roney, Higgins, & Shah, 1995). Those who received the avoidance-framed instructions were less persistent and performed more poorly than those who received the approach-framed instructions. Furthermore, participants in another experiment were more likely to complete the writing of a report or to eat more fruits and vegetables if the framing instructions matched the types of goals they typically prefer than if there was a mismatch (Spiegel, Grant-Pillow, & Higgins, 2004). The ability to learn new perceptual categories was also optimized when payoff structure matched the individual's tendency to rely on approach or avoidance goals (Markman, Baldwin, & Maddox, 2005).

Goals, Plans, and Anxiety

Plans, defined as "the designs we construct to guide our attempts to reach a goal in a given environment" (Scholnick & Friedman, 1993, p. 146), serve an important function in that they are tied to the pursuit and/or fulfillment of goals. Plans move individuals from their current state closer to a future desired end state (approach plan) or farther from an undesired end state (avoidance plan) (Dickson & MacLeod, 2004b). Planning has been demonstrated to be positively related to subjective well-being (Prenda & Lachman, 2001). In one study, individuals gave daily ratings of planning and realization of plans every day for 21 days. Individuals at high risk for depression made plans less carefully and reported less success fulfilling their plans; in addition, on days when individuals reported more success realizing their plans, they also reported better psychological adjustment (Nezlek, 2001). In a related body of research, when personal strivings were more abstract, individuals reported more psychological distress (Emmons, 1992). Consequently, it seems that, in addition to examining approach and avoidance goals, it is also important to examine the plans generated to achieve these goals.

Although research examining differences between those likely to rely on approach goals versus those likely to rely on avoidance goals has become more common, less attention has been placed on within-group or within-person variation. For example, little is known about how one may differ across situations in one's preference for approach versus avoidance goals. Several researchers have found a link between higher levels of anxiety and increased likelihood of selection or report of avoidance goals (Carver & White, 1994; Dickson & MacLeod, 2004a, 2004b); however, when anxiety has been included in this research, the focus has primarily been on high scores on trait anxiety inventories rather than a specific type of anxiety. As a result, little is known about how approach and avoidance goals and plans may differ for individuals who are confronted with a stimulus associated with their primary anxiety-evoking concern, a situation in which someone who experiences a high degree of social anxiety interacts with a stranger, for instance, compared with goals or plans that might be formed when confronted with a less threatening, non-social situation.

Before offering specific hypotheses about how those high and low in social anxiety may differ in goal and plan generation across situations, however, it is important to review how those scoring high on a measure of trait anxiety differ from non-anxious individuals. One of the most direct comparisons can be found in the work of Dickson and MacLeod (2004b), who compared the idiographic goals and plans of adolescents high in anxiety, high in depression, high in both anxiety and depression, and a control group low in both anxiety and depression. Each adolescent completed several tasks, described in greater detail in the method section of this proposal. In the first task, they generated a list of approach goals and selected their two most important goals from that list. They then generated a list of avoidance goals and selected their two most important goals from that list. Finally, they completed a plans task in which they were asked to generate a list of plans, which could focus on either approach or avoidance, to accomplish each approach goal and a list of plans, which could focus on either approach or avoidance, to accomplish each avoidance goal. The analyses most relevant to this study were those comparing the anxious and control groups, and as such, these findings will be emphasized. Adolescents who were high in anxiety generated more avoidance goals and plans and fewer, less specific approach plans than did those in the control group, but the groups did not differ in the number of generated approach goals. Specificity of avoidance goals and plans did not differ between the two groups. The current study sought to expand upon these findings by employing the unstructured goal and plan tasks utilized by Dickson and MacLeod (2004b) but examining goals and plans related to social and non-social situations. Participants generated lists of approach and avoidance goals as well as plans to attain these goals for situations in which they may interact with or be observed by others as well as for situations in which this is not the case.

Dickson (2006) conducted a similar study involving college students who scored in the clinical range on a state anxiety measure and college students who scored below the clinical range. Using the goal task, she again found that those high in anxiety generated a higher number of avoidance goals, but not approach goals, than did those low in anxiety. Participants were then asked to generate a list of the perceived consequences for both succeeding and failing with their most important approach and

avoidance goal. The groups did not differ in the number of anticipated positive consequences, but those high in anxiety generated significantly more negative consequences.

Approach and Avoidance Goals and Social Anxiety

Little is known about how social anxiety may impact idiosyncratic goal generation. Prior to the conceptualization of this study, this area was uninvestigated. Currently, there is only one published study (Rodebaugh, 2007) addressing the relationship between a type of social anxiety and approach and avoidance goals. Rodebaugh asked speech-anxious participants to generate both an approach and an avoidance goal related to giving a speech before being videotaped delivering that speech. When participants rated themselves as confident in their ability to succeed with their avoidance goal, higher confidence with their approach goal was associated with a reduction in anxiety; however, when avoidance goal confidence was low, approach goal confidence was not related to anxiety. Rodebaugh also found that avoidance goals formed for the speech task were more likely to contain specific plans for behavior than were the approach goals. This study did not, however, address the relative proportion of approach and avoidance goals generated by individuals high in social anxiety. Hypotheses related to this question were formulated after reviewing the following literature.

There are several factors that may relate to an increased number of avoidance goals. Anxiety, as previously discussed (Dickson, 2006; Dickson & MacLeod, 2004b), seems to be one of them. Neuroticism, negative affectivity, and behavioral inhibition have also been related to increased preference for avoidance goals (Elliot & Thrash, 2002). As research has demonstrated positive relationships between social anxiety and measures of neuroticism (Bienvenu et al., 2004), trait anxiety (Hirsh, Meynen, & Clark, 2004), negative affect (Davidson, Marshall, Tomarken, & Henriques, 2000; Kashdan & Roberts, 2004), and behavioral inhibition (Harmon-Jones & Allen, 1997), it seems plausible that individuals high in social anxiety would generate more avoidance goals. However, there is reason to suspect that this effect may be even more pronounced for goals in social situations. Dweck and Legget (1988) reported that children in a condition in which evaluation by others was emphasized based their selection of task on perceived ability. Children who believed their ability to be low chose tasks that were easier in an effort to

avoid being deemed incompetent, whereas children who thought their ability was high chose more difficult tasks. In addition, a study involving undergraduates found that higher fear of failure and lower perceived competence predicted increased avoidance goal pursuit in the achievement domain (Elliot & Sheldon, 1997). Furthermore, Gable (2006) provided evidence that behavioral approach(Gray, 1982) and hope for affiliation predicted an increase in social-approach goals and that behavioral inhibition (Gray, 1982) and fear of rejection predicted increases in social-avoidance goals. As a result, one would expect that individuals fearing either negative evaluation or failure would be more likely to choose goals intended to avoid possible negative judgments, particularly if they perceive their competence to be low.

Fear of negative evaluation is one of the central aspects of social anxiety disorder (Rapee & Heimberg, 1997), and several studies indicate that individuals who are socially anxious perceive their ability to be low. For instance, in a novel task, lawn bowling, undergraduates scoring high on a measure of social anxiety in sports and physical activities perceived their performance as poorer than did non-anxious undergraduates, even after controlling for objective difference in performance as measured by distance from the bulls-eye (Norton, Hope, & Weeks, 2004). Individuals with social anxiety disorder also rate their performance in both public speaking and social interaction situations more negatively and less positively than do observers of their behavior (Rapee & Lim, 1992; Stopa & Clark, 1993). Consequently, higher levels of social anxiety may be related to an increased reliance on avoidance goals, particularly in social situations. This body of research also suggests that individuals high in social anxiety may generate fewer approach goals, particularly in social situations, than non-anxious individuals.

There is further reason to suspect that approach and avoidance goal and plan formation may differ when someone high in social anxiety is confronted with social versus non-social situations. Consider, for instance, the literature demonstrating social-stimulus-specific attentional biases in individuals with social anxiety disorder. For example, individuals with social anxiety disorder perform more poorly than non-anxious persons on the Stroop color-naming task (Stroop, 1935) if the task is modified to include words that are evaluative in nature. Several studies have demonstrated that individuals with social anxiety disorder color-name more slowly than non-anxious controls, but this difference in performance is more

pronounced when asked to name the colors of socially threatening words like “foolish,” “boring,” “stupid,” or “failure” (Amir et al., 1996; Lundh & Öst, 1996; Mattia, Heimberg, & Hope, 1993).

In the dot-probe paradigm (MacLeod, Mathews, & Tata, 1986), another method for examining attentional biases that has been used in the study of anxiety, individuals are typically shown two words on a computer screen, one above the other, for 500 ms. Next, a dot (or other probe stimulus) appears on the screen where one of the words was previously located. Participants are instructed to press a key as soon as they see the dot. A speeded response is expected if the dot appears in the location to which the individual’s attention has been directed. Asmundson and Stein (1994) asked individuals with social anxiety disorder and non-anxious controls to read the top word on the computer screen aloud, drawing attention to that word, and press the space bar when the dot appeared on the screen. The word pairs employed were neutral/neutral, neutral/physical threat, or neutral/social threat. Individuals with social anxiety disorder responded faster to social threat words in the top position, but not neutral or physical threat words; non-anxious controls did not differ in response rates for any of the word pair/dot probe pairings. In dot-probes designs modified to present pictures of faces instead of words, individuals high in social anxiety responded more slowly to probes that appeared after negative faces (Mansell, Clark, Ehlers, & Chen, 1999; Yuen, 1994) and happy faces (Mansell et al., 1999) than neutral faces when told that they would be giving a speech.

Whereas the slower dot probe times for non-neutral facial stimuli seemingly contradict the faster times obtained in dot-probe studies using verbal stimuli (e.g., Asmundson & Stein, 1994), Ledly, Fresco, and Heimberg (2006) argue that this is not necessarily the case. Instead, these data may be better interpreted in light of Mogg, Matthews, and Weinman’s (1987) theorized vigilance-avoidance pattern of cognitive processing. According to Mogg et al. (1987), anxious individuals are characterized by two sequential processes. First, they demonstrate biased attention towards the detection of threatening stimuli, and second, they are motivated to avoid, reduce, or ignore threat. For the slower times to have occurred in the facial dot-probe studies, the emotional faces must have first been perceived. After determining the faces were threatening, those high in social anxiety may have redirected their attention elsewhere, thereby

reducing the threat and slowing their response to the probe. Adding more support to the idea that those socially anxious attend to socially threatening stimuli, Veljaca and Rapee (1998) conducted a study in which trained confederates engaged in an equal number of positive and negative feedback behaviors while acting as audience members for participants' speeches. Participants high in social anxiety noticed more negative feedback behaviors than positive feedback behaviors, whereas the reverse was true for those low in social anxiety.

As this social-stimulus-specific attentional bias is well documented in social anxiety disorder, it seems safe to assume that individuals high in social anxiety pay more attention to socially threatening stimuli. If this is the case, they may spend more time planning ways to avoid these stimuli or relying on goals that focus on the avoidance of these stimuli, taking time away from the formation of approach goals and planning to attain them. It also suggests that individuals high in social anxiety may have less specific approach goals and plans for social situations than non-social situations.

Approach, Avoidance, and Emotions

The final aspect of this study examined the anticipated emotional consequents of both succeeding and failing in making progress towards the realization of approach and avoidance goals in social and non-social situations among persons with and without social anxiety. There is a good degree of consensus among theorists of how approach and avoidance relate to emotions with high levels of arousal, in that feelings of being excited, energized, and elated are related to approach orientations whereas feelings of fear or anxiety relate to avoidance orientations (Cacioppo, Gardner, & Benston**,** 1999; Carver, 2004b; Carver & Scheier, 1998; Fowles, 1994; Gray, 1982, 1990, 1994a, 1994b; Higgins, 1997). However, there are also important conceptual differences between the models, particularly with regard to the emphasis they place on emotions that are lower in arousal like depression and sadness and feelings of relief, contentment, or calmness. In order to illustrate some of the similarities and differences, a brief description of three models and related constructs is provided here, beginning with the work of Gray (1982, 1994a, 1994b), arguably the most widely known within clinical psychology, and leading into discussions of the more recent models proposed by Carver and Scheier (1998) and Higgins (1997).

Gray's (1982, 1994a, 1994b) model proposes the existence of fundamental motivational systems. The behavioral approach system (BAS) is an appetitive system thought to be sensitive to cues of reward, non-punishment, and escape from punishment leading to goal-directed behavior. The BAS is thought to be related to positive feelings, like hope, elation, and relief (Gray, 1990). The other of Gray's systems, the behavioral inhibition system (BIS), is an aversive system thought to be sensitive to punishment, non-reward, and novelty, leading to inhibition of behavior that might have aversive outcomes. The BIS is thought to relate to feelings of anxiety and fear.

In contrast to Gray's BIS/BAS model, Carver and Scheier (1998) propose a model of self-regulation in which both approach and avoidance can lead to positive as well as negative experiences. They posit that whether one experiences positive or negative affect does not rest on whether one is approaching or avoiding. Instead, if one is successful in making progress toward a goal at a satisfactory rate, whether it is based on approach or avoidance, one will experience positive affect, whereas the failure to make progress toward a goal at a satisfactory rate will be associated with negative affect. In this model, making satisfactory progress toward a desired end state (approach goal) is associated with positive feelings like elation, eagerness, and happiness, whereas failure to make progress toward a desired end state is related to negative feelings like sadness or depression. If movement away from an aversive end-state (avoidance goal) is perceived to be satisfactory, feelings of relief, calm, and contentedness ensue, whereas the perception that the avoidance is not successful is associated with feelings of fear and anxiety. Carver and Scheier also posit that anger results when there is an obstacle that inhibits the ability to move towards an approach goal.

Using the BIS/BAS scales, Carver (2004a) found that in a situation in which participants experienced frustrative non-reward, a BAS-related scale, Fun Seeking, predicted higher levels of sadness and frustration, whereas the BIS scale was not significantly related to either emotion. In a similar vein, Carver and Scheier (1998) cite a reanalysis of mood data performed by Watson and Tellegen (1985). In this study, the authors reported markers of positive and negative affect. In support of Carver and Scheier's model, words like *blue, depressed, downhearted,* and *unhappy* loaded as inverse markers of

positive affect whereas words like *calm, carefree, placid,* and *satisfied* loaded as inverse markers of negative affect.

Higgins (1997) describes a model of promotion and prevention motivation that corresponds to what has been described above as a reliance primarily on approach or avoidance goals, respectively. In this model, promotion focus tends to be related to emotions on the cheerfulness-dejection dimension, ranging from happy/satisfied to disappointed/discouraged, for example, whereas prevention focus tends to be related to emotions on the quiescence-agitation dimension, ranging from calm/relaxed to tense/uneasy, for example. Higgins, Shah, and Friedman (1997) conducted a study in which participants received instructions for a task involving memorization of letter strings, framing the condition with either a prevention or a promotion focus. After the task was over, half the participants were told they failed and half that they succeeded. Those in the promotion condition had greater feedback-consistent change on the cheerfulness-dejection measure, whereas those in the prevention condition had greater feedback-consistent change on the quiescence-agitation dimension, demonstrating that, in effect, success in the prevention condition related to feeling relaxed and failure related to feeling tense, whereas in the promotion condition, success related to happiness and failure to discouragement. In another study, Shah and Higgins (2001) found that individuals with a stronger prevention focus were quicker to rate how quiescent or agitated an object made them feel, whereas individuals with a stronger promotion focus were quicker to rate how cheerful or dejected an object made them feel.

In a similar vein, Feldman Barrett and Russell (1998) noted that positive affect, as measured by the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988), is comprised of pleasant emotions that are also high in activation (excited, enthusiastic); similarly, negative affect, as measure by the PANAS, is comprised of unpleasant emotions that are also high in activation (afraid, distressed). Feldman Barrett and Russell (1998) constructed additional scales measuring unpleasant deactivated emotions (tired, sluggish) and pleasant deactivated emotions (serene, calm), which were hypothesized to represent the bipolar opposite of positive and negative affect as measured by the PANAS, respectively. Their data support a model with two bipolar dimensions of affect, one composed of positive

affect high in activation that is inversely related to negative affect low in activation, the other composed of negative affect high in activation which is inversely related to positive affect low in activation. Feldman Barrett and Russell (1998) describe these two dimensions as a combination of valence and activation. This view is similar to that of Lang (1995), who describes emotions as a combination of valence, defined as pleasantness-unpleasantness, and arousal. This viewpoint can also be extended to Carver and Scheier's (1998) model of self-regulation and Higgins's (1997) model of regulatory focus in that successful approach/promotion may result in activated pleasant emotions, successful avoidance/prevention may relate to deactivated pleasant emotions, failed approach/promotion may related to deactivated unpleasant emotions, and failed avoidance/prevention may related to activated unpleasant emotions.

Despite theoretical differences, the models of Gray (1982, 1994a, 1994b), Carver and Scheier (1998), and Higgins (1997) predict similar outcomes for failure and success of goals. What Gray described as escape from punishment in regard to the BAS scale can be termed successful avoidance, in which case all three models would predict an increase in positive affect; however, Gray's theory posits that this positive affect would stem from approach motivation whereas the other models state this positive affect would stem from successful avoidance motivation. Although positive affect can come from successful approach or successful avoidance and negative affect can result from failed approach or avoidance (Carver & Scheier, 1998; Higgins, 1997), there is reason to suspect that there will be differences in the nature of affect stemming from approach or avoidance. For instance, Higgins et al. (1997) found that success in the prevention condition led to relaxation, whereas success in the promotion condition led to feelings of happiness. Although both relaxation and happiness are pleasant, they differ in level of activation. As such, when examining the emotional consequents of approach and avoidance, it is important to include measures that include all combinations of valence and activation. Doing so would allow for greater specificity of findings in addition to allowing direct comparisons between the models at points at which they differ, for instance, whether deactivated positive affect (relief) is associated with approach, as Gray predicts, or with avoidance, as both Carver and Scheier and Higgins predict.

Impact of Success and Failure to Attain Goals in Social Situations

Among Individuals Experiencing High Levels of Social Anxiety

Success and failure to attain goals in social situations may result in different experiences with affect than success and failure to attain goals in non-social situations for individuals high in social anxiety. For instance, in their cognitive-behavioral model of social anxiety disorder, Rapee and Heimberg (1997) postulate that an individual's belief that his/her audience may be critical is the source of anxiety experienced during or in anticipation of social situations. During social interactions, the individual formulates a mental representation of how he/she appears to the audience based on past experience, appraisals of his/her current physiological state and appearance, and feedback from the audience (e.g., signs of boredom). The individual compares this mental representation to what he/she believes the audience expects. Increases in the degree of discrepancy between this mental representation and perceived audience expectations lead to a perception of increased risk of negative evaluation and of the associated costs of that evaluation. This perception of increased risk leads to increased anxiety, which may include cognitive (e.g., maladaptive automatic thoughts), physiological (e.g., blushing, sweating, increased heart rate), and behavioral (e.g., fidgeting, stammering) symptoms. These symptoms, in turn, influence the mental representation of how the individual believes he/she appears to the audience and may increase the discrepancy between the mental representation and perceived audience expectation, leading to more anxiety in a vicious downward spiral.

By definition, a goal in a social situation requires the presence of an audience. An audience, in and of itself, should increase the anxiety experienced by those high in trait social anxiety, leading to an increase in negative affect across the board for goals in social situations. Failure to achieve approach goals in social situations (say hello in a clear voice, maintain eye contact) can increase the discrepancy between perceived self and audience expectations as can failure to achieve avoidance goals (don't blush, don't stammer or look away), leading to an increase in negative affect. However, the most prominent differences between goals in social and non-social situations may occur for those high in social anxiety when they are successful. Anticipating positive social outcomes increased both positive and negative

reactions for individuals with social anxiety disorder when compared to non-anxious controls (Gilboa-Schechtman, Franklin, & Foa, 2000). Similarly, when attention was directed towards the presence of positive performance cues in a previous social interaction situation, individuals with social anxiety disorder reported more anticipatory anxiety for the next social interaction than did normal controls; however, when the feedback focused on the absence of negative performance cues by participants, anticipatory anxiety about the next social interaction did not differ between the groups (Alden, Mellings, & Laposa, 2004).

