Social Anxiety and the Accuracy of Predicted Affect

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Abstract

Social anxiety is theorized to arise from sustained over-activation of a mammalian evolved system for detecting and responding to social threat with corresponding diminished opportunities for attaining the pleasure of safe attachments (Trower & Gilbert, 1989). Emotional forecasting data from two holidays were used to test the hypothesis that greater social anxiety would be associated with a specific pattern of decreased expectations of positive affect (PA) and greater anticipated negative affect (NA) on a holiday marked by group celebration (St. Patrick’s Day) while conversely being associated with greater predicted PA for a romantic holiday (Valentine’s Day). Undergraduate participants ($N = 181$ Valentine’s Day, $N = 172$ St. Patrick’s Day) completed symptom reports, made affective forecasts for both holidays, and provided multiple affect reports throughout each holiday. As hypothesized, higher levels of social anxiety were associated with greater anticipated PA for Valentine’s Day daters, but lower experienced PA on the holiday. These results were not found for distress (trait anxiety and depression symptom composite). In contrast, both distress reports and social anxiety were associated with less predicted PA for St. Patrick’s Day, greater anticipated NA, and corresponding diminished experienced PA/greater NA during the holiday. Social anxiety was associated worse PA forecasting accuracy by daters, NA for non-daters, and NA on St. Patrick’s Day. Results are discussed in light of perceived hope for rewarding safe, emotional contact during Valentine’s Day in contrast to the social celebration typical of St. Patrick’s Day with greater possibility for social threat.

Keywords: affective forecasting, positive events, social anxiety
Social Anxiety and the Accuracy of Predicted Affect

Social anxiety is characterized by anxious concerns regarding social competence, negative evaluation by others, and a failure to meet others’ perceived social standards. Such anxious concerns exist on a continuum from non-pathological shyness to the psychiatric diagnosis of social anxiety disorder. Those with even moderate levels of social anxiety experience considerable distress and impairment (Davidson, Hughes, George, & Blazer, 1994; Schneier, et al., 1994). Those reporting high levels of social anxiety symptoms predict they will struggle and embarrass themselves in hypothetical future stressful social situations such as giving a short speech before an audience or interacting with a stranger (Wallace & Alden, 1995, 1997; Wenzel & Holt, 2003). The tendency to assume the worst of themselves in future social exchanges is not alleviated by social success and may actually be exacerbated by perceiving increased expectations for future success (Wallace & Alden, 1995, 1997; Weeks, 2010). In addition to predicting poor social performance and difficulty savoring social successes, socially anxious individuals tend to ruminate more about their perceived failures (Rachman, Gruter-Andrew, & Shafran, 2000).

A significant body of literature has established the prominent roles played by fearful anticipation, physiological fear responses, negative self-appraisals, and use of emotional suppression and gestural efforts to regulate affect and social attention during interactions. However, comparatively less is known about the influence of social anxiety on anticipation and experience of potentially positive social events such as planning an upcoming romantic date or social event. Weeks and colleagues (Weeks, Heimberg, & Rodebaugh, 2008; Weeks & Howell, 2012) have elaborated on the seemingly paradoxical tendencies of socially anxious individuals to fear positive evaluation from others. This fear may partially result from the perception that others
will expect more competence in future social interactions from the socially anxious person who has not experienced a corresponding improvement in skills or confidence. Perceptions of higher expectations which accompany success and can represent an escalating and seemingly insurmountable requirement for ever greater social grace and comfort following what feels like an uncharacteristic social victory.

Gilbert (1989) provided a mammalian evolution informed psychobiological model to account for the difficulties in self and emotional regulation associated with social anxiety. Within this model, social anxiety is seen to arise from excessive activation of the self-defense system (useful in evaluating potential threats from potentially challenging or dominant members of a social group) and a lack of appropriate activation of the safety system (needed to recognize cooperative and friendly social partners and develop a sense of safe attachment). As such, socially anxious individuals continue to perceive social threats when they are no longer present; fearing their ability to rise to the presumed threat, while simultaneously denying themselves needed emotional comfort and safety of belonging (Baumeister & Leary, 1995).