Although it may seem surprising that success could lead to increased levels of negative affect, it is important to note that succeeding in approach goals (speak in a clear voice, make eye contact) may serve to increase the discrepancy between perceived self and audience expectations as the individual may now believe that the audience will "raise the bar" and expect that same or better performance the next time. Indeed, this assertion is supported by the work of Wallace and Alden (1997) who found that positive feedback, when given to individuals with social anxiety disorder following a social interaction, resulted in their perception that others would expect more from them in the future, creating opportunities for future failure. It is also likely that success in an approach goal in a social situation could lead to more threatening social situations, for instance, asking someone on a date is anxiety-provoking but if the offer is accepted, instead of pleasure, the prospect of the future date may serve as a source of anticipatory anxiety. Recent research may offer additional insight into factors increasing the likelihood that individuals high in social anxiety may experience aversive consequences when receiving favorable, social feedback. Weeks, Heimberg, Rodebaugh, and Norton (2008) found evidence that fear of positive evaluation mediates the relationship between social anxiety and subjective discomfort upon receiving positive social feedback. In their sample, increased fear of positive evaluation related to higher ratings of discomfort. There also may be important differences between socially anxious and non-anxious individuals in the duration of the consequents of failed or successful goals in social situations. Gilboa-Schectman et al. (2000) reported that individuals with social anxiety disorder expected the impact of

negative social events to last nearly two days whereas non-anxious controls expected the impact to last between one and a few hours.

Overview of the Current Research

In summation, this study investigated the types, proportion, and specificity of approach and avoidance goals and plans generated by groups of socially anxious and non-anxious participants, emotional consequents of success and failure of approach and avoidance goals, and how approach and avoidance goals and plans relate to reports of social anxiety, depression, life satisfaction, behavioral inhibition, and behavioral activation. Participants were asked to generate a list of approach goals and a list of avoidance goals that are important to them. They then rated the degree to which each of the goals generated was social or non-social. Participants selected the most important social and non-social goals in both the approach and avoidance conditions, which resulted in the following four goal conditions: self-rated social approach, self-rated non-social approach, self-rated social avoidance, and self-rated non-social avoidance. Participants generated a list of plans to attain their goals in each condition for a total of four lists of plans. Participants were then asked to imagine that they were succeeding in making progress toward each of their most important goals in the four conditions and complete measures of positive affect, negative affect, deactivated positive affect, deactivated negative affect, pleasantness - unpleasantness, arousal, and the duration of emotional impact. Participants also imagined failing to make progress towards each goal and provided ratings on these same constructs for a total of eight emotional consequent ratings.

Independent coders rated the following: total number of approach and avoidance goals, number of approach and avoidance plans for avoidance goals, number of approach and avoidance plans for approach goals, specificity of approach and avoidance goals, and specificity of approach and avoidance plans. The following hypotheses were tested:

Hypotheses Pertaining to the Unstructured Goal Generation Task

Hypotheses Relating to the Number of and Specificity of Approach and Avoidance Goals:

1) It was expected that individuals high in social anxiety would generate more avoidance goals than non-anxious individuals.
2) Individuals high in social anxiety were expected to generate more avoidance goals than approach goals, whereas non-anxious individuals were expected to generate more approach than avoidance goals.
3) It was predicted that individuals high in social anxiety would have less specific approach goals than non-anxious individuals; the groups were not expected to differ in specificity of avoidance goals.

Hypothesized Differences in Rating of Goals as Social or Non-social:

4) It was expected that individuals high in social anxiety would rate both approach and avoidance goals as more social than non-anxious individuals.
5) Individuals high in social anxiety were expected to rate avoidance goals as more social than approach goals; non-anxious controls were not expected to differ.

Hypothesized Differences in Number and Specificity of Self-rated Social and Non-social Goals:

6) It was hypothesized that individuals high in social anxiety would have fewer, less specific self-rated social approach goals than non-anxious individuals.
7) It was expected that individuals high in social anxiety would list a greater number of and more specific avoidance goals than approach goals; this effect would be stronger for self-rated social than non-social goals, whereas specificity was not expected to vary as a function of goal type for non-anxious controls.

Hypotheses Pertaining to Plans

8) It was predicted that individuals high in social anxiety would generate more avoidance plans and fewer approach plans than non-anxious controls; this effect was expected to be stronger for plans generated to attain self-rated social goals than non-social goals.

9) Individuals high in social anxiety were expected to generate less specific approach plans than non-anxious controls; this effect was expected to be stronger for plans generated to attain self-rated social goals than non-social goals.

10) It was expected that individuals high in social anxiety would generate more avoidance plans than approach plans for both self-rated social and non-social goals, whereas non-anxious individuals were expected to generate more approach than avoidance plans.

11) It was predicted that individuals high in social anxiety would have fewer and less specific approach plans for self-rated social goals than self-rated non-social goals, whereas non-anxious individuals were not expected to differ.

12) It was hypothesized that individuals high in social anxiety would have a greater number of and more specific avoidance plans for self-rated social than self-rated non-social goals, whereas non-anxious individuals were not expected to differ.

Hypotheses Related to Emotional Consequents of Success and Failure with Goals

13) It was predicted that individuals high in social anxiety would report less positive affect and lower levels of pleasantness than non-anxious individuals after imagining success in the achievement of approach goals; it was also expected that this effect would be more pronounced for self-rated social goals than non-social goals.

14) It was predicted that individuals high in social anxiety would report less deactivated positive affect and lower levels of pleasantness, more arousal, and higher levels of negative affect than non-anxious individuals after imagining success in the achievement of avoidance goals; it was also expected that this effect would be more pronounced for self-rated social goals than non-social goals.

15) It was expected that individuals high in social anxiety would report more negative affect, higher levels of arousal, and lower pleasantness ratings than non-anxious individuals when imagining failure in the achievement of goals; this effect was expected to be more pronounced for self-rated social goals than non-social goals.

16) It was hypothesized that individuals high in social anxiety would report a longer duration for emotions related to failure and a shorter duration for emotions related to success than non-anxious individuals; this effect was expected to be stronger for self-rated social than non-social goals.

17) It was expected that individuals high in social anxiety would report more negative affect, higher levels of arousal, less positive affect, less deactivated positive affect, and lower ratings of pleasantness for failure in social goals than failure in non-social goals; non-anxious individuals were not expected to differ as a function of self-rated goal type.

18) It was also hypothesized that individuals high in social anxiety would report less positive affect, less deactivated positive affect, more negative affect, higher levels of arousal, and lower ratings of pleasantness after imagining success in social goals than they would after imagining success in non-social goals; non-anxious individuals were not expected to differ with regard to self-rated goal type.

Secondary Hypotheses

19) It was predicted that both the number and specificity of social approach goals and the number and specificity of approach plans for social approach goals would be positively related to BAS and life satisfaction and have inverse correlations with BIS, depression, and social anxiety.

20) The number and specificity of social avoidance goals and the number and specificity of avoidance plans for social avoidance goals were expected to be positively related to BIS, symptoms of social anxiety, and depression and have inverse relationships with BAS and life satisfaction.

CHAPTER 2
METHOD

Statistical Power

Power calculations were conducted using G–power, a general power analysis computer program (Faul & Erdfelder,1992). Using this program, a two-tailed test with $p = .05$, effect size = 0.5, and power = .8, the total recommended sample size was 128. This sample size should provide ample power to detect significant main effects; however, many of the hypotheses in this study involved investigation of interaction effects in 2*2*2*2 analyses of variance (ANOVAs) with one between-group and three within-group factors. To ensure that there was sufficient power for follow-up analyses, a larger sample size was required. Cohen's (1977) *d* was calculated from data published in the relevant literature to estimate the likely between-subject effect sizes for some of the dependent variables. A Cohen's *d* of .20 is considered small, .50 is considered moderate, and .80 is considered large. Number and specificity of approach/avoidance goals and plans of individuals high in anxiety and individuals low in anxiety were compared by Dickson and MacLeod (2004b). Effect sizes relevant to the hypotheses tested in this study ranged from 0.95 to 2.3, average effect size = 1.58. When Gilboa-Schectman et al. (2000) compared individuals with social anxiety to non-anxious individuals, the effect size for duration of reaction to negative social events was 2.02. Kashdan and Roberts (2004) compared those high and low in social anxiety on positive and negative affect following a social interaction. Cohen's *d* was 1.24 for negative affect and 0.75 for positive affect. The available data indicate that using a larger effect size than 0.5 for power analysis would be appropriate and that the above analyses are conservative. In addition, in order to ensure that there was sufficient power for follow-up analyses, a more conservative *p* value was used. Entering specifications of two-tailed test with $p = .001$, effect size = 0.7, and power = .8 into G-power resulted in a recommended overall sample of 146 participants.

Participants

Undergraduate students enrolled in psychology courses at Temple University were recruited to participate in the goals and affect study. Students responded to advertisements distributed during class, a

website advertising numerous studies, or fliers posted around campus. Participants completed an on-line questionnaire or a handout to determine their eligibility for the study. There were two groups, socially anxious participants and non-anxious controls. The criterion for inclusion in the socially anxious group was a score of 34 on the Social Interaction Anxiety Scale (SIAS; Mattick & Clarke, 1998). This score is one standard deviation above the mean of a community sample (Heimberg, Mueller, Holt, Hope, & Liebowitz, 1992) and led to the correct classification of 82% of individuals with social anxiety disorder; 72% of the community control participants were correctly classified. In another study using a sample composed of individuals with social anxiety disorder, other anxiety disorders, and individuals with no Axis I diagnosis, eighty-six percent of people who scored 34 or above were correctly classified as having social anxiety disorder and 70% of the people who scored lower than 34 were correctly classified as not having the disorder (E.J. Brown et al., 1997). In addition, as individuals high in depression differed from high anxiety individuals in the work of Dickson and MacLeod (2004b) and a major focus of the current research is on social anxiety, inclusion in the socially anxious group was also contingent upon a *Beck Depression Inventory 2nd Edition* (BDI-II; Beck, Steer, & G.K. Brown, 1996) score of less than 27. This is the cutoff recommended by Sloan et al. (2002) to decrease false positive diagnoses of clinical depression among those with anxiety disorders, with a true negative rate of 83% and a true positive rate of 54%. This cutoff, while allowing individuals in the high social anxiety group to have moderate symptoms of depression (Beck et al., 1996) – contributing to the external validity of the findings as there is substantial comorbidity between social anxiety disorder and depression (Kessler, Stang, Wittchen, Stein, & Walters, 1999) – increased the probability that the findings of the current study are a function of social anxiety rather than depression. To be included in the non-anxious control group, participants must have had a SIAS score ≤ 20, recommended by Heimberg et al. (1992) for selection of a sample with normative levels of social anxiety, and a BDI-II score that fell within the minimum range, ≤ 13 (Beck et al., 1996). Further information regarding the SIAS and the BDI-II appears in the Materials section below.

A total of 193 subjects who met the initial screening criteria completed the study and were paid $15.00 or received class credit for their participation. During the study, the SIAS and BDI-II were

administered a second time. The data from participants who failed to meet inclusion criteria during the second administration of the screening measures were excluded from further analysis. The remaining sample consisted of 152 participants (120 females and 32 males). There were 77 participants in the socially anxious group and 75 in the non-anxious control group. There were no significant differences between the groups with respect to gender, age, ethnicity, familial income, year in college, or if they were currently in a romantic relationship (see Table 1 and Table 2). With regard to marital status, none of the individuals high in social anxiety reported ever having been married or divorced; 2 non-anxious controls were married and 1 was divorced.

Materials

Goals Task (Dickson & MacLeod, 2004a, 2004b). The goals task assesses approach and avoidance goals specific to the individual completing the task. Each participant completes two sections, which are counterbalanced to control for order effects. The approach goal section asks individuals to generate goals in response to the prompt, "In the future, it will be important for me to…" whereas the avoidance goal section asks individuals to generate goals in response to the prompt, "In the future, it will be important for me to avoid…" The goals in each condition are then coded as approach or avoidance, and this coding has been achieved with high inter-rater reliability ($\kappa = .98$; Dickson & MacLeod, 2004b). Afterwards, the number of approach and avoidance goals are counted for each participant. In addition, goals in both sections are coded for specificity, although this index had lower but still acceptable inter-rater reliability ($\kappa = .78$) in the study by Dickson and MacLeod (2004b). Specificity is rated on a three-point scale on which 1 = '*general*,' 2 = '*moderate*,' and 3 = '*specific*.' To be considered specific, a goal must refer to a target feature and include reference to at least one of the following: place, time, or people (e.g., exercise daily at the gym). To be considered moderately specific, a goal is required to refer to a

Table 1. Demographic Comparison of Individuals High in Social Anxiety (SA) and Non-anxious Controls (NAC)

	SA		NAC		
	n	%	*n*	%	χ^2
Sex					0.01
Female	61	79.2	59	78.7	
Male	16	20.8	16	21.3	
Romantic relationship					0.70
Currently involved	44	57.1	39	52.0	
Not involved	31	40.3	36	48.0	
Ethnicity					3.55
Caucasian	47	61.0	43	57.3	
Asian	15	19.5	9	12.0	
African American	9	11.7	12	16.0	
Other	6	7.8	11	14.7	
Year in College					6.26
Freshman	27	35.1	28	37.3	
Sophomore	17	22.1	7	9.3	
Junior	16	20.8	25	33.3	
Senior	17	22.1	15	20.0	

Note. *n*s vary due to missing data. * $p < .05$.

Table 2. Further Demographic Comparison of Individuals High in Social Anxiety (SA) and Non-anxious Controls (NAC)

	SA		NAC			
	M	*SD*	*M*	*SD*	*df*	*t*
Age in Years	19.69	1.77	20.00	2.01	150	1.10
Familial Income ($)	129,120	304,241	88,725	77,314	79	0.81

Note. There were 75 NACs and 77 SAs in the Age in Years analysis; however, because of missing data, there were only 40 NACs and 41 SAs in the Familial Income analysis. * $p < .05$.

target feature (e.g., exercise regularly) but not include reference to place, time, or people. A general response refers to a global aspiration (e.g., work hard). In the original studies, participants were allotted 75 seconds to list as many goals as they could in each condition; however, participants were allotted 120 seconds in the current study. See Appendix A for an example of the Goals Task recording sheet.

Social Rating (SR). This scale was developed in order to facilitate the classification of goals as social or non-social by participants. Participants were given a sheet of paper (see Appendix B) with the following definitions: '*Social Goals* are those goals that involve other people, relate to situations where you may be observed by or interact with other people, or are goals you have chosen because of the expectations of others' and '*Non-social Goals* are those goals that do not involve other people. They are goals you choose because they are important to you and depend upon your own expectations, not the expectations of others.' Examples of how the same goal could be rated as social, non-social, or both were given. For instance, some people go to college because they believe it is important, others go to college because it is what somebody wants for them, and some go to college because of a combination of their own interest and what they believe others think is important. Participants were instructed to rate each goal generated in the Goals Task on a 9-point scale for which 1 = 'non-social,' 9 = 'social,' and 5 =

'equally social and non-social.' Goals rated ≥ 6 were considered social whereas goals rated ≤ 4 were considered non-social. The number of goals rated social and non-social was counted for both approach and avoidance goals. The mean social rating, sum of social ratings divided by the number of goals, was also calculated for both approach and avoidance goals.

Plans Task (Dickson & MacLeod, 2004b). This task was designed to assess approach and avoidance plans generated by an individual when asked to list ways of accomplishing approach goals or avoidance goals. Dickson and MacLeod (2004b) asked individuals to select their two most important approach and avoidance goals, generated in the goals task, and respond to the following prompts "How can I accomplish this?" and "How can I avoid this?" in the approach and avoidance sections, respectively. In each section, individuals were asked to begin their plans with *by* or *by not*, allowing individuals to list approach and avoidance plans in each condition. As such, responses must be coded as approach or avoidance as well as for specificity leading to four scores: approach plans for approach goals and avoidance plans for approach goals; avoidance plans for avoidance goals and approach plans for avoidance goals. Dickson and MacLeod (2004b) reported high inter-rater reliability for plans in the approach and avoidance goal sections ($\kappa = .97$, $\kappa = .90$, respectively) and lower but acceptable reliability for plan specificity ($\kappa = .73$). Plan specificity is rated on the same three-point scale as goal specificity. The criteria for a specific plan include a specific action, like completing class assignments, and reference to place, time, or people. An example of a specific plan would be, 'by completing class assignments each night.' A moderately specific plan includes an action without reference to place, time, or people. 'By studying an extra few hours,' would be considered moderate, whereas a general plan refers to a global aspiration, 'by studying more,' for example. In the original studies, participants were allotted 75 seconds to list as many goals as they could in each condition; however, participants were allotted 120 seconds in the current study. See Appendix C for an example of the Goals Task recording sheet.

Positive and Negative Affect Schedule Short Form (PANAS-SF; Kercher, 1992). The PANAS-SF is a shorter version of the original Positive and Negative Affect Scale (PANAS; Watson et al., 1988). The PANAS-SF is composed of two five-item scales comprised of words that describe feelings or emotions

that are rated on a scale from 1 = '*very slightly or not at all*' to 5 = '*extremely*.' One scale measures positive affect (PA), or the extent to which someone feels enthusiastic, active, and alert, whereas the other measures negative affect (NA), a "general dimension of subjective distress and unpleasurable engagement that subsumes a variety of aversive mood states…" (Watson et al., 1988, p. 1063). Kercher (1992) used five of the ten original items from the PANAS PA scale (excited, enthusiastic, alert, inspired, determined) and five of the ten original items from the PANAS NA scale (distressed, upset, scared, nervous, afraid) to construct the scales of the PANAS-SF. The PANAS-SF has demonstrated good internal consistency in a sample of 18-29 year olds, α's = .75 and .86 for PA and NA, respectively (Mackinnon et al., 1999). Three separate factor analyses have demonstrated two-factor solutions, NA and PA, for the PANAS-SF (Hilleras, Jorm, Herlitz, & Winblad, 1998; Kercher, 1992; Mackinnon et al., 1999). The PANAS-SF and all subsequent emotion rating scales can be seen in Appendix D. See Table 3 for a report of the internal consistency of this and all subsequent multiple item affect measures in the current sample.

Deactivated Positive and Negative Affect (DPNA; Feldman Barrett & Russell, 1998).[2] After noting the combination of valence and activation implicit in PA and NA measured by the PANAS, Feldman Barrett and Russell (1998) developed scales composed of adjectives thought to embody the combinations of valence and deactivation not captured by the PANAS. The deactivated negative affect scale (D-NA), constructed to be the opposite of PA, is composed of six words (tired, sluggish, droopy, dull, drowsy, bored) whereas the deactivated positive affect scale (D-PA), constructed to be the opposite of NA, is composed of five words (relaxed, at rest, serene, calm, at ease). These items are rated on the same scale employed by the PANAS-SF. Feldman Barrett and Russell (1998) demonstrated that the

[2] Feldman Barrett and Russell (1998) defined these scales as *pleasant deactivated* and *unpleasant deactivated*; however, the current research employed the terms used by Kashdan and Roberts (2004) *deactivated positive affect* and *deactivated negative affect*, which reflect the conceptual link between these scales and those of the PANAS and emphasize the combination of valence and arousal. The terms employed by Kashdan and Roberts (2004) will also help to avoid confusion between these scales and the Self-Assessment Manikin (Bradley & Lang, 1994; Lang, 1980) that was also used in this study, which employs a valence measure with pleasant and unpleasant serving as the ends of a spectrum that is separate from arousal.

Table 3. Internal Consistencies of Affect-related and Self-report Questionnaires

Internal consistencies of affect-related questionnaires				
	Positive Affect	Negative Affect	Deactivated Positive Affect	Deactivated Negative Affect
Goal Type	α's	α's	α's	α's
Successful social approach	.82	.87	.74	.88
Successful non-social avoidance	.83	.88	.89	.87
Successful non-social approach	.79	.84	.82	.85
Successful social avoidance	.86	.91	.82	.87
Failed non-social avoidance	.69	.92	.84	.80
Failed social approach	.67	.89	.78	.82
Failed non-social approach	.73	.88	.85	.79
Failed social avoidance	.70	.89	.84	.84

Internal consistencies of self-report questionnaires	α's
Social Interaction Anxiety Scale	.96
Social Phobia Scale	.95
Beck Depression Inventory 2nd Edition	.88
Behavioral Inhibition Scale	.80
Behavioral Activation Scale	.82
Quality of Life Inventory	.81

hypothesized dimensions, PA to D-NA and D-PA to NA were supported by the data and could be described as a combination of independent valence and activation factors. Both D-NA and D-PA have demonstrated good internal consistency, average α equaled .85 and .81, respectively (Kashdan & Roberts, 2004). Following a socially threatening situation, NA was inversely related to D-PA, r = -.59, and PA was inversely related to D-NA, r = -.51, whereas there were no significant correlations between PA and NA or D-PA and D-NA, r's = - .17 and - .18, respectively (Kashdan & Roberts, 2004).

Self-Assessment Manikin (SAM; Bradley & Lang, 1994; Lang, 1980). The SAM is a scale developed to assess emotional experience across two dimensions, valence and arousal. Valence ranges from pleasant to unpleasant, whereas arousal ranges from calm to excited. Each dimension is a rated on a 9-point scale that consists of 5 pictures and the four spaces between them. The figures for the valence dimension range from "smiling with raised eyebrows to frowning with knitted eyebrows" (Bradley, Greenwald, Petry, & Lang, 1992, p. 381), whereas the figures for arousal range from "having an active body and eyes wide open to having an inactive body and closed eyes" (Bradley et al., 1992, p. 381). The scales have demonstrated high correlations with other measures of arousal (r = .95) and valence (r = .96), respectively, while showing low correlations with each other (r = -.20) (Bradley & Lang, 1994). Furthermore, a factor analysis involving these two dimensions and several physiological and behavioral measures found that valence ratings loaded onto a factor that included corrugator (frown) muscle activity, peak heart rate, and zygomatic (smile) muscle activity, whereas arousal ratings loaded onto a second factor including skin conductance as well as interest ratings and viewing times (with respect to visual stimuli) (Lang, 1995).

Duration Scale (Gilboa-Schechtman et al., 2000). This scale is a single item, "How long would your negative [positive] reaction last?" rated on a 9-point scale: 0 = "*none*"; 1 = "*several minutes*"; 2 = "*15 minutes*"; 3 = "*about an hour*"; 4 = "*few hours*"; 5 = "*about a day*"; 6 = "*Few days*"; 7 = "*two weeks*"; 8 = "*more than a month.*" This scale was administered following the PANAS-SF and the SAM and served as a means of assessing how long participants believed the emotions rated on these scales would last. As such, the wording of the duration scale was altered to "How long would your reaction

last?" since the PANAS-SF and SAM can record positive or negative emotional reactions. In their research, Gilboa-Schectman et al. (2000) reported that individuals with social anxiety disorder expected the impact of negative social events to last nearly two days whereas non-anxious controls expected the impact to last less than two hours. The forms for all of the emotion rating scales can be seen in Appendix D.

Social Interaction Anxiety Scale (SIAS; Mattick & Clarke, 1998). The SIAS assesses anxiety in dyads and groups. Its 20 items are rated on a scale from 0 = "*not at all characteristic"* to 4 = "*extremely characteristic"*. Sample items include: 'When mixing socially, I am uncomfortable' and 'I get nervous if I have to speak with someone in authority.' The scale has demonstrated internal consistency, α's ranging from .88-.94, as well as 4- and 12-week test-retest reliability, *r's* = .92 (Mattick & Clarke, 1998). See Table 4 for the α's for this and all other self-report questionnaires for this sample. Individuals with social anxiety disorder had higher SIAS scores than did individuals with agoraphobia, individuals with simple phobia, undergraduate students, and members of a community sample (Mattick & Clarke, 1998). In another study, individuals with social anxiety disorder had higher SIAS scores than individuals with panic disorder, panic disorder with agoraphobia, generalized anxiety disorder, simple phobia, and obsessive-compulsive disorder (E.J. Brown et al., 1997). In addition to providing an index of social interaction anxiety, the SIAS was also used to determined group membership, individuals with a score ≥ 34 were considered high in social anxiety (E.J. Brown et al., 1997) whereas those scoring ≤ 20 were considered non-anxious controls (Heimberg et al., 1992). See Appendix E to view the SIAS and other self-report questionnaires.

Social Phobia Scale (SPS; Mattick & Clarke, 1998). The SPS assesses anxiety when an individual may be observed or scrutinized by others. It is a 20-item scale, with each item rated on a scale of 0 = *"not at all characteristic"* to 4 = "*extremely characteristic."* Sample items include 'I fear I may blush when I am with others' and 'I become anxious if I have to write in front of people.' The scale has demonstrated internal consistency: α's range from .89 to .94, as well as test-retest reliability, 4-week *r* = .91 and 12-week *r* = .93 (Mattick & Clarke, 1998). Individuals with social anxiety disorder scored higher

on the SPS than did individuals with agoraphobia, individuals with simple phobia, undergraduate students, and members of a community sample (Mattick & Clarke, 1998). E.J. Brown et al. (1997) reported that clients with social anxiety disorder obtained higher SPS scores than clients with panic disorder, generalized anxiety disorder, simple phobia, or obsessive compulsive disorder, but not clients with panic disorder with agoraphobia.

Beck Depression Inventory 2nd Edition (BDI-II; Beck et al., 1996). The BDI-II is an updated version of the Beck Depression Inventory (BDI; Beck, Rush, Shaw, & Emery, 1979). Its 21-items are rated on a scale from 0-3 and were generated to assess the symptoms listed in the criteria for depressive disorders in the DSM-IV (APA, 1994), including cognitive, affective, and somatic components. Beck et al. (1996) reported high internal consistency of the measure among college students, $\alpha = .93$, and outpatients, $\alpha = .92$, with high one-week test-retest reliability among outpatients, $r = .93$, as well as good convergent and discriminant validity. These findings have been supported by a number of subsequent studies (Dozois, Dobson, & Ahnberg, 1998; Osman et al., 1997; Steer & Clark, 1997; Whisman, Perez, & Ramel, 2000). Individuals scoring ≥ 27 were excluded from the socially anxious group; individuals scoring > 13 were excluded from the non-anxious group.

BIS/BAS Scales (Carver & White, 1994). These scales were designed to assess dispositional BIS and BAS sensitivities. The scales consist of 20 items that are rated on a scale from 1 = "*very false for me"* to 4 = "*very true for me"*. There is a seven-item BIS scale that measures BIS sensitivity or responsiveness to threat, for example, 'Criticism or scolding hurts me quite a bit.' There are three subscales that reflect BAS sensitivity. The four-item Fun Seeking subscale, e.g., 'I crave excitement and new sensations,'; four-item Drive subscale, e.g., 'I go out of my way to get things I want'; and the five-item Reward Responsiveness subscale, e.g., 'When I get something I want, I feel excited and energized,' represent different aspects of incentive responsiveness. The subscales have demonstrated acceptable internal consistencies, α's range from .66 to .76 (Carver & White, 1994) and from .65 to .80 (Jorm et al., 1999), and eight week test-retest *r's* of .66 to .69 (Carver & White, 1994). The BAS subscales were more strongly related to extraversion, positive affectivity, positive temperament, and the BIS scale was related

more strongly to neuroticism, negative affectivity, negative temperament, trait anxiety, anxiety proneness, and harm avoidance (Carver & White, 1994; Jorm et al., 1999). In addition, high BAS sensitivity was associated with more happiness when a reward was expected and high BIS sensitivity predicted greater nervousness when punishment was expected (Carver & White, 1994).

Several researchers have combined the three BAS subscales into a single BAS scale, citing the high inter-scale correlations (*r*s > .45; Harmon-Jones & Allen, 1997) and recent precedent in the literature using the combined scale (Elliot & Thrash, 2002; Harmon-Jones & Allen, 1997; Sutton & Davidson, 1997). Indeed, a recent factor-analytic examination of the BIS/BAS scales, although lending support to the original four-factor structure reported by Carver and White (1994), also reported a two-factor solution in which the three BAS subscales loaded on the first factor, $\alpha = .83$, and items from the BIS scale loaded on the second (Jorm et al., 1999). Research using the two-scale BIS/BAS and EEG data has found relationships between BAS and higher levels of activation in the left prefrontal cortex (Harmon-Jones & Allen, 1997; Sutton & Davidson, 1997) and between BIS and higher levels of activation in the right prefrontal cortex (Sutton & Davidson, 1997). In accordance with recent precedent, the combined BAS scale was used in this study.

Quality of Life Inventory (QOLI; Frisch, Cornell, Villanueva, & Retzlaff, 1992). The QOLI assesses the degree to which an individual is satisfied with his or her life. The measure is composed of 16 domains of life. Health, standard of living, friendships, relationship with family, and community are a few examples. These domains are rated once on a 0-2 scale of importance to the individual's life and again on a scale of -3 to 3 of how satisfied the individual is in this area. The total score is derived by multiplying satisfaction and importance ratings and averaging the obtained value for each of the 16 domains. The total score is internally consistent, $\alpha = .98$, and has demonstrated adequate test-retest reliability, *r's* range from .80 to .91 (Frisch et al., 1992). Frisch et al. (1992) reported that QOLI scores were positively correlated with a score on a clinician-administered life satisfaction interview, peer ratings of life satisfaction, and five self-report measures assessing life satisfaction and subjective well being. QOLI scores were negatively correlated with subscales of the Symptom Checklist-90-R (SCL-90-R;

Derogatis, 1983), the Beck Depression Inventory (Beck et al., 1979), and the Anxiety and Depression subscales of the Millon Clinical Multiaxial Inventory-II (Millon, 1987).

Procedure

Participants were undergraduate students from Temple University recruited from an introductory psychology course, flyers distributed in other psychology courses, and an on-line screener. They received research credits that fulfilled a class requirement, were provided with extra credit, or were paid $15.00 for their participation. Participants whose scores on the SIAS and BDI-II conformed to the cutoffs described above were invited to participate in a study involving personal goals and emotions. The study took part in a classroom set up to accommodate as many as 8 participants. Participants were asked to read an informed consent form. If they agreed to participate, they were administered the Goals Task. To control for order effects, the approach and avoidance sections of this task were counter-balanced. Neither non-anxious controls nor individuals high in social anxiety were significantly more likely to complete the approach or avoidance condition first. The following instructions were read to introduce the Goals Task:

> The first task you'll be doing is called a personal future goals task. In this study, personal future goals represent those goals that we think will be important to us at some time in the future. Future goals are defined as those goals that we think will be more important or relevant to us in the future than they are in the present. These future goals or strivings could be related to any time in the future, for example, the next few days, the next few weeks or months, next year, in a few years, five to ten years, or so on. In short, these goals and strivings have an ongoing quality to them. They could relate to any aspect of your life, for example, personal qualities, family, school, career, relationships, specific events/experiences, health issues, etc. Essentially, these goals and strivings represent what we will be trying to accomplish or trying to avoid in the future.

At this point, examples of approach and avoidance goals were shown to participants before the following was read:

> It doesn't matter whether you think you'll be successful or not in achieving your personal goals. The emphasis in this study is what you think you'll be trying to accomplish or avoid. There are no right or wrong responses. The first task includes two activities. One will begin with the phrase 'In the future it will be important to try…' and the other will begin with the phrase 'In the future it will be important for me to try to avoid…' During each activity, you'll only be given a short time to record as many future goals/strivings that come to mind that seem relevant and plausible to you. If you think these goals will be important to you, then it doesn't matter whether they are simple goals or major goals.

The following instructions were read before the first section of the Goals Task (approach or avoidance in accordance with counterbalanced order) was administered:

> You need only write a few words or a single statement for each goal — just enough for the reader to get the gist of what you mean. Please write or print clearly and begin each goal on a new line. In each task, I'll give you a short time to jot down your goals. For the first task, imagine each of your responses beginning with the phrase 'In the future it will be important to try (to avoid)…'

After the first task was completed, the experimenter emphasized that the goals listed in the first condition do not need to be consistent with those listed in the second condition. Participants were instructed to imagine that this was the only activity that they were completing before beginning the next section of the goals task, approach or avoidance depending on what was previously administered.

After completing the Goals task, participants were asked to rate each goal on the social rating (SR) scale for goals generated in both the approach and avoidance sections of the Goals Task. The following step was also counterbalanced, but is described with self-rated non-social goals first for explanatory purposes. Participants were asked to choose the two goals that are most important that they rated as 4 or lower on the SR scale for the first section of the goals task, ranking them N1 (non-social 1) and N2 (non-social 2) in order of importance. If they did not rate any goals as 4 or lower, they were asked to think of two goals that were important to them that they would rate as 4 or lower. They were

then asked to choose the two most important goals that they rated as 6 or higher on the SR scale and rate them S1 (social 1) and S2 (social 2) in order of importance. If they did not rate any goals as 6 or higher, they were asked to think of two goals that would be important to them that they would rate as 6 or higher. The experimenter asked to see the goals to ensure that the goals selected based on SR ratings matched the section of goals task administered first, selected goals for the approach section are approach for example, and asked the participant to write their goals in the appropriate boxes on the randomization sheet. The randomization sheet (see Appendix F) consisted of four boxes labeled Goal Task 1 S1, Goal Task 1 N1, Goal Task 2 S1, Goal Task 2 N1 where Goals Task 1 refers to the first section of the Goals Task administered (approach or avoidance), Goals Task 2 refers to the second section administered, S refers to self-rated social goals, and N refers to self-rated non-social goals. This process was then repeated for the goal task that was administered second, resulting in a list of four self-rated goal conditions: social approach, non-social approach, social avoidance, non-social avoidance.

The Plans Task was then administered. Participants were given 120 seconds to generate a list of plans to accomplish the most important goal selected in each of the four goal conditions described above. Participants were asked to write the goals from the randomization sheet at the top of the corresponding plan sheets which were administered in one of four random orders (Goal Task 2 N1, Goal Task 1 N2, Goal Task 1 S1, Goal Task 2 S1, for example). The following instructions were read:

> The next activity looks at ways of striving to make your most important future goals possible. I'll show you a couple of examples based on the goals I presented earlier, to help explain the nature of this activity (examples of approach and avoidance plans are shown). You are only required to write a few words – just enough for the reader to get the gist of what you mean. There are no right or wrong responses. You will have a short time to record as many strategies/plans you can think of that seem relevant and applicable to you. Please write or print clearly and begin each of your responses on a new line beginning them with either 'by…' or 'by not…'

In the final section of the experiment, participants were asked to rate the emotional consequents of success and failure. For each of the four goal conditions, participants completed the PANAS-SF, D-NA, D-PA, SAM, and Duration Scale, rating the emotions they would feel if they perceived that they were making progress toward this goal and a second PANAS-SF, D-NA, D-PA SAM and Duration Scale to assess the emotions they would experience if they were failing to make progress toward this goal. Before beginning the emotions rating task, verbal instructions for the SAM were given (Lang, Bradley, & Cuthbert, 2005; see Appendix G). To control for order effects, the eight emotional consequent conditions (success and failure for each of the four goal conditions) were administered in one of four randomly determined orders. Neither group was significantly more likely to complete any of the four random orders of plans tasks and emotional ratings than the other, $X^2(3) = 0.89$, $p = .829$. Participants were then asked to fill out a brief demographic questionnaire as well as a battery of questionnaires composed of the SIAS, BDI-II, BIS/BAS, SPS, and QOLI. Participants were then debriefed and given course credit or paid for their participation. Forty-one participants no longer meeting criteria for inclusion in one of the experimental groups, based on scores on the SIAS and BDI-II, were excluded from the analyses.

Coding

All goals and plans were coded as approach or avoidance. In addition, goals and plans were also coded for specificity using the criteria outlined by Dickson and MacLeod (2004b), described above. Two undergraduate psychology students were recruited as research assistants. They were blind to the hypotheses and coded all the data. The following training procedures were employed: criteria for approach, avoidance, and specificity were described; coders were then asked to code a list of goals and plans on those dimensions; reliability between the coder's and experimenter's codings was calculated; a meeting was held in which inconsistencies in codings were discussed, and coders were asked to rate another list of goals and plans. This process was repeated until there was sufficient inter-rater reliability between coders and the experimenter ($\kappa \geq .80$)

Inter-rater reliability was assessed by generating a random sample of 25% of the participants to be rated by an independent coder. The following dimensions were subject to tests of inter-rater

reliability: total number of approach and avoidance goals; specificity of approach and avoidance goals; plan type for each of the four goal conditions; and plan specificity for each of the four goal conditions. See Table 3 for the Cohen's Kappa coefficient values of the inter-rater reliability analyses. See Table 4 for inter-rater reliability for this and all subsequent goal- and plan-related ratings for this sample.

Table 4. Inter-rater Reliability for Goal- and Plan-related Tasks

	κ's
Total # of approach goals	.75
Total # of avoidance goals	.84
Specificity of approach goals	.31
Specificity of avoidance goals	.23
Plan type for social approach goals	.86
Plan type for social avoidance goals	.81
Plan type for non-social approach goals	.90
Plan type for non-social avoidance goals	.95
Plan specificity for social approach goals	.08
Plan specificity for social avoidance goals	.19
Plan specificity for non-social approach goals	.04
Plan specificity for non-social avoidance goals	.06

CHAPTER 3
RESULTS

Preliminary Analyses

See Table 5 for a comparison of means between the groups for the self-report questionnaires. Those high in social anxiety had significantly higher scores on all of the questionnaires than non-anxious controls, with the exception of the QOLI and BAS for which they had significantly lower scores. A series of Pearson's correlations were run to determine if there were significant relationships between pairs of dependent variables. Correlations were reported for each group independently since the groups do not represent a continuous range of values on the SIAS and BDI-II. Only variables demonstrating acceptable inter-rater reliability were used in these and subsequent analyses. All self report measures demonstrated acceptable internal consistency See Tables 6 through 13 for results of the analyses for individuals with social anxiety and non-anxious controls, respectively.

Results of Goal-related Analyses

Because of the poor inter-rater reliability of the goal specificity variable, hypothesis 3, which relates to goal specificity remains untested. In addition, hypotheses 6 and 7 involve both social rating and specificity as dependent variables. As such, only the social rating component of these hypotheses was evaluated.

Number of Goals

A 2*2 mixed design ANOVA was run to test hypotheses 1 and 2. The between-groups factor was group, defined as *socially anxious* and *non-anxious control*, whereas the within-groups factor was goal type, defined as *approach* and *avoidance*. The dependent variable was *number of goals*. More goals were generated in the approach condition than in the avoidance condition, $F(1, 150) = 32.90$, $p < .001$. There was not, however, a significant main effect of group, $F(1, 150) < 1$, $p = .997$. The two-way interaction also failed to reach significance, $F(1, 150) = 2.63$, $p = .107$. See Table 14 for means and

Table 5. Mean Difference on Self-report Questionnaires Between Individuals High in Social Anxiety (SA) and Non-anxious Controls (NAC)

	SA		NAC			
	M	*SD*	*M*	*SD*	*df*	*t*
Social Interaction Anxiety Scale	47.2	8.3	11.3	4.88	123.4[a]	32.5***
Social Phobia Scale	29.0	13.7	5.63	4.37	91.7[a]	14.2***
Beck Depression Inventory 2nd Edition	13.6	6.69	4.45	3.40	113.6[a]	10.6***
Behavioral Inhibition Scale	23.6	3.05	19.5	3.29	150	8.09***
Behavioral Activation Scale	52.0	5.15	55.9	4.56	150	4.91***
Quality of Life Inventory	1.39	1.26	2.96	1.52	147	6.87***

Note. Data from 77 SAD participants and 75 NAC participants were compared in the above analyses except for the analyses examining the Quality of Life Inventory. Due to missing data, only 74 participants in the SAD group were included in that analysis. The number of NACs remained the same.