In addition to the apparent fear and vigilance regarding social threats, those with social anxiety appear to experience less hedonic pleasure when opportunities for intimacy and connection are present (e.g, Kashdan et al., 2011). Kashan and colleagues (2011) used an experience sampling method daily diary method over three weeks to evaluate how depression and social anxiety symptoms influence subsequent hedonic pleasure associated with sexual experiences. They found greater social anxiety symptoms were associated with reduced frequency of sexual contact and lower reported experiences of pleasure and intimacy following sexual contact. Kashdan, Weeks, and Savostyanova (2011) argue that impaired positive affect reactivity in social anxiety may be partially understood as an unfortunate consequence of
expend high levels of attentional resources on impression management and anxiety regulation which depletes subsequent resources including those which generate hedonic states (in an extension of the depletion model of self-control; Muraven & Baumeister, 2000).

If those suffering from social anxiety are conflicted regarding social success (desiring social competence and safety while fearing their ability to meet increased future expectations), tend to negate their successes, and experience diminished rewards and pleasure in the moment, do they anticipate deriving less pleasure from future hedonic events in the manner found among those reporting elevated depression and general anxiety (Hoerger, Quirk, Chapman, & Duberstein, 2012; Wenze, Gunthert, & German, 2012)? The current study was designed to determine to what degree to which social anxiety concerns affect predicted future pleasure.

The affective forecasting literature reveals that individuals typically over predict their future experienced pleasure (Wilson, et al., 2000) but this pattern appears to be attenuated among those reporting high trait distress (Hoerger et al., 2012; Wenze et al., 2012). Hoerger and colleagues found that those higher in trait distress predicted reduced pleasure when anticipating a future date on Valentine’s Day. That is, high trait distress was associated with a dysphoria bias or tendency to underpredict subsequent positive affect experienced on the holiday (and subsequent two days). Wenze and colleagues (2012) used experience sampling methods to collect affect reports throughout a week to compare predicted levels of positive and negative mood to subsequent experiences and found a similar dysphoria bias of over predicted negative mood associated with depression and anxiety symptoms (but relatively intact expected and experienced pleasure for those reporting higher anxiety symptoms).

In the current study, we also used experience sampling throughout the day during two holidays in order to determine the potential influence of social anxiety symptoms upon predicted
and experienced pleasure in the context of social events. We chose a typically private, romantic holiday (Valentine’s Day) and a holiday known for friendship/peer based social contact (St. Patrick’s Day) in the hopes of evaluating the potential role of these different socio-emotional contexts upon the expectations vis-a-vis social anxiety symptoms. We also decided to obtain multiple affect reports across the day to avoid any negative recall bias confounding post event reports and to provide an opportunity to evaluate both peak and aggregate emotional experiences across the holidays.

**Prediction in Social Anxiety**

Given socially anxious individuals tend to anticipate danger in ambiguous social situations and create negative evaluations of their interpersonal behavior even when others perceive their behavior as competent and respond favorably (see Hirsch & Clark, 2004, and Kashan, Weeks, & Savostyanova, 2011, for reviews), we hypothesized higher reported social anxiety symptoms would lead to less anticipated and experienced pleasure for St. Patrick’s Day as this holiday is often celebrated by American college students within peer group gatherings and parties. As such, social fears regarding status and the need for defense/safety behaviors are more likely to be activated in the group context of St. Patrick’s Day. In contrast, Valentine’s Day is generally celebrated as an intimate romantic holiday for dating couples. Valentine’s Day often represents an opportunity for success in the important social domain of romantic intimacy. For our sample, most participants anticipate a date with their current romantic partner and socially anxious participants may invest significant hope for a pleasurable exchange with a ‘known’ and predictable partner. In light of Gilbert’s (1989) theory, the opportunity for emotional connection and comfort accompanying an intimate partner holiday should outweigh any corresponding activation of social status or safety concerns. Given the relative dearth of satisfying and safe
emotional opportunities, we hypothesized that those reporting greater social anxiety symptoms would invest greater hoped for connection in the form of anticipated positive affect for Valentine’s Day.

In general we hypothesized that great social anxiety would be associated with diminished experienced pleasure for both holidays. For St. Patrick’s Day, we suspect great social anxiety will be associated with both diminished predicted and experienced pleasure. Diminished experienced pleasure is likely given the group manner of social celebration which marks the holiday and represents a prime scenario for activating safety/defense fears (Cloitre & Shear, 1995).