[a] Indicates that the degrees of freedom were adjusted to reflect unequal variances between the groups.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 6. Pearson's Correlations Between Goal-related Variables and Self-report Questionnaires for Individuals High in Social Anxiety

	1.	2.	3.	4.	5.	6.	7.
1. # of Ap. Gl.							
2. # of Av. Gl.	.47***						
3. Ap. Gl. Social Rating	-.06	-.04					
4. Av. Gl. Social Rating	.13	.31**	.19				
5. # Social Ap. Gl.	.48***	.20	.68***	.24*			
6. # Non-social Ap. Gl.	.71***	.31**	-.59**	-.10	-.05		
7. # Social Av. Gl.	.32**	.61***	.17	.79***	.40***	-.06	
8. # Non-social Av. Gl.	.17	.44***	-.15	-.57***	-.07	.29*	-.27*
9. BIS	.11	.11	.19	.23*	.14	-.08	.79
10. BAS	.04	-.05	.08	-.10	.08	-.15	-.08
11. SIAS	-.11	-.08	.14	.10	.04	-.13	.12
12. SPS	-.14	-.03	.03	.22	-.22	-.07	.10
13. BDI-II	.05	-.02	.06	.06	-.01	.01	.11
14. QOLI	-.14	-.17	.10	-.05	-.04	-.07	-.12

Note. Ap. Gl. = Approach Goals; Av. Gl. = Avoidance goals; BIS = Behavioral Inhibition Scale; BAS = Behavioral Activation Scale; SIAS = Social Interaction Anxiety Scale; SPS = Social Phobia Scale; BDI-II = Beck Depression Inventory 2nd Ed.; QOLI = Quality of Life Inventory. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 6. (continued)

	8.	9.	10.	11.	12.	13.
8. # Non-social Av. Gl.						
9. BIS	-.19					
10. BAS	.06	.12				
11. SIAS	-.22	.26*	-.20			
12. SPS	-.28*	.26*	-.17	.42***		
13. BDI-II	-.18	.22	-.01	-.21	.33**	
14. QOLI	-.02	.09	.14	-.07	.04	-.28*

Note. Ap. Gl. = Approach Goals; Av. Gl. = Avoidance goals; BIS = Behavioral Inhibition Scale; BAS = Behavioral Activation Scale; SIAS = Social Interaction Anxiety Scale; SPS = Social Phobia Scale; BDI-II = Beck Depression Inventory 2nd Ed.; QOLI = Quality of Life Inventory. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 7. Pearson's Correlations Between Goal-related Variables and Self-report Questionnaires for Non-anxious Controls

	1.	2.	3.	4.	5.	6.	7.
1. # of Ap. Gl.							
2. # of Av. Gl.	.65***						
3. Ap. Gl. Social Rating	-.15	.10					
4. Av. Gl. Social Rating	-.11	-.04	.33**				
5. # Social Ap. Gl.	.14	.26*	.73***	.34**			
6. # Non-social Ap. Gl.	.74***	.46***	-.59***	-.25*	-.19		
7. # Social Av. Gl.	.06	.31**	.39**	.74***	.47**	-.11	
8. # Non-social Av. Gl.	.49***	.79***	-.11	-.53***	.02	.51***	-.15
9. BIS	-.16	.11	.22	.16	.05	-.20	.24*
10. BAS	.25*	.37**	-.09	-.04	.02	.27*	.10
11. SIAS	-.14	-.10	.18	.09	.09	-.13	.01
12. SPS	-.21	.03	.14	.28*	.04	-.16	.24*
13. BDI-II	-.12	.03	.07	.02	.12	-.06	.13
14. QOLI	-.20	-.26*	.03	.06	-.04	-.19	-.06

Note. Ap. Gl. = Approach Goals; Av. Gl. = Avoidance goals; BIS = Behavioral Inhibition Scale; BAS = Behavioral Activation Scale; SIAS = Social Interaction Anxiety Scale; SPS = Social Phobia Scale; BDI-II = Beck Depression Inventory 2nd Ed.; QOLI = Quality of Life Inventory. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 7. (continued)

	8.	9.	10.	11.	12.	13.
8. # Non-social Av. Gl.						
9. BIS	.03					
10. BAS	.36**	-.13				
11. SIAS	-.14	.19	-.14			
12. SPS	-.17	.25*	.07	.46***		
13. BDI-II	.01	.26*	.04	.23*	.31**	
14. QOLI	-.24*	-.12	-.03	-.17	-.17	-.24

Note. Ap. Gl. = Approach Goals; Av. Gl. = Avoidance goals; BIS = Behavioral Inhibition Scale; BAS = Behavioral Activation Scale; SIAS = Social Interaction Anxiety Scale; SPS = Social Phobia Scale; BDI-II = Beck Depression Inventory 2nd Ed.; QOLI = Quality of Life Inventory. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 8. Pearson's Correlations Between the Number of Plans and Self-report Questionnaires for Individuals High in Social Anxiety.

	BIS	BAS	SIAS	SPS	BDI-II	QOLI
#of approach plans for social approach goals	.13	.04	-.03	.18	-.01	.01
# of avoidance plans for social approach goals	-.11	.07	.01	-.21	.06	.04
# of approach plans for non-social approach goals	.10	.06	.23*	.07	.02	-.10
# of avoidance plans for non-social approach goals	.26*	.10	-.07	.04	.16	-.16
# of approach plans for social avoidance goals	.19	.02	.16	.09	-.15	.12
# of avoidance plans for social avoidance goals	.16	.02	.14	.07	-.18	.15
# of approach plans for non-social avoidance goals	.18	-.13	.14	.14	-.05	-.19
# of avoidance plans for non-social avoidance goals	.03	.02	-.02	-.13	.03	.01

Note. BIS = Behavioral Inhibition Scale; BAS = Behavioral Activation Scale; SIAS = Social Interaction Anxiety Scale; SPS = Social Phobia Scale; BDI-II = Beck Depression Inventory 2nd Ed.; QOLI = Quality of Life Inventory. * $p < .05$, ** $p < .01$, *** $p < .001$. $n = 77$ for all of the correlations except those involving the QOLI. For these, $n = 74$.

Table 9. Pearson's Correlations Between the Number of Plans and Self-report Questionnaires for Non-anxious Controls

	BIS	BAS	SIAS	SPS	BDI-II	QOLI
# of approach plans for social approach goals	-.09	-.09	-.02	-.12	-.03	.16
# of avoidance plans for social approach goals	.17	.17	.32**	.13	-.07	-.21
# of approach plans for non-social approach goals	-.14	.13	-.07	-.10	-.06	-.22
# of avoidance plans for non-social approach goals	.24*	.07	.14	.14	-.02	-.05
# of approach plans for social avoidance goals	.23*	.07	.13	.12	-.01	-.06
# of avoidance plans for social avoidance goals	-.06	.05	.04	.02	-.24*	-.03
# of approach plans for non-social avoidance goals	-.11	-.04	.04	-.04	-.07	.05
# of avoidance plans for non-social avoidance goals	.24*	.10	.11	.12	-.02	-.04

Note. BIS = Behavioral Inhibition Scale; BAS = Behavioral Activation Scale; SIAS = Social Interaction Anxiety Scale; SPS = Social Phobia Scale; BDI-II = Beck Depression Inventory 2nd Ed.; QOLI = Quality of Life Inventory. * $p < .05$, ** $p < .01$, *** $p < .001$. $n = 75$.

Table 10. Pearson's Correlations Between Goal-related Variables and Number of Plans for Individuals High in Social Anxiety.

	# of approach goals	# of avoidance goals	Approach goal social rating	Avoidance goal social rating	# of social approach goal	# non-social approach goal	# social avoidance goal	# non-social avoidance goal
# of approach plans for social approach goals	-.09	-.15	-.05	.06	-.08	-.04	-.03	-.14
# of avoidance plans for social approach goals	.06	-.01	.09	-.11	.10	.02	-.11	.03
# of approach plans for non-social approach goals	.03	-.08	-.12	-.10	-.05	.08	-.11	-.02
# of avoidance plans for non-social approach goals	.05	.07	.01	.23*	.09	.01	.11	-.09
# of approach plans for social avoidance goals	-.02	.02	.05	.08	-.02	-.10	.07	-.06
# of avoidance plans for social avoidance goals	-.03	.04	.06	.09	.01	-.11	.08	-.04
# of approach plans for non-social avoidance goals	.06	-.07	-.10	.01	-.05	.09	-.13	-.04
# of avoidance plans for non-social avoidance goals	-.02	-.01	-.07	.07	-.03	.02	.04	-.12

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. $n = 77$.

Table 11. Pearson's Correlations Between Goal-related Variables and Number of Plans for Non-anxious Controls

	# of approach goals	# of avoidance goals	Approach goal social rating	avoidance goal social rating	# of social approach goal	# non-social approach goal	# social avoidance goal	# non-social avoidance goal
# of approach plans for social approach goals	.10	-.15	-.32**	-.03	-.24*	.22	-.18	-.06
# of avoidance plans for social approach goals	-.02	.21	.14	-.30**	-.01	-.07	-.14	-.31**
# of approach plans for non-social approach goals	.08	-.08	-.12	-.16	-.12	.10	-.32**	.04
# of avoidance plans for non-social approach goals	-.11	.10	.03	-.01	-.04	-.11	.06	.09
# of approach plans for social avoidance goals	-.10	.09	-.01	-.02	-.06	-.09	.02	.08
# of avoidance plans for social avoidance goals	.11	.14	.17	-.11	.15	.03	.04	.16
# of approach plans for non-social avoidance goals	-.09	-.27*	-.18	-.16	-.23*	.02	-.26*	-.15
# of avoidance plans for non-social avoidance goals	-.09	.12	.04	-.03	-.03	-.11	.04	.11

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. $n = 75$.

Table 12. Pearson's Correlations Amongst Plan-related Variables for Individuals High in Social Anxiety.

	1.	2.	3.	4.	5.	6.	7.	8.
1. # of approach plans for social approach goals								
2. # of avoidance plans for social approach goals	-.34**							
3. # of approach plans for non-social approach goals	.47***	-.01						
4. # of avoidance plans for non-social approach goals	-.04	.36**	-.12					
5. # of approach plans for social avoidance goals	.23*	-.21	.13	-.13				
6. # of avoidance plans for social avoidance goals	.15	-.18	.06	-.10	.98***			
7. # of approach plans for non-social avoidance goals	.45***	-.22	.52***	.09	.11	.03		
8. # of avoidance plans for non-social avoidance goals	-.03	.50***	.16	.27*	-.09	-.08	-.27*	

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. $n = 77$.

Table 13. Pearson's Correlations Amongst Plan-related Variables for Non-anxious Controls.

	1.	2.	3.	4.	5.	6.	7.	8.
1. # of approach plans for social approach goals								
2. # of avoidance plans for social approach goals	-.17							
3. # of approach plans for non-social approach goals	.56***	.04						
4. # of avoidance plans for non-social approach goals	-.14	.39**	-.17					
5. # of approach plans for social avoidance goals	-.08	.38**	-.09	.98***				
6. # of avoidance plans for social avoidance goals	.01	.39**	.07	-.05	-.08			
7. # of approach plans for non-social avoidance goals	.60***	.03	.49***	-.07	.01	.10		
8. # of avoidance plans for non-social avoidance goals	-.13	.39**	-.13	.99***	. 99**	-.05	-.08	

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. $n = 75$.

Table 14. Means and Standard Deviations for Goal-related Outcome Variables

	SA		NAC	
	M	*SD*	*M*	*SD*
Number of approach goals	7.57	2.31	7.87	2.72
Number of avoidance goals	6.82	2.14	6.52	2.57
Social rating for approach goals	4.05	1.11	3.56	1.20
Social rating for avoidance goals	4.24	1.26	3.72	1.48
Number of social approach goals	2.13	1.32	1.65	1.27
Number of non-social approach goals	4.13	1.92	4.79	2.44
Number of social avoidance goals	2.35	1.67	1.56	1.29
Number of non-social avoidance goals	3.44	1.51	3.85	2.05

Note. SA refers to individuals high in social anxiety and NAC refers to non-anxious controls. Data from 77 SAD participants and 75 NAC participants were compared in the above analyses.

standard deviations. As there was no group difference or interaction between group and goal type, the results did not support hypotheses 1 and 2.

Social Rating

A 2*2 mixed design ANOVA was run to test Hypotheses 4 and 5. The between-groups factor was group, defined as *socially anxious* and *non-anxious control,* whereas the within-groups factor was goal type, defined as *approach* and *avoidance*. The dependent variable was the *mean social rating.* Individuals high in social anxiety rated goals as being more social than did non-anxious controls, $F(1, 150) = 9.76$, $p = .002$. Social ratings did not differ as a function of whether goals were approach or avoidance in nature, $F(1, 150) = 1.79$, $p = .184$. The two-way interaction failed to reach significance, $F(1, 150) = 0.01$, $p = .931$. See Table 14 for means and standard deviations. Hypothesis 4 was fully supported; individuals high in social anxiety had significantly higher social ratings for both approach and

avoidance goals. Those high in social anxiety did not rate avoidance goals as more social than approach goals, offering no support for the prediction made in hypothesis 5.

Number of Goals Classified as Social and Non-social

The nature of the difference between the groups on social ratings was investigated further by testing for the differences in the number of goals rated as social (six or higher on the SR scale) and non-social (4 or lower on the SR scale) predicted by hypotheses 6 and 7. A 2*2*2 ANOVA was conducted. The between-groups factor was group, defined as *socially anxious* and *non-anxious control*, whereas the within-groups factors were goal type, defined as *approach goal* and *avoidance goal*, and rating, defined as *social* and *non-social*. The dependent variable was *number of goals*. See Table 14 for means and standard deviations and Table 15 for *F* and *p* values for the main effects and interactions.

There was a significant main effect for goal type; more approach goals were generated than were avoidance goals. In addition, the significant main effect of rating revealed a pattern in which more goals were classified as non-social than social. There was no main effect for group. The three-way interaction failed to reach significance, but there were two significant two-way interactions. Alpha inflation was controlled in the follow-up analyses by using *Bonferonni* correction. As only 2-way interactions reached significance in these analyses, the correction used was .05/4, which provided a critical *p*-value of .0125.

The group * rating interaction was significant and revealed the following pattern. Individuals high in social anxiety generated more social goals than did non-anxious controls, $t(150) = 3.32$, $p < .001$, but the groups did not differ in the number of non-social goals generated, $t(150) = 1.95$, $p = .053$. Both those high in social anxiety, $t(76) = 6.91$, $p < .001$, and non-anxious controls, $t(74) = 9.89$, $p < .001$, generated more non-social goals than social goals.

The goal type * rating interaction was also significant. There were more non-social goals in the approach condition than the avoidance condition, $t(151) = 4.62$, $p < .001$, but there was no difference in the number of social goals between the approach and avoidance condition, $t(151) = 0.54$, $p = .591$. There

Table 15. Summary of Group*Goal Type*Rating Mixed-group ANOVA Results for Number of Social and Non-social Goals

Main effects	*df*	*F*	*p*
Group	1,150	0.10	.751
Goal Type	1,150	15.60	< . 001
Rating	1,150	145.40	< . 001
Two-way interactions			
Goal Type * Rating	1,150	13.80	< . 001
Group * Rating	1,150	10.90	.001
Goal Type * Group	1,150	2.19	.141
Three-way interaction			
Group * Goal Type* Rating	1,150	0.02	.884

were more non-social goals than social goals in both the approach, $t(151) = 11.60$, $p < .001$, and avoidance, $t(151) = 7.94$, $p < .001$, conditions.

As the three-way interaction failed to reach significance, there was no support for hypotheses 6 and 7. In addition, individuals high in social anxiety classified more goals as social than non-social, which ran counter to the predicted pattern.

Number of Plans

A 2*2*2*2 ANOVA was conducted to test the plan-related hypotheses: 8, 10, 11, and 12. The between-groups factor was group, defined as *socially anxious* and *non-anxious control*, whereas the within-groups factors were: rating, defined as *social* and *non-social*; goal type, defined as *approach goal* and *avoidance goal*; and plan type, defined as *approach plan* and *avoidance plan*. The dependent variable was *number of plans*. Alpha inflation was controlled in the follow-up analyses by using

Bonferonni correction. As only 2-way interactions reached significance in these analyses, the correction used was .05/4, which provided a critical *p*-value of .0125. See Table 16 for means and standard deviations.

Table 16. Means and Standard Deviations for Number of Plans with Respect to Group, Plan Type, Rating, and Goal Type

	SA		NAC	
	M	*SD*	*M*	*SD*
Number of approach plans for social approach goals	4.25	1.63	4.66	1.85
Number of avoidance plans for social approach goals	1.88	1.19	1.51	1.07
Number of approach plans for social avoidance goals	3.66	1.45	4.03	1.87
Number of avoidance plans for social avoidance goals	2.13	1.13	1.84	0.97
Number of approach plans for non-social approach goals	4.64	1.73	4.84	2.03
Number of avoidance plans for non-social approach goals	1.73	1.03	1.70	1.01
Number of approach plans for non-social avoidance goals	4.20	1.53	4.26	2.01
Number of avoidance plans for non-social avoidance goals	1.96	1.20	1.89	0.94

Note. SA refers to individuals high in social anxiety and NAC refers to non-anxious controls. Data from 75 SA participants and 70 NAC participants were used to calculate descriptive statistics.

There was a significant main effect of plan type; more approach plans than avoidance plans were generated. See Table 17 for *F* and *p* values for the plan-related main effects and interactions. The main effect of rating revealed a pattern in which higher numbers of plans were generated for goals rated as non-social than for goals rated as social. There was also a main effect for goal type, in that more plans were

Table 17. Summary of 2*2*2*2 Mixed-Group ANOVA Results for Number of Plans

Main effects	*df*	*F*	*p*
Plan Type	1,143	37.30	< .001
Rating	1,143	10.60	.001
Goal Type	1,143	10.20	.002
Group	1,143	0.62	.803
Two-way interactions			
Goal Type * Plan Type	1,143	29.70	< .001
Rating * Plan Type	1,143	5.98	.016
Rating * Group	1,143	0.01	.923
Goal Type * Group	1,143	0.14	.708
Plan Type * Group	1,143	3.04	.084
Rating * Goal Type	1,143	0.01	.947
Three-way interactions			
Rating * Plan Type * Group	1,143	3.28	.072
Rating * Goal Type * Group	1,143	0.35	.556
Goal Type * Plan Type * Group	1,143	0.13	.717
Rating * Goal Type * PlanType	1,143	0.31	.579
Four-way interaction			
Plan Type * Rating * Goal Type* Group	1,143	0.00	.992

generated for approach goals than avoidance goals. There was no main effect of group with respect to the number of plans generated.

The four-way interaction failed to reach significance. None of the three-way interactions reached significance. Two of the six two-way interactions were significant and are discussed below. Follow-up analyses investigating the nature of the goal type * plan type interaction revealed that more plans were generated in the approach goal condition than the avoidance goal condition, but this effect was more pronounced for avoidance plans, $t(144) = 13.70$, $p < .001$, than it was for approach plans, $t(149) = 5.55$, $p < .001$. Individuals generated more approach than avoidance plans whether in the approach goal condition, $t(145) = 14.50$, $p < .001$, or the avoidance goal condition, $t(146) = 14.60$, $p < .001$.

Follow-up analyses investigating the nature of the rating * plan type interaction indicated that the number of approach plans generated was higher for goals rated as non-social than social, $t(149) = 2.79$, $p = .006$; however, the number of avoidance plans did not differ between social and non-social goals, $t(144) = 0.39$, $p = .700$. More approach plans than avoidance plans were generated whether goals were rated as social, $t(144) = 15.50$, $p < .001$, or non-social, $t(150) = 17.90$, $p < .001$.

Plan Specificity

Because of the poor inter-rater reliability of the goal specificity variable, hypothesis, 9 which relates to plan specificity remains untested. In addition, hypotheses 11 and 12 involve both social rating and specificity as dependent variables. As such, only the social rating component of these hypotheses was evaluated.

Results of Affect-related Hypotheses

A series of 2*2*2*2 mixed design ANOVAs were conducted to test hypotheses 13-18. The between-groups factor was group, defined as *individuals high in social anxiety* and *non-anxious controls*, whereas the within-groups factors were rating, defined as *social* and *non-social*; goal type, defined as *approach goal* and *avoidance goal*; and outcome, defined as *imagined success* and *imagined failure*. The dependent variables examined in this fashion were: *positive affect, deactivated negative affect, negative*

affect, deactivated positive affect, valence, arousal, and duration. Alpha inflation was controlled in the follow-up analyses by using *Bonferonni* correction. As only 2-way interactions reached significance in these analyses, the correction used was .05/4, which provided a critical *p*-value of .0125.

Positive Affect

In the 2*2*2*2 mixed design ANOVA examining positive affect, three main effects were significant. See Table 18 for means and standard deviations and Table 19 for *F* and *p* values for the main effects and interactions. There was a main effect of goals; approach goals received higher ratings of positive affect than did avoidance goals. Social goals were related to less positive affect than were non-social goals, and imagined success was associated with more positive affect than was imagined failure. There was no main effect of group. Neither the four way interaction, nor the 3 way interactions were significant. Two significant two-way interactions are described below.

The goals*outcome interaction took the following pattern. Imagining success with both approach goals, $t(149) = 33.40$, $p < .001$, and avoidance goals, $t(150) = 24.00$, $p < .001$, was associated with more positive affect than imagining failure. However, approach goals were associated with more positive affect than avoidance goals when imagining success, $t(150) = 5.06$, $p < .001$, but not when imagining failure, $t(149) = 0.78$, $p = .430$.

The rating*outcome interaction exhibited the following pattern. Success was associated with more positive affect than failure for both social, $t(150) = 27.10$, $p < .001$, and non-social goals, $t(149) = 29.80$, $p < .001$. However, non-social goals were associated with more positive affect than social goals when imagining success, $t(150) = 3.78$, $p < .001$, but not when imagining failure, $t(149) = 1.45$, $p = .148$.

Because there was no main effect of group and none of the interactions involving group were significant, the results of these analyses provide no evidence for the between-group differences predicted by hypothesis 13 or the within-group patterns predicted by hypothesis 17. There was a pattern of results consistent with hypothesis 18, in which success with social goals was associated with less positive affect

Table 18. Means and Standard Deviations for Positive Affect and Deactivated Negative Affect Ratings for Both Individuals High in Social Anxiety and Non-anxious controls

	Positive Affect			
	SA		NAC	
Goal Type	*M*	*SD*	*M*	*SD*
Successful social approach	19.20	4.46	19.67	4.06
Successful social avoidance	17.80	4.88	18.2	5.31
Successful non-social approach	20.40	3.50	20.7	3.99
Successful non-social avoidance	19.10	3.96	19.2	4.74
Failed social approach	8.61	3.58	8.78	3.02
Failed social avoidance	9.02	3.67	9.01	3.56
Failed non-social approach	9.05	3.82	9.18	3.31
Failed non-social avoidance	9.30	3.85	8.97	3.66
	Deactivated Negative Affect			
	SA		NAC	
Goal Type	*M*	*SD*	*M*	*SD*
Successful social approach	7.94	2.76	6.73	1.63
Successful social avoidance	7.92	3.37	6.77	1.82
Successful non-social approach	8.01	3.14	7.03	2.27
Successful non-social avoidance	8.90	4.03	7.33	3.45
Failed social approach	14.50	5.14	11.31	4.32
Failed social avoidance	14.40	5.72	11.10	4.93
Failed non-social approach	15.40	6.27	13.04	5.90
Failed non-social avoidance	15.10	5.71	12.30	5.16

Note. SA refers to individuals high in social anxiety and NAC refers to non-anxious controls.

Table 19. Summary of Group*Goal Type*Rating*Outcome Mixed-group ANOVA Results for Positive Affect

Main effects	*df*	*F*	*p*
Group	1,148	0.10	.750
Goal Type	1,148	15.40	< .001
Rating	1,148	14.70	< .001
Outcome	1,148	1054.67	< .001
Two-way interactions			
Goals * Outcome	1,148	16.60	<.001
Social * Outcome	1,148	6.23	.014
Outcome * Group	1,148	0.25	.616
Goal * Group	1,148	0.23	.630
Social * Group	1,148	0.04	.845
Goals * Social	1,148	0.01	.959
Three-way interactions			
Goals*Social*Outcome	1,148	0.61	.440
Social*Outcome*Group	1,148	0.01	.930
Goals*Outcome*Group	1,148	0.27	.602
Goals*Social*Group	1,148	0.01	.993
Four-way interaction			
Group * Goal Type* Rating * Outcome	1,148	0.09	.760

than success with non-social goals; however, counter to hypothesis 18, this pattern was true of both those high in social anxiety and non-anxious controls.

Deactivated Negative Affect

In the 2*2*2*2 mixed design ANOVA examining the relationship between the factors listed above and deactivated negative affect, there were 3 significant main effects. See Table 18 for means and standard deviations and Table 20 for *F* and *p* values for the main effects and interactions. Imagined success was associated with less deactivated negative affect than was imagined failure. Individuals high in social anxiety reported higher levels of deactivated negative affect than did those low in social anxiety. In addition, social goals were related to lower ratings of deactivated negative affect than were non-social goals. Participants did not differ in ratings of deactivated negative affect of approach or avoidance goals. Neither the four-way interactions nor any of the three-way interactions reached significance.

Of the two-way interactions, only the outcome*group interaction was significant. Individuals high in social anxiety reported more deactivated negative affect than non-anxious controls whether imagining success, $t(131.8) = 3.67$, $p < .001$, or failure $t(140) = 4.18$, $p < .001$. Imagined failure was associated with an increase in deactivated negative affect for both individuals high in social anxiety, $t(76) = 12.7$, $p < .001$, and non-anxious controls, $t(72) = 11.8$, $p < .001$, but this effect appeared to be more pronounced among those high in social anxiety.

Individuals high in social anxiety reported higher levels of deactivated negative affect than did non-anxious controls for both imagined success and failure, but the pattern of results did not conform to those predicted by the hypotheses as this effect was not stronger with respect to goal type and social rating.

Negative Affect

All four main effects were significant in the 2*2*2*2 mixed design ANOVA examining the relationship between the factors listed above and negative affect. Imagining success was related to less negative affect than was imagining failure. Those high in social anxiety endorsed more negative affect than did non-anxious controls. Social goals were related to lower ratings of negative affect than were

Table 20. Summary of Group*Goal Type*Rating*Outcome Mixed-group ANOVA Results for Deactivated Negative Affect

Main effects	*df*	*F*	*p*
Group	1,148	23.40	< .001
Goal Type	1,148	1.39	.558
Rating	1,148	13.10	< .001
Outcome	1,148	293.20	< .001
Two-way interactions			
Outcome * Group	1,148	5.16	.019
Goal * Group	1,148	1.40	.239
Social * Group	1,148	0.33	.565
Social * Outcome	1,148	3.16	.077
Goals * Social	1,148	0.05	.822
Goals * Outcome	1,148	3.33	.070
Three-way interactions			
Goals*Social*Outcome	1,148	1.08	.300
Social*Outcome*Group	1,148	1.34	.249
Goals*Outcome*Group	1,148	0.02	.879
Goals*Social*Group	1,148	0.72	.399
Four-way interaction			
Group * Goal Type* Rating * Outcome	1,148	0.14	.711

non-social goals, and approach goals were associated with higher levels of negative affect than were avoidance goals. Neither the four-way interaction nor any of the three-way interactions reached significance. The significant rating * outcome interaction is discussed below. See Table 21 for means and standard deviations and Table 22 for *F* and *p* values for the main effects and interactions.

The rating*outcome two-way interaction was significant and revealed the following pattern. Whereas imagining failure was associated with lower negative affect for social than non-social goals, $t(149) = 4.19$, $p < .001$, imagining success did not relate to different ratings of negative affect for social and non-social goals, $t(149) = 0.82$, p .412. Imagining failure was associated with more negative affect than was imagining success for both social, $t(149) = 22.30$, $p < .001$, and non-social goals, $t(149) = 28.60$, $p < .001$.

There was little evidence for the predicted patterns of difference between the groups in hypotheses 14 and 15. Although those high in social anxiety did report higher levels of negative affect, this effect did not significantly increase in strength as a function of rating, goal type, or imagined outcome, which ran counter to the predictions. There was no support for the predicted within group differences among those high in social anxiety in hypotheses 17 and 18.

Deactivated Positive Affect

Three of the four main effects were significant in the 2*2*2*2 mixed design ANOVA examining deactivated positive affect. See Table 21 for means and standard deviations and Table 23 for *F* and *p* values for the main effects and interactions. Imagining success was associated with more deactivated positive affect than was imagining failure, and approach goals were related to lower ratings of deactivated positive affect than were avoidance goals. Individuals high in social anxiety had lower mean ratings of deactivated positive affect than did non-anxious controls. There was also a non-significant trend with regard to the relationship between social and non-social goals, $F(1, 146) = 3.73$, $p = .056$, in which social goals tended to be related to higher ratings of deactivated positive affect than were non-social goals.

Table 21. Means and Standard Deviations for Negative Affect and Deactivated Positive Affect Ratings for Both Individuals High in Social Anxiety and Non-anxious controls

	Negative Affect			
	SA		NAC	
Goal Type	*M*	*SD*	*M*	*SD*
Successful social approach	8.67	4.54	6.36	2.94
Successful social avoidance	7.77	4.05	6.42	3.76
Successful non-social approach	8.26	3.63	6.25	2.81
Successful non-social avoidance	7.62	3.60	6.58	3.49
Failed social approach	17.9	5.15	16.30	6.13
Failed social avoidance	17.49	5.30	15.80	5.76
Failed non-social approach	19.68	5.12	18.30	5.10
Failed non-social avoidance	18.44	5.58	17.29	5.63
	Deactivated Positive Affect			
	SA		NAC	
Goal Type	*M*	*SD*	*M*	*SD*
Successful social approach	16.0	5.46	17.40	4.74
Successful social avoidance	16.9	5.20	18.00	4.46
Successful non-social approach	15.9	4.91	17.30	4.75
Successful non-social avoidance	16.8	5.20	17.30	4.65
Failed social approach	7.08	2.87	7.42	3.29
Failed social avoidance	6.82	2.74	7.73	3.41
Failed non-social approach	6.65	2.86	6.53	1.99
Failed non-social avoidance	6.66	2.37	7.08	3.20

Note. SA refers to individuals high in social anxiety and NAC refers to non-anxious controls.

Table 22. Summary of Group*Goal Type*Rating*Outcome Mixed-group ANOVA Results for Negative Affect

Main effects	*df*	*F*	*p*
Group	1,148	15.10	< .001
Goal Type	1,148	6.29	.013
Rating	1,148	8.76	.004
Outcome	1,148	851.60	< .001
Two-way interactions			
Social * Outcome	1,148	17.60	< .001
Goal * Group	1,148	1.31	.254
Social * Group	1,148	0.45	.506
Outcome * Group	1,148	0.14	.710
Goals * Social	1,148	0.62	.431
Goals * Outcome	1,148	0.92	.339
Three-way interactions			
Goals*Social*Outcome	1,148	1.22	.272
Social*Outcome*Group	1,148	0.11	.746
Goals*Outcome*Group	1,148	0.70	0.40
Goals*Social*Group	1,148	0.01	.935
Four-way interaction			
Group * Goal Type* Rating * Outcome	1,148	0.04	.840

Table 23. Summary of Group*Goal Type*Rating*Outcome Mixed-group ANOVA Results for Deactivated Positive Affect

Main effects	*df*	*F*	*p*
Group	1,146	4.51	.035
Goal Type	1,146	5.81	.017
Rating	1,146	3.73	.056
Outcome	1,146	768.73	< .001
Two-way interactions			
Social * Outcome	1,146	0.58	.448
Goal * Group	1,146	0.02	.903
Social * Group	1,146	0.83	.363
Outcome * Group	1,146	1.09	.298
Goals * Social	1,146	0.11	.736
Goals * Outcome	1,146	2.12	.147
Three-way interactions			
Goals*Social*Outcome	1,146	0.44	.507
Social*Outcome*Group	1,146	0.07	.800
Goals*Outcome*Group	1,146	1.41	.237
Goals*Social*Group	1,146	0.19	.667
Four-way interaction			
Group * Goal Type* Rating * Outcome	1,146	0.12	.730

The four-way interaction was not significant. None of the 3-way or two-way interactions reached significance. Individuals high in social anxiety did report lower levels of deactivated positive affect; however, the failure of any interaction to reach significance provided no support for the between group differences predicted in hypotheses 14. The failure of any interaction involving rating to reach significance resulted in a lack of support for the within-group differences predicted in hypotheses 17 and 18.

Valence

In the 2*2*2*2 mixed design ANOVA examining the relationship between the factors listed above and valence, there were 3 significant main effects. See Table 24 for means and standard deviations and Table 25 for *F* and *p* values for the main effects and interactions.

Table 24. Means and Standard Deviations for Valence Ratings for Both Individuals High in Social Anxiety (SA) and Non-anxious Controls (NAC)

	Valence[a]			
	SA		NAC	
Goal Type	*M*	*SD*	*M*	*SD*
Successful social approach	2.09	1.48	1.59	0.89
Successful social avoidance	2.47	1.76	2.23	1.53
Successful non-social approach	1.82	1.29	1.60	1.23
Successful non-social avoidance	2.49	1.49	2.20	1.76
Failed social approach	7.60	1.43	7.49	1.58
Failed social avoidance	7.64	1.48	7.36	1.56
Failed non-social approach	7.86	1.48	7.89	1.28
Failed non-social avoidance	7.46	1.58	7.47	1.64

Note. [a] On the valence scale, lower scores are indicative of stimuli ratings as more pleasant.

Table 25. Summary of Group*Goal Type*Rating*Outcome Mixed-group ANOVA Results for Valence

Main effects	*df*	*F*	*p*
Group	1,146	5.40	.022
Goal Type	1,146	6.67	.011
Rating	1,146	0.17	.677
Outcome	1,146	2042.23	< .001
Two-way interactions			
Goals * Outcome	1,146	19.40	< .001
Outcome * Group	1,146	1.07	.303
Goal * Group	1,146	0.03	.873
Social * Group	1,146	1.10	.296
Social * Outcome	1,146	1.63	.204
Goals * Social	1,146	1.64	.202
Three-way interactions			
Goals*Social*Outcome	1,146	1.99	.160
Social*Outcome*Group	1,146	0.15	.699
Goals*Outcome*Group	1,146	0.12	.725
Goals*Social*Group	1,146	0.44	.510
Four-way interaction			
Group * Goal Type* Rating * Outcome	1,146	0.76	.385

Imagining success was rated as more pleasant than was imagining failure. Approach goals were rated more pleasant than were avoidance goals, and individuals high in social anxiety rated goals as less pleasant than did non-anxious controls. Social and non-social goals did not differ with respect to ratings of valence.

Of the two-way interactions, only the goals*outcome interaction was significant. Follow-up analyses revealed that imagining success was related to higher ratings of pleasantness than imagining failure for both approach, $t(150) = 45.10$, $p < .001$, and avoidance goals, $t(150) = 30.80$, $p < .001$. However, imaging success with approach goals was related to higher ratings of pleasantness than was imagining success with avoidance goals, $t(150) = 4.97$, $p < .001$, but imagining failure did not differ in level of pleasantness for approach and avoidance goals, $t(150) = 0.64$, $p = .522$.

The two groups did differ in that individuals high in social anxiety rated goals as less pleasant than did non-anxious controls; however, this effect did not differ with respect to rating, outcome, or goal type as predicted by hypotheses 13, 14, or 15. The within-group variations with respect to imagined outcome and social rating predicted in hypotheses 17 and 18 were not supported.

Arousal

In the 2*2*2*2 mixed design ANOVA examining arousal, there was one significant main effect. See Table 26 for means and standard deviations and Table 27 for *F* and *p* values for the main effects and interactions. Approach goals were related to higher arousal ratings than were avoidance goals. There was also a non-significant trend in which imagined success was perceived as more arousing than imagined failure. There were no main effects of social versus non-social goals or group. The four-way interaction was not significant and none of the 3-way interactions reached significance. Three of the 2-way interactions reached significance and are discussed below.

The goals*outcome interaction was significant. Imagined success with approach goals was related to higher levels of arousal than imagined failure, $t(148) = 3.38$, $p = .001$, but avoidance goals did not differ in level of arousal with respect to outcome, $t(148) = 0.29$, $p = .776$.

Table 26. Means and Standard Deviations for Arousal Ratings for Both Individuals High in Social Anxiety (SA) and Non-anxious Controls (NAC)

	Arousal[a]			
	SA		NAC	
Goal Type	*M*	*SD*	*M*	*SD*
Successful social approach	4.46	2.54	3.96	2.18
Successful social avoidance	5.22	2.56	4.69	2.49
Successful non-social approach	4.08	2.30	3.80	2.41
Successful non-social avoidance	5.09	2.27	4.56	2.55
Failed social approach	4.97	2.43	5.66	2.68
Failed social avoidance	4.61	2.50	5.10	2.70
Failed non-social approach	4.42	2.87	5.19	2.78
Failed non-social avoidance	4.67	2.69	5.55	2.68

Note. [a]On the arousal scale, lower ratings are indicative of higher levels of arousal.

Table 27. Summary of Group*Goal Type*Rating*Outcome Mixed-group ANOVA Results for Arousal

Main effects	*df*	*F*	*p*
Group	1,145	0.20	.658
Goal Type	1,145	11.80	.001
Rating	1,145	2.84	.094
Outcome	1,145	3.73	.055
Two-way interactions			
Goals * Outcome	1,145	18.90	< .001
Outcome * Group	1,145	4.02	.047
Goal * Social	1,145	5.75	.018
Social * Group	1,145	0.97	.325
Social * Outcome	1,145	0.32	.574
Goals * Group	1,145	0.61	.436
Three-way interactions			
Goals*Social*Outcome	1,145	2.72	.012
Social*Outcome*Group	1,145	0.71	.402
Goals*Outcome*Group	1,145	0.16	.692
Goals*Social*Group	1,145	0.07	.799
Four-way interaction			
Group * Goal Type* Rating * Outcome	1,145	0.30	.584

Imagining success with approach goals related to higher levels of arousal than did imagining success with avoidance goals, $t(149) = 6.18$, $p < .001$, whereas imagining failure led to similar levels of arousal irrespective of whether a goal was approach or avoidance, $t(146) = 0.64$, $p = .522$.

The goals*rating interaction was also significant. Social goals were less arousing than non-social goals in the approach condition, $t(148) = 2.99$, $p = .003$, but did not differ in the avoidance condition, $t(149) = 0.32$, $p = .711$. Approach goals were considered more arousing than avoidance goals in the non-social condition, $t(149) = 3.83$, $p < .001$, but did not differ in the social goal condition, $t(149) = 1.05$, $p = .296$.

The outcome*group interaction also reached significance. Individuals high in social anxiety did not differ from non-anxious controls in level of arousal when imagining success, $t(148) = 1.37$, $p = .172$, or failure, $t(149) = 1.73$, $p = .085$. Individuals high in social anxiety did not differ in arousal ratings whether they were imagining success or failure, $t(75) = 0.05$, $p = .957$; however, non-anxious controls reported higher levels of arousal when they were imagining success than when imagining failure, $t(70) = 2.72$, $p = .008$.

Since the four-way interaction did not reach significance, hypothesis 14 was not supported by the results. Similarly, the failure of the group*rating*outcome interaction to reach significance indicates that the data do not support the predictions made in hypotheses 15, 17, or 18.

Duration

In the 2*2*2*2 mixed design ANOVA examining duration, there were 2 significant main effects. See Table 28 for means and standard deviations and Table 29 for *F* and *p* values for the main effects and interactions. Approach goals were associated with a longer duration than were avoidance goals, and social goals were related to a shorter duration than were non-social goals. There was no main effect of group or outcome. Neither the four-way interaction nor any of the three-way interactions were significant. Three of the 2-way interactions reached significance and are discussed below.

Table 28. Means and Standard Deviations for Duration Ratings for Both Individuals High in Social Anxiety and Non-anxious Controls

	Duration			
	SA		NAC	
Goal Type	M	SD	M	SD
Successful social approach	6.29	1.79	6.95	1.52
Successful social avoidance	6.14	2.11	6.80	1.54
Successful non-social approach	6.74	1.62	7.07	1.42
Successful non-social avoidance	6.12	2.01	6.85	1.32
Failed social approach	6.40	1.86	6.54	1.74
Failed social avoidance	6.43	1.62	6.24	1.73
Failed non-social approach	7.12	1.33	6.87	1.14
Failed non-social avoidance	6.64	1.70	6.50	1.49

Note. SA refers to individuals high in social anxiety and NAC refers to non-anxious controls.

Table 29. Summary of Group*Goal Type*Rating*Outcome Mixed-group ANOVA Results for Duration

Main effects	*df*	*F*	*p*
Group	1,148	1.82	.179
Goal Type	1,148	16.70	< .001
Rating	1,148	7.72	.006
Outcome	1,148	0.08	.784
Two-way interactions			
Outcome * Group	1,148	17.1	< .001
Social * Outcome	1,148	4.76	.031
Goals * Social	1,148	4.26	.041
Goals * Outcome	1,148	0.03	.858
Goal * Group	1,148	0.20	.654
Social * Group	1,148	0.80	.373
Three-way interactions			
Goals*Social*Outcome	1,148	0.04	.840
Social*Outcome*Group	1,148	0.06	.805
Goals*Outcome*Group	1,148	1.59	.210
Goals*Social*Group	1,148	2.30	.131
Four-way interaction			
Group * Goal Type* Rating * Outcome	1,148	0.01	.979

The was a significant outcome*group interaction. Non-anxious controls rated the effects of imagining success as lasting longer than did individuals high in social anxiety, $t(148) = 2.80$, $p = .006$; the groups did not differ in duration ratings when imagining failure, $t(149) = 0.50$, $p = .617$. Non-anxious controls rated the affective impact of imagining success as having a longer duration than that of imagining failure, $t(73) = 3.79$, $p < .001$. There was also a tendency for individuals high in social anxiety to rate the affective impact of imagining failure as having a longer duration than that of imagining success, $t(75) = 2.38$, $p = .020$, but this trend did not remain significant after correcting for alpha inflation.

The rating*outcome was also significant. Imagining failure was associated with a longer duration for non-social goals than for social goals, $t(150) = 3.72$, $p < .001$, but there was no difference in duration ratings when imagining success with social or non-social goals, $t(149) = 1.23$, $p = .222$. Neither social goals, $t(149) = 1.29$, $p = .199$, nor non-social goals, $t(150) = 1.00$, $p = .321$, differed with regard to duration when imagining success or failure.

The goals*rating interaction was also significant. Social approach goals were associated with a lower duration than were non-social approach goals, $t(149) = 3.38$, $p = .001$, but social avoidance goals did not differ in duration ratings from non-social goals, $t(150) = 1.02$, $p = .307$. Non-social goals in the approach condition had higher duration ratings than did those in the avoidance condition, $t(150) = 4.45$, $p < .001$, but social goals did not differ in duration ratings if they were approach or avoidance, $t(149) = 1.45$, $p = .148$.