Although social anxiety symptoms may be associated with strong desires for safe, positive contact on Valentine’s Day, prior couples research supports the expectation that socially anxious individuals experience significant difficulty regulating and expressing positive affect within the real-time exchanges of a rewarding romantic relationships and fail to sustain expressions of positive investment and curiosity which impede shared closeness and relationship satisfaction (Kashdan et al., 2013). Consequently, both socially anxious individuals and their partners are likely to find the emotional impact of the holiday less fulfilling than hoped.

Methods

Procedures

Approximately one month before Valentine’s Day, university students enrolled in psychology courses filled out an online screening measure via Survey Monkey to receive extra credit in their psychology courses and qualify for additional studies conducted throughout the semester. This survey included various symptoms and trait rating scales including those used in this study. They also completed affective forecasting items regarding expected positive and
negative mood for Valentine’s (vis-à-vis dating status) and St. Patrick’s holidays. Participants indicated if they possessed a text-enabled cell phone and if they consented to be contacted on these future holidays for additional credit.

On the day before each holiday, we emailed all screening participants who consented to be contacted (and had a text ready cell phone) with a brief message reminding them of the study and procedures on completing the affect ratings. On each holiday, participants received five text messages throughout the day. The times of text prompts were 10:45AM, 12:30PM, 3PM, 6PM, with the last was sent at 10PM. Participants were asked to respond within 20 minutes of receiving the text. Each text message asked the recipient to rate his/her current affect state along three positive (happy, joyful, excited) and three negative (sad, miserable, upset) affect dimensions.

**Participants**

A total of 383 undergraduate students at a large Midwestern university were recruited from the psychology department subject pool. Of these, 297 agreed to be contacts and had a text enable phone. Two hundred and forty three students responded to at least one text message on Valentine’s Day and 189 responded to at least one message on St. Patrick’s Day. We excluded individuals who responded to fewer than three of the five texts and this eliminated 37 participants for Valentine’s Day and another 20 who failed to reply to a single item follow-up questionnaire on Feb 15th asking if they had had a date for the holiday. This left 181 total participants for Valentine’s Day. Twenty-four of the St. Patrick’s Day participants failed to respond to at least three texts providing a sample of 172. One hundred and forty one participants completed at least three text data collections for both holidays (an additional 70 provided sufficient data for only one of the holidays). The composition of the combined sample was
predominantly Caucasian (91.4%) and female (78.2%), with a majority of Valentine’s Day participants reporting not having a date, \( n = 104 \) (57%). The average age of the participants was 19.87 (\( SD = 3.25 \), range = 18-46).

**Measures**

**Social Anxiety.** Participants completed both the Social Interaction Anxiety Scale (SIAS) and the Social Phobia Scale (SPS; Mattick & Clarke, 1998). Both scales consist of 20 items, and on each participants rated how much they agreed with the statements on a scale from 0 (*not at all characteristic or true of me*) to 4 (*extremely characteristic or true of me*).

The SIAS assess for anxiety during social interactions with items such as “I have difficulty making eye contact with others,” and “When mixing socially, I am uncomfortable.” The authors reported an internal consistency of .88 in a sample of undergraduates with a test-retest reliability of .92 at a 12-week interval. An internal consistency of .93 was found in the present sample.

The SPS assesses for fears of being observed or scrutinized by others, “I would find it difficult to drink something if in a group of people” and “I get nervous that people are staring at me as I walk down the street.” The authors reported an internal consistency in their sample .90 in a sample of undergraduates with a test-retest reliability of .93 within a 12-week interval. The internal consistency in the present sample was .93.

**Trait Anxiety.** Participants completed the trait form of the Spielberger State Trait Anxiety Inventory (STAI; Spielberger et al., 1983). The STAI is a 20-item scale assessing trait anxiety with items such as “I feel nervous and restless” and, “I worry too much over something that doesn’t really matter.” Participants rate each item on a scale from 1 (*almost never*) to 4
The authors found an internal consistency of .86 in their sample; an internal consistency of .92 was found in the present sample.