There was very little evidence in support for hypothesis 16. Individuals high in social anxiety did report a shorter duration for affect related to success than did non-anxious controls, but the groups did not differ in duration for affect related to failure. The second part of hypothesis 16, the prediction that this effect would be stronger for social than non-social goals among those who are socially anxious, was not supported.

Results of Analyses Pertaining to Secondary Hypotheses

A series of Pearson's correlations were run to test hypotheses 19 and 20. Because of the poor inter-rater reliability of specificity, the portion of these hypotheses relating to specificity of goals and plans remains untested. Correlations were reported for each group independently since the groups do not represent a continuous range of values on the SIAS and BDI-II. See Tables 30 and 31 for a full reporting of these results.

Table 30. Pearson's Correlations Between Social Approach Goals / Plans and Self-report Questionnaires

Self-report questionnaire	# of social approach goals		#of approach plans for social approach goals	
	SA	NAC	SA	NAC
Behavioral Inhibition Scale	.14	.05	.13	-.09
Behavioral Activation Scale	.08	.02	.04	-.09
Social Interaction Anxiety Scale	.04	.09	-.03	-.02
Social Phobia Scale	-.22	.04	.18	-.12
Beck Depression Inventory II	-.01	.12	-.01	-.03
Quality of Life Inventory	-.04	-.04	.01	.16

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. Data from 75 non-anxious controls (NAC) and 77 individuals high in social anxiety (SA) were used in the correlations, with the exception of the analyses using the Quality of Life Inventory. There were only 74 individuals high in social anxiety in these analyses; the number of non-anxious controls was unchanged.

Table 31. Pearson's Correlations Between Social Avoidance Goals / Plans and Self-report Questionnaires

Self-report questionnaires	# of social avoidance goals		# of avoidance plans for social avoidance goals	
	SA	NAC	SA	NAC
Behavioral Inhibition Scale	.19	.24*	.16	-.06
Behavioral Activation Scale	-.08	.10	.02	.05
Social Interaction Anxiety Scale	.12	.01	.14	.04
Social Phobia Scale	.10	.24*	.07	.02
Beck Depression Inventory II	.11	.13	-.18	-.24*
Quality of Life Inventory	-.12	-.06	.15	-.03

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. Data from 75 non-anxious controls (NAC) and 77 individuals high in social anxiety (SA) were used in the correlations, with the exception of the analyses using the Quality of Life Inventory. There were only 74 individuals high in social anxiety in these analyses; the number of non-anxious controls was unchanged.

There was very little evidence in support of hypothesis 20 and hypothesis 19 was not supported at all. There were only two significant goal-related correlations in the sample of non-anxious controls: a positive relationship between the number of social avoidance goals and the BIS scale and a second positive relationship between the number of social avoidance goals and the social phobia scale. Both of these were predicted by hypothesis 20. None of the correlations were significant among those high in social anxiety. There was no support for the predicted relationships between the number of plans and self-report questionnaires. The only significant correlation with plan data related to the inverse relationship between BDI-II scores and the number of avoidance plans for social avoidance goals among non-anxious controls, which ran counter to the predicted pattern.

CHAPTER 4
DISCUSSION

This study combined components of goal and affect research in order to garner a better understanding of how approach and avoidance motivation may relate to social anxiety. Overall, few of the hypotheses were supported. As a result, this study raises more questions than it answers, providing a foundation for future research to build upon. In the paragraphs below are a discussion of the results, an evaluation of the methodology employed, and recommended directions for future research.

Discussion of Goal- and Plan-related Findings

Similar to previous findings (Dickson, 2006; Dickson &MacLeod, 2004b), individuals high in social anxiety did not differ from non-anxious controls in the number of approach goals generated. In contrast to the previous study, however, the two groups did not differ in the number of avoidance goals generated. More approach goals than avoidance goals were generated across both groups of participants. This pattern of results was inconsistent with the hypotheses of this study and indicates that the two groups may not differ with respect to approach and avoidance goal generation. However, this conclusion is premature for the following reasons.

This study placed an emphasis upon the generation of idiographic goals in the hope of assessing underlying approach or avoidance motivation, but the goals generated were not completely idiographic. One task was clearly designed to prompt approach goals while the other was designed to prompt avoidance goals. This methodology was employed because of the need to have access to easily identifiable approach and avoidance goals for subsequent phases of the study (i.e., the Plans Task and affect rating), but it may have placed artificial constraints on the proportion of approach vs. avoidance goals generated. If results of the goal tasks employed were representative of an underlying approach or avoidance motivation, then there should exist a correlation between the number of goals in either condition and established measures assessing approach and avoidance-related motivation. Multiple authors recommend using the BIS and BAS scales (Carver et al., 2008; Elliot & Thrash, 2002; Strachman & Gable, 2006) to test whether a given construct is related to approach or avoidance motivation. Neither

the number of approach goals nor the number of avoidance goals was correlated with either BIS or BAS scales among socially anxious participants. The number of approach goals was correlated with both the BIS and BAS scales among non-anxious controls, but the number of avoidance goals was not correlated with either scale. This pattern of findings lends credence to the view that our use of the Goals Task may not have provided a reliable index of approach and avoidance motivation.

It is important to note, however, that the Goals Task was modified from its original conception in this study. Instead of allowing 75 seconds per task as recommended by Dickson and MacLeod (2004b), our participants were allotted 120 seconds per task. The decision to increase the time limit was made to increase the chances that participants would generate a sufficient number of social and non-social goals to complete the affect rating and plan generation components of this study. This decision may have had the undesired effect of changing the underlying construct assessed by the Goals Task. One group may have been faster than the other to generate either approach or avoidance goals, but, with the changes in time allotted to the task, the slower group may have had enough time to compensate for any differences in relative goal generation. As such, the lack of a relationship between the number of goals in each task and BIS and BAS scores in this study should not be viewed as evidence against the utility of the Goals Task, but rather as an indictment of the decision to add more time to each task. It is recommended that future researchers who utilize the Goals Task empirically examine the effects of manipulating time for this task.

Another possible explanation for the inconsistencies in goal findings may be related to the different samples. Dickson and MacLeod (2004b) assessed trait anxiety, whereas the current study examined those high in social anxiety. An individual high in trait anxiety would be expected to be anxious much of the time, whereas an individual high in social anxiety would be expected to be anxious when exposed to social stimuli perceived as threatening. There is evidence suggesting that performance or perception of performance in a variety of tasks is influenced by anxiety-related social cues among those who are socially anxious (Amir et al., 1996; Asmundson & Stein, 1994; Lundh & Öst, 1996;

Mansell et al., 1999; Mattia et al., 1993; Norton et al., 2004; Rapee & Lim, 1992; Stopa & Clark, 1993; Yuen, 1994), and it is unlikely that the Goals Task would be immune to this effect.

Futhermore, Roseman (2008) proposes that motivation and emotions relate to goal-directed behavior differently. In the absence of intense emotional experiences, the motivational systems allow flexibility in goal-directed behavior. However, when experiencing intense emotions like fear, there are fewer options for goal-directed behavior, and the activity undertaken by an organism tends to relate to general purpose goals, such as seeking safety. As such, it is reasonable to suggest that findings related to approach and avoidance may differ if one is currently experiencing anxiety. It may be the case that individuals high in social anxiety were not anxious when they were completing the goals task, which may have contributed to the lack of difference in avoidance goal generation. Following this logic, it would also be reasonable to expect that if there are any differences in goal generation between non-anxious individuals and those who are high in social anxiety that these differences may be more pronounced in situations likely to increase social anxiety. In line with this, Kashdan and Steger (2006) found that individuals high in social anxiety experienced a disruption in their pursuit of positive events when engaging in experiential avoidance related to their social anxiety.

Before concluding that there are not differences between individuals high in social anxiety and non-anxious controls with respect to approach and avoidance goal generation, more research is needed. Within the current study, individuals were asked to generate both approach and avoidance goals and given equal time to record each type of goal. It may not be the case that individuals spend identical amounts of time forming each type of goal when faced with everyday situations. A truly idiographic goal generation task, similar to that described by Elliot and Friedman (2007), without obvious prompts of approach or avoidance should be developed and administered. For example, participants could be given a short amount of time and asked to "Write some goals that are important to you." The design should be free of any mention of approach or avoidance goals prior the goal generation task. The responses could then be coded as approach or avoidance, which would provide a ratio of avoidance to approach goals which is

less influence by study-specific methodology. This ratio could then be subjected to tests of convergent validity by assessing its relationship to established constructs related to approach and avoidance like BIS/BAS (Carver et al., 2008; Carver & White, 1994), cerebral asymmetry (Davidson, Ekman, Saron, Senulis, & Friesen, 1990), extraversion and neuroticism (Carver & White, 1994; Elliot & Thrash, 2002), and positive and negative temperaments (Elliot & Thrash, 2002).

It may also prove beneficial to design studies that evoke anxiety before goal generation tasks are administered. For example, participants could be informed that they will be asked to present a 5-minute speech or engage in a 5-minute conversation with a stranger after completing some preliminary questionnaires. Following mention of the social situation, a variety of goal tasks could be administered: the Goal Task (Dickson & MacLeod, 2004b), the idiosyncratic task mentioned above, an idiographic goals generation asking participants to list social goals similar to the one used by Gable (2006; Study 1), or by simply asking "What are your goals for the speech (conversation)?" The results from these variations, when combined, would provide a more complete understanding of how social anxiety is related to approach and avoidance goals than is currently available.

The findings related to number of plans did not conform to the predicted pattern of results. There were no between-group differences, and both groups tended to generate more approach plans regardless of goal type or social rating. Approach goals were also associated with a larger number of plans than were avoidance goals for each group. Although inconsistent with hypotheses, the findings fit with previous research relating to approach and avoidance. Carver and colleagues (Carver et al., 2008; Carver & Scheier, 1998) describe approach motivation as being more efficient than avoidance motivation. There is a clear target when one is approaching, whereas there is not a specified target when one is avoiding. Instead of moving towards one desired outcome, the individual seeks to move farther from an undesired outcome and, to be successful, must prevent all possible causes of the feared outcome. They go on to posit that, because of its relative inefficiency, avoidance motivation is eventually constrained by approach motivation, particularly when individuals move farther from their feared self (Carver et al., 1999). Their

research supports the view that those closer to their feared self tend to focus more on escape than approach, whereas those who are farther from their feared self may rely more on approach behavior as an avoidance strategy than escape.

There are several instances of approach and avoidance motivation being linked throughout the available literature. For instance, Gray (1971) describes active avoidance, learning a new behavior in order to avoid an aversive consequence. Rodebaugh's (2007) findings provided evidence for the pairing of approach goals with avoidance goals. In addition, the ought self (Higgins, 1987) can be seen as a manifestation of the desire to avoid the feared self by adhering to social norms, duties, and responsibilities. A recent review of the work of Higgins and colleagues (Scholer & Higgins, 2008) provides examples of findings tying approach tactics to avoidance strategies and avoidance tactics to approach strategies. Elliot and Church (1997) describe performance approach goals as being linked to approach behavior that, in addition to being related to the need for achievement, may also be a manifestation of the desire to avoid failure. The work of Elliot and colleagues has consistently demonstrated relationships between performance approach goals, which include both approach and avoidance components, and intrinsic motivation (Elliot & Harackiewicz, 1996), achievement motivation, fear of failure (Elliot & Church, 1997), BIS, BAS, positive temperament, negative temperament, extraversion, and neuroticism (Elliot & Thrash, 2002), and these relationships differ from the relationships of these same constructs with goals that are considered only approach (i.e., mastery) or only avoidance (i.e., performance avoidance). Several authors have concluded that there are mulitple levels of approach and avoidance motivation (Cacioppo & Bernston, 1994; Elliot, 2008; Scholer & Higgins, 2008) that impact observable behavior.

The finding in this study that there were more approach plans than avoidance plans generated for avoidance goals lends additional support to the view that avoidance goals are attained through approach-related activities. It was believed that the groups would differ, specifically that those higher in social anxiety would rely more upon avoidance plans, particularly with regard to social goals. This hypothesis

was not supported by the data. As such, any group differences in plan generation may be much more subtle than initially anticipated. It may be that if there was a situation that elicited more social anxiety than was elicited in this study, more avoidance plans may have been generated by those high in social anxiety. It may also be the case that this study sought differences at the wrong level of the hierarchical model of approach-avoidance motivation (Elliot, 2006, 2008; Elliot, Gable, & Mapes, 2006).

According to this model, observable behavior may be similar, but, according to Elliot et al. (2006), it can be guided by different motives in the social (i.e., hope for affiliation or fear of rejection) and achievement domains (i.e., need for achievement or fear of failure; Elliot, 2006). Those high in social anxiety may exhibit similar overt behaviors or generate similar plans or goals, but these phenomena may be guided by different motives than are those generated by non-anxious individuals. It may also be the case that differing motives lead to a subjectively different experience stemming from the same overt behaviors. Furthermore, a recent study (Gable, 2006) found that social motives, hope for affiliation and fear of rejection, accounted for more variance than did idiographic social approach and avoidance goals when predicting concurrent satisfaction with social bonds, loneliness, positive social attitudes, negative social attitudes, and relationship anxiety. The idiographic goals did, however, predict changes that occurred during a follow-up assessment. Because of these factors, it may prove useful to conduct further examinations of the underlying motives related to approach and avoidance among those high in social anxiety, particularly since relationships have been reported between heightened social anxiety and both increased fear of negative evaluation (Coles, Turk, Heimberg, & Fresco, 2001; Rapee & Heimberg, 1997; Rodebaugh et al., 2004) and perceptions of lesser ability (Norton et al., 2004; Rapee & Lim, 1992; Stopa & Clark, 1993), which are similar to the motives described by Elliot and colleagues listed above. This may be especially important when collecting data at one time point rather than multiple time points.

There were few significant correlations between the number of plans generated across goal types with the BIS or BAS for either group. None of the plan-related variables were significantly correlated with BAS. There was a positive relationship between BIS and the number of avoidance plans for non-

social approach goals for both groups, but there were no other significant correlations amongst those high in social anxiety. There were also positive relationships between BIS scores and the number of approach plans for social avoidance goals and the number of avoidance plans for non-social avoidance goals. Overall, the plan-related variables did not relate to the BIS and BAS scales in the manner one would expect of a measure of approach and avoidance motivation. Because of this, it is likely that the plans task, as applied in this study, may not represent a valid measure of underlying approach and avoidance motivations. This may have been the case because, like the goals task, the time limit was extended from the recommended 75 seconds to 120 seconds. The difference in time may have changed the underlying construct assessed. In addition, the plans task, while somewhat less constrained than the goals task since both approach and avoidance plans are generated during the same time period, still provides instructions that may change the ratio of approach and avoidance plans that would be generated in a more naturalistic approach to gathering plan data. The same suggestions offered for future research into idiosyncratic goal generation apply to plan research. Namely, examine the effects of manipulating time for the plans task or develop a task that does not explicitly guide participants toward generating either approach or avoidance plans.

Discussion of Findings Pertaining to Social Rating of Goals

As was predicted, those high in social anxiety rated both approach and avoidance goals as more social than did non-anxious controls. It is important to note, however, that the mean social rating of approach and avoidance goals for both groups was below five, which falls within the non-social goal classification. Overall, a significantly higher number of goals were classified as non-social than social by both groups. Those high in social anxiety did not differ from non-anxious controls with respect to the number of non-social goals generated, but they did generate higher numbers of social goals than did non-anxious controls. This finding that individuals high in social anxiety classify more goals as social and rate goals as more social in general is important in that it represents the only between-group differences related to goal generation identified in the study.

This difference becomes more meaningful when the results of the affect rating and plans task portions of the study are taken into consideration. Pursuit of social goals was related to anticipating less positive affect when imagining success, anticipating less negative affect when imagining failure, anticipating less deactivated negative affect in general, anticipating that the affective experience would have a shorter duration in general, and a non-significant tendency to anticipate a greater amount of deactivated positive affect. In effect, pursuit of social goals appears to be related to a dampening of affective experience, with the exception of states of calmness or serenity. Although there was an overall tendency for both groups to choose non-social goals over social goals, those high in social anxiety were more likely to choose social goals rated as having less net affective cost or gain and which would last for a shorter duration. This may represent a predilection among those high in social anxiety to avoid heightened affective states or choose goals that are less affectively risky. This is in keeping with a growing body of literature examining relationships between social anxiety and tendencies to suppress emotions (Kashdan & Breen, 2008; Kashdan & Steger, 2006; Spokas, Luterek, & Heimberg, 2009; Turk, Heimberg, Luterek, Mennin, & Fresco, 2005).

Whether goals were rated as social or non-social also affected the number of plans generated. Similar to the findings related to goals, participants in both groups generated higher number of approach plans than avoidance plans. The number of avoidance plans generated did not differ between social and non-social goals; however, fewer approach plans were generated for social goals than non-social goals. This finding, coupled with the finding that individuals high in social anxiety rated more goals as social, suggests that, despite the failure for between group comparisons to reach significance in this study, there may be a difference in plan generation among those high and low in social anxiety. However, any between-group differences in plan generation are much more subtle than were predicted in this study.

One of the strengths of the social rating scale used in this study is that it relies on the perception of the participant rather than that of a coder. Indeed, there were several goals (i.e., “get married”) that the research team would likely have considered social goals because of the requirement of another person for

their fulfillment. The fact that these goals were rated by participants as non-social, however, demonstrates that goals can be seen in a variety of ways depending on one's perspective, and that may not be obvious to observers. It is also a relatively quick assessment, taking less than a few minutes, and relates differently to low and high levels of social anxiety. Because of these factors, it is recommended that some variant of this assessment be used in future research. There is, however, an important limitation that could be corrected by future researchers.

The definition of non-social goals, "those goals that do not involve other people. They are goals you choose because they are important to you and depend upon your own expectations, not the expectations of others," included one component, that the goal did not involve other people. If a goal included others or was influenced by the expectation of someone else, then the goal was not to be considered non-social. In contrast, the definition of social goals had two components. The first component related to the presence of at least one other person, "those goals that involve other people, relate to situations where you may be observed by or interact with other people." The second component related to the influence of another person on the shaping of one's goals, "or are goals you have chosen because of the expectations of others." It is entirely possible that a goal could involve another person (i.e., make a new friend at the coffee house tonight) but have no relation to someone else's expectations. Conversely, a goal could seemingly have no socially interactive component (i.e., climbing a mountain by oneself), but be related to one's parents' desire to pass on their favorite pastime to their child, who would rather be watching the *Dr. Who* marathon on television.

There were between-group differences on the social rating scale; however, because of the two components of the definition of a social goal, questions can be raised as to which component participants responded. The example related to going to college in the instructions placed emphasis upon the component involving expectations, which might have primed participants from both groups to key into this aspect of social goals, but there is no means of ascertaining if this was, in fact, the case in this study. Alternatively, there may have been different patterns of responding to the social definition. For example,

one group might have been more likely to focus on the component of the definition related to expectations of others, whereas the other group may have attended more to the presence or absence of others. A way of discerning this in future studies would be to create a social rating scale that had two parts. The first would be a categorical rating, "*does this goal involve other people, interacting with other people, or being observed by other people?",* for which participants could circle yes or no. The second would be a dimensional rating with "*this goal is solely related to my own expectations"* on one end of the scale and, "*this goal is solely related to the expectations of others"* on the other. The results of this measure could then be used to examine if there were differences in the anticipated affect one would experience with respect to expectation source and presence or absence of others in order to get a more precise understanding of the role social anxiety plays in social goal related anticipated experiences with affect.

The relationship between social rating and approach and avoidance turned out to be somewhat complex. For non-anxious individuals, neither the BIS nor BAS scales were correlated with the approach goal social rating or the avoidance goal social rating. A pattern emerged in which the BAS scale was positively correlated with both the number of non-social approach and the number of non-social avoidance goals, indicating that the non-social goals had an approach component within the non-anxious control group. Within this group, the number of social avoidance goals was correlated with the BIS, but not the number of social approach goals, providing less clear evidence of a link between social goals and avoidance motivation among non-anxious controls. Among those high in social anxiety, the avoidance goal social rating was positively correlated with the BIS scale, but there were no other significant correlations between the BIS/BAS scale and social rating related variables among those high in social anxiety, presenting evidence that social rating related variables and approach / avoidance motivation have a differential relationship with those high in social anxiety than they do with non-anxious controls.