**Depression.** Participants completed the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) which assesses for severity of depression symptoms in the past week with items such as “I thought my life had been a failure” and “I felt everything I did was an effort.” Participants read 20-items which are scored on a scale from 0 (Rarely or none of the time/less than once a day) to 3 (most or all of the time/five to seven days). Radloff reported an internal consistency of .85 in a non-clinical sample. An internal consistency of .91 was found in the present sample.

**Emotion Ratings.** Participants rated six emotions to assess for positive affect (PA; happy, excited and joyful) and negative affect (NA; sad, miserable, upset). For Valentine’s Day, participants were asked to predict their positive affect “If you have a date” using the three positive emotions and use the three negative emotion ratings “If you do not have a date.” They predicted all six emotions for St. Patrick’s Day. Emotion ratings were made using a five-point Likert type scale ranging from 1 (not at all) to 5 (extremely). Composites were calculated by combing the three positive and three negative emotions. Internal consistency of the predicted positive emotions was .94 Valentine’s Day daters and .89 for St. Patrick’s Day for predicted negative emotions were .93 for Valentine’s Day non-daters and .91 for St. Patrick’s Day. Experience sampling affect ratings were obtained for all six emotions on both holidays and demonstrated excellent internal consistency with all sets of positive and negative affect ratings yielding coefficient alphas > .95.

Participants were asked to complete experience sampling affect ratings within 20 minutes of receiving each text and they were generally compliant with this request. For example, during
Valentine’s Day, 245 individuals provided a total of 1028 responses of which 738 (72%) were received within the 20 minute window. Eighty-four percent were received within 30 minutes of the text prompt and 95% were received within an hour of the prompt. Similar data were observed for St. Patrick’s Day.

**Pre-Event Sharing.** As part of the screening, participants were asked additional questions regarding plans and discussions with others regarding both holidays. Participants were asked if he/she had discussed the holiday with a romantic partner (Valentine’s Day) or close friend (St. Patrick’s Day). If they indicated yes, they were then asked follow up questions regarding ‘one main’ conversation they had had with another person and were asked to characterize how positive/excited versus disinterested the other person seemed during the conversation(s). For Valentine’s Day, participants were also asked to imagine how such a conversation would go (if they indicated not having had a date planning conversation). Over half of those with a date had already had such a conversation with a significant other (41 of 77), whereas fewer than 25% (40 of 172) of St. Patrick’s Day participants reported having such a conversation with a close friend at time one data collection (in January). Consequently, these data were used for Valentine’s Day analyses but not for St. Patrick’s Day.

**Data Analysis Procedures.** We did not have specific hypotheses regarding the form of affect reports across the day for either holiday and instead sought multiple affect ratings in order to obtain aggregate experienced affect and peak intensity of affect during each holiday. Consequently, we calculated both averaged positive and negative affect scores collapsing across the available experience data and also isolated peak affect scores (the highest positive and negative affect response throughout the day). Affective (in)accuracy scores were calculated using residualized difference scores (Cohen, Cohen, West, & Aiken, 2003), wherein the residual
variation in predicted reactions (averaged across emotion ratings) were saved after using regression to control for actual reactions (represented by averaged emotion ratings across the holiday and by the peak affect ratings during each day; see Hoerger & Quirk, 2010). These accuracy scores represent variation in predicted reactions that is unaccounted for by actual emotional reactions. Residualized difference scores are more appropriate than simple difference scores when the intention is to correlate accuracy scores with other measures as they have statistical advantages for interpretability and replicability (Hand & Taylor, 1987).

Results

Study 1: Valentine’s Day

Table 1 presents descriptive data for the scales used by dating status. Daters and non-daters were similar across symptom report measures, largest $t = - .95, p = .34$. Affect reports differed in expected ways with daters reporting higher levels of predicted and experienced positive affect (PA) than the negative affect (NA) levels expected and experienced by non-daters. Daters over-predicted their PA when compared to average mood throughout the day, $t(76) = 4.08, p < .001, d = .48$ (all within subjects Cohen’s $d$ effects sizes are adjusted for within subjects mean correlations; Morris & DeShon, 2002). Similarly, non-daters over-predicted their aggregated NA, $t(103) = 5.00, p < .001, d = .55$. However, peak affect ratings did not reliably differ from predicted affect for daters, $t(76) = -1.65, p = .10, d = -.17$, or non-daters, $t(104) = -.39, p = .70, d = .07$. The social phobia scale and social interaction anxiety scale scores were highly correlated, $r = .81$, and were aggregated into a social anxiety composite score. Similarly, trait anxiety and depression scores were strongly associated, $r = .67$, and were combined to create a composite distress measure. These composite scores were used in subsequent analyses.
Daters

To determine if greater levels of social anxiety were associated with impaired ability to accurately predict affective reactions to Valentine’s Day, social anxiety composite scores were correlated with regression adjusted accuracy scores (see Table 2). As hypothesized, greater social anxiety symptom were associated with over predicted Valentine’s Day PA for daters, $r = .30, p = .009$. Further, social anxiety reports correlated with poorer accuracy largely due to the noted contrast between elevated expected PA in combination with diminished experienced PA on the holiday itself. This relationship was specific to social anxiety as distress reports were only associated with diminished average PA on the holiday, $r = -.31, p = .001$, and were not substantially related to predicted or peak PA. In regression terms, predicted PA was first regressed on average PA reports, $\beta = .11, R^2 = .01, ns$, followed by social anxiety, $\beta = .35, \Delta R^2 = .11, p = .003$. Social anxiety reports retained its ability to account for (in)accuracy when entered after distress (step 3), as distress did not add significant incremental variance when entered at step 2, $\beta = .15, R^2 = .015, ns$. Conversations with a significant other regarding plans for the holiday were generally unrelated to either social anxiety or distress levels, average $r = .07$.

Non-Daters

Parallel analyses were calculated for non-daters and yielded a disparate pattern of associations (Table 2; above diagonal). Notably, social anxiety reports were not reliably associated with predicted or experienced NA reports, largest $r = .13, p > .10$, whereas distress levels were substantially associated with both greater expected and experienced NA around Valentine’s Day, smallest $r = .30, p < .001$. Greater distress was also associated with larger errors in over-predicted NA for both peak and averaged affect experiences. These findings are consistent with the expectation that social anxiety predictions of distress are linked to nature of
expected social interaction and those without a date are less likely to be engaged in social activity on the holiday (due to their dateless status and the romantic couple focus that characterizes the holiday). Additionally, social anxiety levels were significantly correlated with lower levels of expected enthusiasm of a hypothetical dating partner.

**Study 2: St. Patrick’s Day**

St. Patrick’s Day participants reported levels of symptoms comparable to those from Valentine’s Day. Using data available from both holidays, we computed ANOVA’s comparing V-Day daters \( (n = 62) \), non-daters \( (n = 79) \), and participants unique to St. Patrick’s Day \( (n = 31) \), on symptom measures and found no reliable differences between groups, largest \( F(2,169) = 2.12, p = .12 \). V-Day daters were comparable to the unique St. Patrick’s Day participants in their PA predictions and experienced pleasure on St. Patrick’s Day, largest \( t(91) = 1.15, p = .25 \).

Participants who completed both studies reported expecting somewhat less PA on St. Patrick’s Day, predicted PA, \( M = 3.55, SD = .80 \), compared to Valentine’s Day, \( M = 3.91, SD = .79 \), \( t(171) = 4.84, p < .001, d = .36 \).

The comparatively diminished expected pleasure reports regarding St. Patrick’s Day led to corresponding (and somewhat uncharacteristic) *under* prediction of experienced PA on the holiday for both average PA across the day, \( M = 3.80, SD = .92, t(172) = -3.03, p < .003, d = -.26 \), and especially so for peak PA reported affect, \( M = 4.32, SD = .80, t(172) = -11.04, p < .001, d = -.82 \). Though not hypothesized, such findings are consistent with *future anhedonia* (Kassam, Gilbert, Boston & Wilson, 2008) which refers to the diminishing intensity in positive emotional forecasts as temporal distance extends further into the future. As participants made predictions regarding both holidays in mid-January, they were forecasting affect approximately two months in the future for St. Patrick’s Day.
In terms of affect data and symptom reports, positive predictions regarding the pleasure of St. Patrick’s Day were the primary data of interest. However, positive and negative affect are not interchangeable polar opposites (Larsen, McGraw, & Cacioppo, 2001; Watson & Tellegen, 1999; see Russell & Carroll, 1999 for an opposing view) and the possibility of co-occurring hope and dread regarding a future social event is especially likely among socially anxious individuals. Consequently, we asked participants to predict and report levels of PA and NA across all measurements and these data are presented in Table 3. Indeed, corresponding PA and NA predictions and experience data were only modestly negatively correlated in the current data, ranging from $r = -0.28$ to $r = -0.49$.