Discussion of Findings Pertaining to Anticipated Affect

When comparing expected affect as a result of goal pursuit, it appears that those high in social anxiety do not anticipate reaping the same rewards from goal pursuit that non-anxious controls do. When

considering goal pursuit, those high in social anxiety reported expecting more negative affect, more deactivated negative affect, and less deactivated positive affect, and they rated goal pursuit as less pleasant. In addition, they also believed that the consequents of imagining success would have a shorter duration than non-anxious controls and tended ($p = .02$) to believe that the consequences of failure had a longer duration than did the consequences of success, regardless of goal type, whereas non-anxious controls anticipated the opposite pattern. Furthermore, there was an additional benefit present for non-anxious controls, anticipating more arousal from imagining success than imagining failure, which was not present for those high in social anxiety. Also of note is that although those high in social anxiety tended to be more likely to generate social goals that were associated with higher ratings of deactivated positive affect, non-anxious controls anticipated more of this type of affect than did those high in social anxiety.

Surprisingly, the two groups did not differ with respect to the level of anticipated positive affect. Although this could be viewed as a benefit shared between the groups, there is reason to suspect that this may be an additional liability for those high in social anxiety. When the PANAS is administered, it is customarily used to assess current levels of affect. In studies using the PANAS in this manner, those high in social anxiety have consistently reported lower current levels of positive affect (T.A. Brown, Chorpita, & Barlow, 1998; Kashdan, 2007; Kashdan & Roberts, 2004; Kashdan & Breen, 2008; Kashdan & Steger, 2006). In effect, it appears that those high in social anxiety may expect to experience the same amount of positive affect from goal pursuit as do non-anxious controls but do not actually experience the amount of positive affect that non-anxious individuals experience. This may prove a liability because it may be one more area where those high in social anxiety may have grounds to compare themselves to others in a critical manner, "Why can't I just feel excited like everyone else?"

A similar pattern of differences between expected outcomes and actual outcomes has been reported elsewhere. Gilboa-Schectman et al. (2000) found that individuals with generalized social anxiety disorder expected that both the desirable and undesirable effects of a positive social event would last longer than did non-anxious controls. They also expected to have a stronger bodily reaction and a

larger increase in self-esteem following positive social events than did non-anxious controls. The work of Wallace and Allen (1997), however, indicated that the actual emotional consequences of positive social interactions resembled those experienced during unsuccessful social interactions. As discrepancies between the perceived self and expectations of how one should appear are believed to increase the risk of negative evaluation and anxiety among those high in social anxiety (Rapee & Heimberg, 1997), it may be the case that differences in the expected and actual consequents of goal pursuit may lead to an increase in anxiety for these individuals. It is also plausible to suggest that the anticipated positive consequents of goal pursuit, like an increase in positive affect, may become goals individuals are striving to achieve. Individuals failing to achieve these affect-related approach goals would likely experience an increase in deactivated negative affect (Carver et al., 2008; Higgins, 1997). As such, the tendency to expect equivalent levels of positive affect from goal pursuit may be initially adaptive, in that it would likely provide motivation and energy for approach goals, but would likely result in increased feelings of anxiety and sadness in the long term among those who experience higher levels of social anxiety.

Before the discussion of how approach and avoidance goal pursuit related to affect begins, it is important to note some key differences between the methodology employed in this study and that utilized in previous studies. In general, the studies linking approach / avoidance with affect have included more direct manipulation of participants' instructional set. In addition, most studies including a framing component usually involve between one and three separate sets of framing instructions and many times participants only experience one of these sets of instructions. In this study, we asked individuals to self-frame by imagining success or failure with four types of goals. In effect, asking them to experience eight self-framing conditions. Because of this, it was anticipated that the large effect sizes customary in similar research may have been somewhat reduced in this study. Participants were also asked to provide ratings based on anticipated experiences with affect rather than current experiences. There is evidence that expected and actual experiences with affect differ among those high in social anxiety and, it is likely that the same may be true of non-anxious controls. Because of these factors, it was anticipated that there

would be differences between these results and those obtained in more direct experimental manipulations and those assessing current experiences. As such, the affect portion of this study does not provide definitive answers to which model maps most closely onto one's actual experience. Rather, these results were obtained in the hope of contributing to the dialogue by addressing types of affect that have received less attention, like deactivated positive affect, and comparing what individuals anticipate experiencing to what would be predicted based on the various models of approach and avoidance.

In general, it was anticipated by participants that approach goals would be related to heightened states of affect. The only exceptions were deactivated negative affect, for which the anticipated affect level did not differ with respect to goal type, and deactivated positive affect. Avoidance goals were expected to be related to higher levels of deactivated positive affect than were approach goals, regardless of group, social rating, or imagined outcome. This pattern of relationship between avoidance goals and affective states like calmness and serenity would be predicted by Carver and colleagues (Carver et al., 2008; Carver & Scheier, 1998) and Higgins (1997). It is not, however, consistent with Gray's (1982, 1990, 1994a, 1994b) view of these emotions being related to approach motivation. In line with all of the models, when participants imagined success with approach goals, they expected to experience more positive affect than when imagining successful avoidance. Contrary to the pattern predicted by all of the models, participants anticipated experiencing more negative affect when pursuing approach goals than when pursuing avoidance goals. There was no difference in anticipated deactivated negative affect when pursuing approach or avoidance goals, which also contrasted with predictions made by the various theoretical models.

With regard to the valence and arousal findings, there was mixed congruence with the theoretical models. In general, approach goals were rated as more pleasant and arousing than were avoidance goals. They were also expected to have a longer duration. There were significant interaction effects for goal type and outcome for both valence and arousal, which, when combined, lend support to the idea that both approach and avoidance goals are related to pleasant experiences with affect, but that these experiences

differ in important ways (Carver et al., 2008; Carver & Scheier, 1998; Higgins, 1997). Imagining success was more pleasant than imagining failure for both types of goals; however, imagining success with approach goals was expected to relate to more pleasant and arousing experiences than was imagining success with avoidance goals. Imagining failure was less pleasant than imagining success for both types of goals, which would predicted by all the models; however, failure with approach or avoidance goals did not differ with respect to anticipated arousal, which is inconsistent with models posited by Carver and Scheier (1998) and Higgins (1997).

Because of the factors listed above, the results from this study should not be used to advocate for one group of theorists over the other; rather, they serve to underscore the necessity of further work investigating aspects of the affective spectrum that have received less attention, like deactivated positive affect. The findings also illuminated a bias that may be shared by both individuals high in social anxiety and non-anxious controls. Whereas participants anticipated having experiences that were congruent with research relating to approach / avoidance and pleasant affect (Higgins et al., 1997; Shah & Higgins, 1997), what they anticipated with respect to unpleasant affect did not match empirical findings. In effect, both groups expected to experience the same heightened arousal for failing to successfully approach as they would for failing to successfully avoid, which runs counter to the all the evidence cited in this paper as well as what would be predicted by the various theoretical models. An important point is the fact that, to the best of our research group's knowledge, empirical studies involving individuals high in social anxiety and using the extant methodology for assessing the link between approach / avoidance framing and actual experience of affect are non-existent. As such, it may be the case that individuals high in social anxiety expect equivalent negative affect regardless of the type of goal they are pursuing and that expecting negative affect from failed approach is not a bias, but a well-founded assumption based on personal experience. Employing existing methodology (Elliot & Harackiewicz, 1996; Roney et. al, 1995; Higgins et al., 1997) with individuals high in social anxiety would likely prove an intriguing and useful focus for future studies.

The higher order interactions in the analyses examining affect failed to reach significance. As a result, there was no support for hypotheses predicting a differential response to success with social approach goals between groups. Because this study involved ratings of anticipated affect, the findings may not map onto one's actual experience with success or failure with social approach goals. It may be the case that these types of effects are not anticipated by individuals high in social anxiety. It is notable that previous work reported in this area (Alden et al., 2004; Wallace & Alden, 1997) included a feedback component in which individuals high in social anxiety were provided with information that either focused on the presence of positive performance cues or the absence of negative performance cues. These studies provide evidence for negative consequences of success in social situations among those high in social anxiety. It may prove useful to examine the types of goals individuals high in social anxiety who receive positive feedback following a social interaction generate compared to those who receive either negative feedback or feedback related to the absence of negative performance cues to see whether conditions that led to the expectation that others may "raise the bar" (Wallace & Alden, 1997) following successful social performances also impacts goal generation and the affect one anticipates following goal pursuit.

Discussion Pertaining to Additional Limitations of the Current Study

One of the most significant limitations of the current study was the poor inter-rater reliability for the specificity of goals and plans. This prohibited fully testing multiple hypotheses based upon some of the more interesting findings from Dickson and MacLeod (2004b) related to differences in specificity of goals in the absence of differences in the number of goals generated. There are multiple factors that may have contributed to the lack of reliability. The data had been entered and checked to ensure that the disparity in codings had not come from a simple data entry error. The criteria and training materials were obtained from the original authors, who had reported acceptable reliability for specificity variables. All three of the original coders were selected because of their academic excellence; they had all taken a course taught by members of the research team, received high marks, and appeared motivated to pursue careers in psychology. They had also gained a reputation for being dependable research assistants on

other projects at the Adult Anxiety Clinic of Temple University. They were trained in accordance with the description from the methods section. The initial plan was to have two assistants each code half of the participants. The third assistant would then code a fourth of the participants the first two coders had been assigned to assess for reliability soon after the first pass had been completed.

Unfortunately, one of the research assistants left the project without notice because of personal circumstances, and reliability ratings were no longer able to occur concurrently. Therefore, the amount of time between training and completion of the reliability coding increased. As such, the adherence to the specificity criteria may have drifted over the course of the coding period, which seems the most plausible explanation for the lack of reliability. The validity ratings for specificity of goal and plan hinge upon correctly identifying a *target feature* or *specific action*, respectively. Identifying whether a concept fits within these umbrellas, or is a more *global aspiration* can be a difficult decision and, it is likely, that this factor also contributed to the lack of agreement between coders. During the first and second passes of coding, graduate students were available to answer questions coders had related to the coding criteria and multiple conversations occurred between the principal investigator, coders, and other members of the research team. However, it is apparent that this was insufficient to maintain adequate agreement. Future researchers using this rating scheme are advised to use more than two coders, complete coding closer to training, and engage in more structured training throughout the rating process to reduce drift among coders.

The inter-rater reliability for classifying goals and plans as approach or avoidance was acceptable, but not as high as that reported by Dickson and MacLeod (2004b). The same factors reducing the reliability of specificity likely played a role in reducing agreement in this classification scheme. If the coding had been completed closer to the occurrence of the training, there likely would have been better agreement. Since the onset of this research, a more thorough set of guidelines and instructions for coding goals as approach or avoidance has been developed for use in idiosyncratic goal generation tasks (Elliot & Friedman, 2007). This scheme may have advantages over that used in the current study in that it was

developed to code goals in tasks that placed fewer constraints on goal generation. For example, both approach and avoidance goals could be generated during the same task. In addition to the traditional approach and avoidance categories, there are also other designations, *approach then avoidance* and *avoidance then approach*, which may better capture the pursuit of avoidance through approach and approach through avoidance. It is recommended that future researchers examining employing idiosyncratic goal generation tasks evaluate several coding schemes in order to ensure their selection of the one that is most closely aligned with their needs.

Another limitation of the current study was its reliance upon an analog sample of Temple University undergraduate psychology students. The aim of this study was to use inclusion criteria that would maximize the applicability of these findings to a clinical sample, and the mean SIAS score of this sample (M = 47.2, SD = 8.3) is comparable to the mean SIAS score of a clinical sample of 50 individuals with social anxiety disorder reported by E.J. Brown et al. (1997; M = 50.7, SD = 17.0). Nevertheless, there may be important differences between this analog sample and an actual clinical sample of individuals having a primary diagnosis of social anxiety disorder. This limits the ability to generalize findings from this study to clinical samples. Examination of approach and avoidance goals and plans in an actual clinical sample would have provided findings better suited towards increasing our understanding and treatment of social anxiety disorder. It is also likely that these findings may not relate as well to samples with different demographic and cultural compositions.

Discussion of the Clinical Implications of Findings

Integrating aspects of approach and avoidance into therapy is not unique to cognitive-behavioral therapy and has been advocated by practitioners from a multitude of theoretical orientations. Distinctions between approach and avoidance goals have been an important, albeit not always explicit, component of several theoretically diverse treatments for psychological distress and impairment. Horney (1937/1964) described neurotics as being driven by fears to such an extent that they do not develop a clear conception of what they want in life. The importance of working towards meaningful goals is also outlined by

existential theorists like Frankl (1946/1985) and May (1953) who wrote that, "The human being cannot live in a condition of emptiness for very long: if he is not growing *toward* something, he does not merely stagnate; the pent-up potentialities turn into morbidity and despair…" (p. 24, italics in original). Although contemporary, empirically supported approaches to psychotherapy have dramatic theoretical differences from the psychodynamic and existential approaches listed above, they do share an emphasis on approach and avoidance behaviors. For instance, Beck, Rush, Shaw, and Emery (1979) noted the importance of scheduling pleasurable and mastery-related activities, similar to approach goals, in cognitive-behavioral therapy (CBT) for depression. In addition, CBT for social anxiety disorder (Heimberg & Becker, 2002) utilizes a combination of cognitive restructuring and exposure to reduce avoidance of feared situations and maladaptive cognitions, leading to a reduction in social anxiety.

Despite the importance placed upon approach and avoidance goals throughout the history of psychotherapy, specific goal setting strategies have received little empirical attention in the discussion of effective treatment in general. To date, there has been only one study that directly investigated how client-generated avoidance goals relate to treatment outcome (Elliot & Church, 2002). Existing approaches to social anxiety treatment were developed prior to the recent resurgence of interest in the relationship between types of goals and affect. As such, there has been limited inquiry into how best to incorporate goal-related knowledge into these treatment approaches.

During exposure sessions in CBT for social anxiety disorder, it is customary for the therapist to work with clients to set observable goals that are achievable (Hope, Heimberg, & Turk, 2006). Many of these goals tend to be approach oriented: stay in the exposure, provide three pieces of information about yourself, or challenge negative thoughts as they occur. Another important part of existing treatment is the gradual reduction of avoidance-related behaviors and shift towards more approach-related behaviors. There are, however, many other important goal-related findings that may contribute to the development of more effective interventions. The current study found more similarities than differences in goal and plan generation between groups. Because of the limitations described above, it is premature to conclude that

there are not important differences with respect to goal and plan generation as a function of level of social anxiety. Future research into this area involving more specific anxiety evoking events may reveal a pattern of differences that could be used to further refine goal and plan setting strategies in CBT.

Idiographic social goals were demonstrated to be related to multiple unfavorable outcomes for those high in social anxiety. Reliance upon social goals may also serve as a means of avoiding more intense affective experience, which has also been found to have unpleasant consequences when coupled with high levels of social anxiety (Kashdan & Steger, 2006). As such, learning more about which aspects of the social goals, presence of others or expectations of others, has a stronger relationship to the negative consequences may prove useful in tailoring interventions. It may be the case that encouraging clients to form more goals encapsulating their own expectations rather than those of others may improve treatment outcome. In addition, the findings from this study also highlight that those high in social anxiety anticipate different experiences with affect as a function of goal pursuit. Beliefs about affect related to goal pursuit may impact goal formation, goal-directed behavior, and motivation in general. Challenging maladaptive beliefs about negative affect has been an integral aspect of treatment for social anxiety for decades. After considering the affect-related findings from this study, it may be the case that challenging maladaptive beliefs related to other types of affect may also prove useful in reducing unpleasant experiences of affect and encouraging behaviors and beliefs related to more adaptive goal-related affective outcomes.

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APPENDIX A
RECORDING SHEET FOR GOAL TASK

Goal #	**Imagine each of your responses beginning with the following phrase: 'In the future it will be important for me to try (to avoid) ….'**	**SR**

Please turn to the back of this page if you need more space to write.

APPENDIX B
SOCIAL RATING SCALE

For the next task, please read the following definitions.

Social Goals are those goals that involve other people, relate to situations where you may be observed by or interact with other people, or are goals you have chosen because of the expectations of others.

Non-social Goals are those goals that do not involve other people. They are goals you choose because they are important to you and depend upon your own expectations, not the expectations of others.

In this task, you will be asked to rate your goals with regard to how social or non-social you think they are. There are not right or wrong answers. The same goal could be rated as social, non-social, or both depending on who is rating them. For instance, some people go to college because they believe it is important, others go to college because it is what somebody wants for them, and some go to college because of a combination of their own interest and what they believe others think is important. Please use the following scale to rate each of the goals you listed during the goals task, write your response in the column labeled **SR**:

1 non-social	2	3	4	5 Equally social and non-social	6	7	8	9 social

APPENDIX C
RECORDING SHEET FOR PLANS TASK

	Please write the goal labeled Goal Task x Nx on the randomization sheet in the space below. **In the future it will be important for me to try (to avoid):**
Plan **#**	**How I could accomplish this...?** (please begin each response with either **'by…'** or **'by not…'**)

Please turn to the back of this page if you need more space to write.

APPENDIX D
EMOTIONAL RATING FORMS

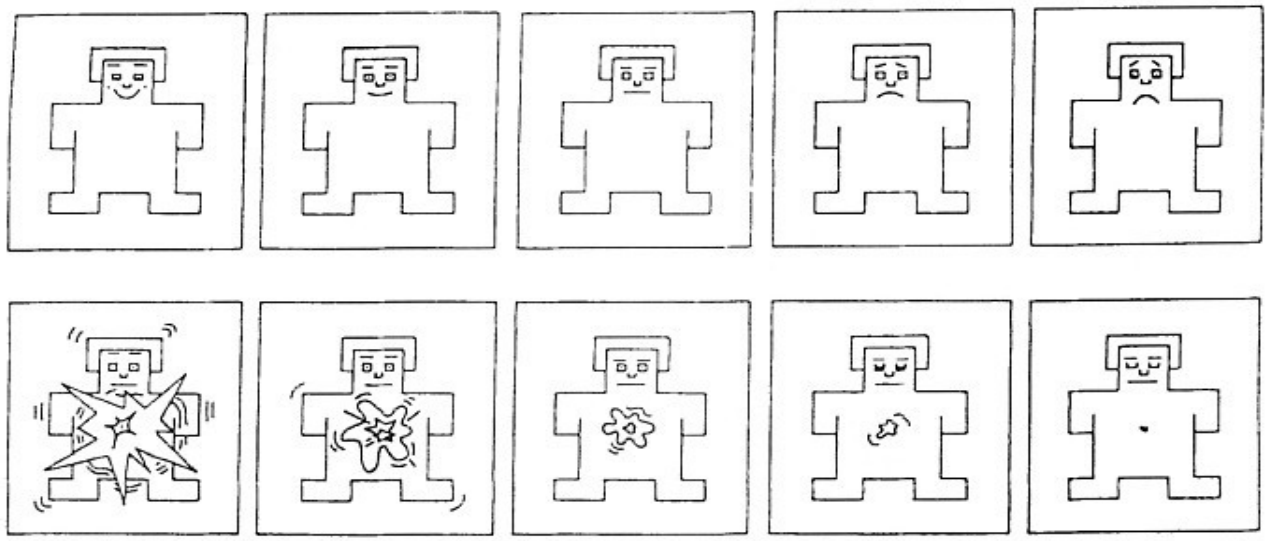
Please write the goal labeled Goal Task x Nx on the randomization sheet in the following space_____. Imagine you were (failing to) making progress towards this goal. Please answer the following questions with respect to how you would feel.

This scale consists of a number of words that describe different feelings and emotions. Read each item and then circle the appropriate box next to that word. Indicate to what extent you would feel if you were (failing to) making satisfactory progress towards the goal you listed above. Use the following scale to record your answers.

1 very slightly or not at all	2 a little	3 moderately	4 quite a bit	5 extremely

Distressed	1	2	3	4	5
Excited	1	2	3	4	5
Upset	1	2	3	4	5
Scared	1	2	3	4	5
Alert	1	2	3	4	5
Inspired	1	2	3	4	5
Nervous	1	2	3	4	5
Determined	1	2	3	4	5
Afraid	1	2	3	4	5
Enthusiastic	1	2	3	4	5

Relaxed	1	2	3	4	5
Tired	1	2	3	4	5
At rest	1	2	3	4	5
Serene	1	2	3	4	5
Sluggish	1	2	3	4	5
Droopy	1	2	3	4	5
Calm	1	2	3	4	5
Drowsy	1	2	3	4	5
At ease	1	2	3	4	5
Bored	1	2	3	4	5
Dull	1	2	3	4	5



Please circle your answer to the following question: How long would your reaction last?

none	Several minutes	15 minutes	About an hour	Few hours	About a day	Few days	Two weeks	More than a month

APPENDIX E
SELF-REPORT QUESTIONNAIRES

Social Interaction Anxiety Scale

Beck Depression Inventory 2nd Edition

Social Phobia Scale

BIS/BAS Scales

Quality of Life Inventory

Social Anxiety Interaction Scale

For each question, please fill in a numbered bubble to indicate the degree to which you feel the statement is characteristic or true of you. The rating scale is as follows:

0 = Not at all characteristic or true of me
1 = Slightly characteristic or true of me
2 = Moderately characteristic or true of me
3 = Very characteristic or true of me
4 = Extremely characteristic or true of me

	Not at All	Slightly	Moderately	Very	Extremely
1. I get nervous if I have to speak with someone in authority (teacher, boss).	⓪	①	②	③	④
2. I have difficulty making eye-contact with others.	⓪	①	②	③	④
3. I become tense if I have to talk about myself or my feelings.	⓪	①	②	③	④
4. I find it difficult mixing comfortably with the people I work with.	⓪	①	②	③	④
5. I find it easy to make friends of my own age.	⓪	①	②	③	④
6. I tense up if I meet an acquaintance in the street.	⓪	①	②	③	④
7. When mixing socially, I am uncomfortable.	⓪	①	②	③	④
8. I feel tense if I am alone with just one person.	⓪	①	②	③	④
9. I am at ease meeting people at parties, etc.	⓪	①	②	③	④
10. I have difficulty talking with other people.	⓪	①	②	③	④
11. I find it easy to think of things to talk about.	⓪	①	②	③	④
12. I worry about expressing myself in case I appear awkward.	⓪	①	②	③	④
13. I find it difficult to disagree with another's point of view.	⓪	①	②	③	④
14. I have difficulty talking to attractive persons of the opposite sex	⓪	①	②	③	④
15. I find myself worrying that I won't know what to say in social situations.	⓪	①	②	③	④
16. I am nervous mixing with people I don’t know well.	⓪	①	②	③	④
17. I feel I'll say something embarrassing when talking.	⓪	①	②	③	④
18. When mixing in a group, I find myself worrying I will be ignored.	⓪	①	②	③	④
19. I am tense mixing in a group.	⓪	①	②	③	④
20. I am unsure whether to greet someone I know only slightly.	⓪	①	②	③	④

BDI-II

This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the **one statement** in each group that best describes the way you have been feeling during the **past two weeks, including today**. Fill in the bubble beside the statement you have picked. If several statements in the group seem to apply equally well, fill in the bubble that corresponds to the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite)

1. Sadness

⓪ I do not feel sad.
① I feel sad much of the time.
② I am sad all the time.
③ I am so sad or unhappy that I can't stand it.

2. Pessimism

⓪ I am not discouraged about my future.
① I feel more discouraged about my future than I used to be.
② I do not expect things to work out for me.
③ I feel that my future is hopeless and will only get worse.

3. Past Failure

⓪ I do not feel like a failure.
① I have failed more than I should have.
② As I look back, I see a lot of failures.
③ I feel I am a total failure as a person.

4. Loss of Pleasure

⓪ I get as much pleasure as I ever did from the things I enjoy.
① I don't enjoy things as much as I used to.
② I get very little pleasure from the things I used to enjoy.
③ I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings

⓪ I don't feel particularly guilty.
① I feel guilty over many things I have done or should have done.
② I feel quite guilty most of the time.
③ I feel guilty all of the time.

6. Punishment Feelings

⓪ I don't feel I am being punished.
① I feel I may be punished.
② I expect to be punished.
③ I feel I am being punished.

7. Self-Dislike

⓪ I feel the same about myself as ever.
① I have lost confidence in myself.
② I am disappointed in myself.
③ I dislike myself.

8. Self-Criticalness

⓪ I don't criticize or blame myself more than usual.
① I am more critical of myself than I used to be.
② I criticize myself for all of my faults.
③ I blame myself for everything bad that happens.

9. Suicidal Thoughts or Wishes

⓪ I don't have any thoughts of killing myself.
① I have thoughts of killing myself, but I would not carry them out.
② I would like to kill myself.
③ I would kill myself if I had the chance.

10. Crying

⓪ I don't cry anymore than I used to.
① I cry more than I used to.
② I cry over every little thing.
③ I feel like crying, but I can't.

11. Agitation

⓪ I am no more restless or wound up than usual.
① I feel more restless or wound up than usual.
② I feel so restless or agitated that it's hard to stay still.
③ I am so restless or agitated that I have to keep moving or doing something.

12. Loss of Interest

⓪ I have not lost interest in other people or activities.
① I am less interested in other people or things than before.
② I have lost most of my interest in other people or things.
③ It's hard to get interested in anything.

13. Indecisiveness

⓪ I make decisions about as well as ever.
① I find it more difficult to make decisions than usual.
② I have much greater difficulty in making decisions than I used to.
③ I have trouble making any decisions.

14. Worthlessness

⓪ I do not feel I am worthless.
① I don't consider myself as worthwhile and useful as I used to.
② I feel more worthless as compared to other people.
③ I feel utterly worthless.

15. Loss of Energy

⓪ I have as much energy as ever.
① I have less energy than I used to have.
② I don't have enough energy to do very much.
③ I don't have enough energy to do anything.

16. Changes in Sleeping Pattern

⓪ I have not experienced any change in my sleeping pattern.
① I sleep somewhat more than usual.
① I sleep somewhat less than usual.
② I sleep a lot more than usual.
② I sleep a lot less than usual.
③ I sleep most of the day.
③ I wake up 1-2 hours early and can't get back to sleep.

17. Irritability

⓪ I am no more irritable than usual.
① I am more irritable than usual.
② I am much more irritable than usual.
③ I am irritable all the time.

18. Changes in Appetite

⓪ I have not experienced any change in my appetite.
① My appetite is somewhat less than usual.
① My appetite is somewhat greater than usual.
② My appetite is much less than before.
② My appetite is much greater than usual.
③ I have no appetite at all.
③ I crave food all the time.

19. Concentration Difficulty

⓪ I can concentrate as well as ever.
① I can't concentrate as well as usual.
② It's hard to keep my mind on anything for very long.
③ I find I can't concentrate on anything.

20. Tiredness or Fatigue

⓪ I am no more tired or fatigued than usual.
① I get more tired or fatigued more easily than usual.
② I am too tired or fatigued to do a lot of the things I used to do.
③ I am too tired or fatigued to do most of the things I used to do.

21. Loss of Interest in Sex

⓪ I have not noticed any recent change in my interest in sex.
① I am less interested in sex than I used to be.
② I am much less interested in sex now.
③ I have lost interest in sex completely.

SPS

For each question, please fill in a numbered bubble to indicate the degree to which you feel the statement is characteristic or true of you. The rating scale is as follows:

0 = Not at all characteristic or true of me
1 = Slightly characteristic or true of me
2 = Moderately characteristic or true of me
3 = Very characteristic or true of me
4 = Extremely characteristic or true of me

	Not at All	Slightly	Moderately	Very	Extrem-ely
1. I become anxious if I have to write in front of other people.	⓪	①	②	③	④
2. I become self-conscious when using public toilets.	⓪	①	②	③	④
3. I can suddenly become aware of my own voice and of others listening to me.	⓪	①	②	③	④
4. I get nervous that people are staring at me as I walk down the street.	⓪	①	②	③	④
5. I fear I may blush when I am with others	⓪	①	②	③	④
6. I feel self-conscious if I have to enter a room where others are already seated.	⓪	①	②	③	④
7. I worry about shaking or trembling when I'm watched by other people	⓪	①	②	③	④
8. I would get tense if I had to sit facing other people on a bus or a train.	⓪	①	②	③	④
9. I get panicky that others might see me faint, or be sick or ill.	⓪	①	②	③	④
10. I would find it difficult to drink something if in a group of people.	⓪	①	②	③	④
11. It would make me feel self-conscious to eat in front of a stranger at a restaurant.	⓪	①	②	③	④
12. I am worried people will think my behavior odd.	⓪	①	②	③	④
13. I would get tense if I had to carry a tray across a crowded cafeteria.	⓪	①	②	③	④
14. I worry I'll lose control of myself in front of other people.	⓪	①	②	③	④
15. I worry I might do something to attract the attention of other people.	⓪	①	②	③	④
16. When in an elevator, I am tense if people look at me.	⓪	①	②	③	④
17. I can feel conspicuous standing in a line	⓪	①	②	③	④
18. I can get tense when I speak in front of other people.	⓪	①	②	③	④
19. I worry my head will shake or nod in front of others.	⓪	①	②	③	④
20. I feel awkward and tense if I know people are watching me.	⓪	①	②	③	④

BIS/BAS

Directions: Each item on this questionnaire is a statement that a person may either agree with or disagree with. For each item, indicate how much you agree or disagree with what that item says. Please respond to all of the items; do *not* leave any blank. Choose only *one* response to each statement. Please be as accurate and honest as you can be. Respond to each item as if it were the only item. That is, don't worry about being "consistent" in your responses. Choose from the following four response options:

1	2	3	4
strongly disagree	disagree	agree	strongly agree

1. Even if something bad is about to happen to me, I rarely experience fear or nervousness.	1	2	3	4
2. I go out of my way to get things I want.	1	2	3	4
3. When I'm doing well at something, I love to keep at it.	1	2	3	4
4. I'm always willing to try something new if I think it will be fun.	1	2	3	4
5. When I get something I want, I feel excited and energized.	1	2	3	4
6. Criticisms or scolding hurts me quite a bit.	1	2	3	4
7. When I want something, I usually go all-out to get it.	1	2	3	4
8. I will often do things for no other reason than that they might be fun.	1	2	3	4
9. If I see a chance to get something I want, I move on it right away.	1	2	3	4
10. I feel pretty worried or upset when I think or know somebody is angry at me.	1	2	3	4
11. When I see an opportunity for something I like, I get excited right away.	1	2	3	4
12. I often act on the spur of the moment.	1	2	3	4
13. If I think something unpleasant is going to happen, I usually get pretty "worked up."	1	2	3	4
14. When good things happen to me, it affects me strongly.	1	2	3	4
15. I feel worried when I think I have done poorly at something.	1	2	3	4
16. I crave excitement and new sensations.	1	2	3	4
17. When I go after something, I use a "no holds barred" approach.	1	2	3	4
18. I have very few fears compared to my friends.	1	2	3	4
19. It would excite me to win a contest.	1	2	3	4
20. I worry about making mistakes.	1	2	3	4

QOLI (1994)

DIRECTIONS:
This survey asks how satisfied you are with parts of your life such as your work and your health. It also asks how important these things are to your happiness. Special definitions are used for words like "money", "work," and "play." Keep these definitions in mind as you answer the questions. Answer every question, even if it does not seem to apply to you. It is your feelings and opinions that are important, so there are no right or wrong answers. Just give the answers that best describe you.

The survey asks you to describe how **important** and how **satisfied** you are with parts of your life such as work and health:

Important means how much this part of your life adds to your overall happiness. You can say how important something is by picking one of three choices: "Not Important" (0), "Important" (1), or "Extremely Important" (2).

Satisfied means how well your needs, goals, and wishes are being met in this area of life. You can say how satisfied you are by picking one of six choices from
"Very Dissatisfied" (-3) to "Very Satisfied" (+3).

For each question, fill in the numbered bubble that best describes you.

EXAMPLE:

This is how you would answer if WORK was "Important" for your overall happiness:

Not Important	Important	Extremely Important
⓪	●	②

You would answer this way if you were "Somewhat Satisfied" with your WORK:

DISSATISFIED			SATISFIED		
Very (-3)	Somewhat (-2)	A Little (-1)	A Little (1)	Somewhat (2)	Very (3)
○	○	○	○	●	○

				DISSATISFIED			SATISFIED		
	Not Important	Important	Extremely Important	Very (-3)	Somewhat (-2)	A Little (-1)	A Little (1)	Somewhat (2)	Very (3)
HEALTH is being physically fit, not sick, and without pain or disability. 1. How **important** is HEALTH to your happiness? 2. How **satisfied** are you with your HEALTH?	⓪	①	②	○	○	○	○	○	○
SELF-ESTEEM means liking and respecting yourself in light of your strengths and weaknesses, successes and failures, and ability to handle problems. 3. How **important** is SELF-ESTEEM to your happiness? 4. How **satisfied** are you with your SELF-ESTEEM?	⓪	①	②	○	○	○	○	○	○
GOALS-AND-VALUES are your beliefs about what matters most in life and how you should live, both now and in the future. This includes your goals in life, what you think is right or wrong, and the purpose or meaning of life as you see it. 5. How **important** are GOALS-AND-VALUES to your happiness? 6. How **satisfied** are you with your GOALS-AND- VALUES?	⓪	①	②	○	○	○	○	○	○
MONEY is made up of three things. It is the money you earn, the things you own (like a car or furniture), and believing that you will have the money and things that you need in the future. 7. How **important** is MONEY to your happiness? 8. How **satisfied** are you with the MONEY you have?	⓪	①	②	○	○	○	○	○	○
WORK means your career or how you spend most of your time. You may work at a job, at home taking care of your family, or at school as a student. WORK includes your duties on the job, the money you earn (if any), and the people you work with. (If you are unemployed, retired, or can't work, you can still answer these questions.) 9. How **important** is WORK to your happiness? 10. How **satisfied** are you with your WORK? (If you are not working, say how satisfied you are about not working.)	⓪	①	②	○	○	○	○	○	○

				DISSATISFIED			SATISFIED		
	Not Important	Important	Extremely Important	Very (-3)	Somewhat (-2)	A Little (-1)	A Little (1)	Somewhat (2)	Very (3)
PLAY is what you do in your free time to relax, have fun, or improve yourself. This could include watching movies, visiting friends, or pursuing a hobby like sports or gardening.									
11. How **important** is PLAY to your happiness?	⓪	①	②						
12. How **satisfied** are you with the PLAY in your life?				○	○	○	○	○	○
LEARNING means gaining new skills or information about things that interest you. LEARNING can come from reading books or taking classes on subjects like history, car repair, or using a computer									
13. How **important** is LEARNING to your happiness?	⓪	①	②						
14. How **satisfied** are you with your LEARNING?				○	○	○	○	○	○
CREATIVITY is using your imagination to come up with new and clever ways to solve everyday problems or to pursue a hobby like painting, photography, or needlework. This can include decorating your home, playing the guitar, or finding a new way to solve a problem at work.									
15. How **important** is CREATIVITY to your happiness?	⓪	①	②						
16. How **satisfied** are you with your CREATIVITY?				○	○	○	○	○	○
HELPING means helping others in need or helping to make your community a better place to live. HELPING can be done on your own or in a group like a church, a neighborhood association, or a political party. HELPING can include doing volunteer work at a school or giving money to a good cause. HELPING means helping people who are not your friends or relatives.									
17. How **important** is HELPING to your happiness?	⓪	①	②						
18. How **satisfied** are you with the HELPING you do?				○	○	○	○	○	○

				DISSATISFIED			SATISFIED		
	Not Important	Important	Extremely Important	Very (-3)	Somewhat (-2)	A Little (-1)	A Little (1)	Somewhat (2)	Very (3)
LOVE is a very close romantic relationship with another person. LOVE usually includes sexual feelings and feeling loved, cared for, and understood. (If you do not have a LOVE relationship, you can still answer these questions.)									
19. How **important** is LOVE to your happiness?	⓪	①	②						
20. How **satisfied** are you with the LOVE in your life? (If you are not in a LOVE relationship, say how satisfied you feel about not having a LOVE relationship.)				○	○	○	○	○	○
FRIENDS are people (not relatives) you know well and care about who have interests and opinions like yours. FRIENDS have fun together, talk about personal problems, and help each other out. (If you have no FRIENDS, you can still answer these questions.)									
21. How **important** are FRIENDS to your happiness?	⓪	①	②						
22. How **satisfied** are you with your FRIENDS? (If you have no FRIENDS, say how satisfied you are about having no FRIENDS.)				○	○	○	○	○	○
CHILDREN means how you get along with your child (or children). Think of how you get along as you care for, visit, or play with your child. (If you do not have CHILDREN, you can still answer these questions.)									
23. How important are CHILDREN to your happiness? (If you have no CHILDREN, say how important having a child is to your happiness.)	⓪	①	②						
24. How satisfied are you with your relationships with your CHILDREN? (If you have no CHILDREN, say how satisfied you feel about not having CHILDREN.)				○	○	○	○	○	○

				DISSATISFIED			SATISFIED		
	Not Important	Important	Extremely Important	Very (-3)	Somewhat (-2)	A Little (-1)	A Little (1)	Somewhat (2)	Very (3)
RELATIVES means how you get along with your parents, grandparents, brothers, sisters, aunts, uncles, and in-laws. Think about how you get along when you are doing things together like visiting, talking on the telephone, or helping each other out. ***(If you have no living RELATIVES, circle the 0 ["not Important"] for question 25 and do not answer question 26).***									
25. How **important** are RELATIVES to your happiness?	⓪	①	②						
26. How **satisfied** are you with your relationships with RELATIVES?				○	○	○	○	○	○
HOME is where you live. It is your house or apartment and the yard around it. Think about how nice it looks, how big it is, and your rent or house payment.									
27. How **important** is your HOME to your happiness?	⓪	①	②						
28. How **satisfied** are you with your HOME?				○	○	○	○	○	○
NEIGHBORHOOD is the area around your home. Think about how nice it looks, the amount of crime in the area, and how well you like the people.									
29. How **important** is your NEIGHBORHOOD to your happiness?	⓪	①	②						
30. How **satisfied** are you with your NEIGHBORHOOD?				○	○	○	○	○	○
COMMUNITY is the whole city, town, or rural area where you live (It is not just your neighborhood). COMMUNITY includes how nice the area looks, the amount of crime, and how well you like the people. It also includes places to go for fun like parks, concerts, sporting events and restaurants. You may also consider the cost of things you need to buy, the availability of jobs, the government, schools, taxes, and pollution.									
31. How **important** is your COMMUNITY to your happiness?	⓪	①	②						
32. How **satisfied** are you with your COMMUNITY?				○	○	○	○	○	○

APPENDIX F

RANDOMIZATION SHEET

Please write the goals that you selected from Activity 1 and Activity 2 in the appropriate boxes.

Goal Task 1 N1	

Goal Task 1 S1	

Goal Task 2 N1	

Goal Task 2 S1	

APPENDIX G
SELF-ASSESSMENT MANIKIN INSTRUCTIONS

Instructions for the valence dimension (Lang et al., 2005, p. 5):

"You can see that each SAM figure varies along each scale. In this illustration, the first SAM scale is the happy-unhappy scale, which ranges from a smile to a frown. At one extreme of the happy vs. unhappy scale, you felt happy, pleased satisfied, contented, hopeful. If you felt completely *happy* while viewing the picture[3], you can indicate this by placing an "X" over the figure at the left, like this (demonstrate with SAM). The other end of the scale is when you felt completely unhappy, annoyed, unsatisfied, melancholic, despaired, bored. You can indicate feeling completely *unhappy* by placing an "X" on the figure on the right, like this (demonstrate with SAM). The figures also allow you to describe intermediate feelings of pleasure, by placing an "X" over any of the other pictures. If you felt completely neutral, neither happy nor unhappy, place and "X" over the figure in the middle. If, in your judgment, your feelings of pleasure or displeasure falls *between* two of the pictures, then place an "X" between the figures, like this (demonstrate with the SAM). This permits you to make more finely graded ratings of how you feel in reaction to the pictures."

[3] These instructions were developed for use with the International Affective Picture System (IAPS; Center for the Study of Emotion and Attention, 1995) and were modified in the following ways: instead of querying how participants felt in regard to pictures from the IAP, participants were asked to make their ratings in regard to how they would feel if they were making satisfactory progress towards a goal and if they were failing to make progress toward this goal.

Instructions for the arousal dimension (Lang et al., 2005**,** p. 5):

"The excited vs. calm dimension is the second type of feeling displayed here. At one extreme of the scale, you felt stimulated, excited, frenzied, jittery, wide-awake, aroused. If you felt completely *aroused* while viewing the pictures[4], place an "X" over the figure at the left of the row, like this (demonstrate with SAM). On the other hand, at the other end of the scale, you felt completely relaxed, calm, sluggish, dull, sleepy, unaroused. You can indicate you felt completely *calm* by placing an "X" over the figure at the right of the row, like this (demonstrate with SAM). As with the happy-unhappy scale, you can represent intermediate levels by placing an "X" over any of the other figures. If you are not at all excited nor at all calm, place an "X" over the figure in the middle of the row. Again, if you wish to make a more finely tuned rating of how excited or calm you feel, place an "X" *between* the pictures, like this (demonstrate with SAM).

[4] These instructions were developed for use with the International Affective Picture System (IAPS; Center for the Study of Emotion and Attention, 1995) and were modified in the following ways: instead of querying how participants feel in regard to pictures from the IAP, participants were asked to make their ratings in regard to how they would feel if they were making satisfactory progress towards a goal and if they were failing to make progress toward this goal.