As seen in Table 3, greater social anxiety was associated with less predicted and experienced PA as well as greater predicted and experienced NA on St. Patrick’s Day. Similar results were seen for distress levels. Neither social anxiety nor distress levels were strongly associated with forecasting accuracy; however, all four corresponding correlations are negative (indicating reduced discrepancy between predicated and experienced PA) and greater distress was significantly associated with greater accuracy between peak PA and forecasted PA, $r = 0.19$, $p < 0.02$. In contrast, both social anxiety and distress reports were strongly associated with predicted, experienced NA and reduced accuracy in NA predictions, average $r = 0.30$. These results indicate that those reporting greater symptoms expected and experienced greater NA on St. Patrick’s Day and symptom levels helped explain additional variance in errors in prediction. The direction of these correlations indicates that greater errors in over-predicted distress were associated with higher symptom reports.
Discussion

Emotional forecasting data from two holidays were used to test the hypothesis that expected emotional experiences are linked to differing motivational symptoms involved in social anxiety. Social anxiety is theorized to reflect disruptions of adaptive emotional systems which function to allow individuals to detect and respond to safety and danger signals in social situations (Gilbert, 1989; Trower & Gilbert, 1989). Excess attention to social danger cues (often in the form of perceived status threats from dominant others) lead to the maintenance of a defensive vigilant stance which, in combination with perceived inability to successfully meet such threats, gives rise to social anxiety. It is possible that undue effort and time spent in vigilant fear disrupts with the ability of socially anxious individuals to accurately perceive and respond to non-threatening opportunities for safe, cooperative, and hedonically rewarding interactions. As such, we hypothesized that contemplating a holiday typically celebrated in the company of multiple friends and peers would activate the defensive/safety system for those with greater social anxiety whereas a holiday typically celebrated in the company of a romantic partner would represent an opportunity for desired safety and much needed emotional support. Results were consistent with these hypotheses. Greater levels of social anxiety were correlated with lower expectations for positive affect/greater expectations for NA on St. Patrick’s Day (social holiday) but were correlated with greater expectations for PA on Valentine’s Day (intimate partner holiday).

To our knowledge, these are the first results demonstrating greater predicted positive affect associated with elevated anxiety symptom measures. The relationship between social anxiety and elevated predicted PA on Valentine’s Day was specific in the sense that a similar pattern was not observed for St. Patrick’s Day or for measures of distress (in the form of trait
anxiety and depression symptoms). Instead, distress symptoms were associated with greater experiences of averaged NA and reduced PA for both holidays but were essentially unrelated to predicted affect for daters. Hoerger and Quirk (2010) found essentially the same pattern of results for trait neuroticism in another sample of Valentine’s Day daters. In the current study, distress levels were important in the over prediction of NA for St. Patrick’s Day and for those without a date on Valentine’s Day. Distress levels were not strongly associated with errors in PA predictions but were associated with errors in predicted PA for peak affect ratings for St. Patrick’s Day. Taken together, these distress results suggest a general pattern of negative affect prediction bias in line with prior findings regarding the dysphoria bias proposed by Hoerger and colleagues (Hoerger et al., 2012) although Hoerger et al. found a more robust effect for under-predicting PA associated with higher levels of trait dysphoria.

It is not clear how broadly relevant the current results may be to the emotional lives of those with social anxiety concerns. We argue that the specific experience of looking forward to a romantic date represents an opportunity to invest hopeful expectations for needed emotional connection (Baumeister & Leary, 1995) without the perceived need to activate social anxiety safety fears. Whereas the data are consistent with this model, important questions remain such as, (1) why social anxiety symptoms should be associated with greater predicted PA (rather than merely a relaxing of the general vigilance stance/expectation of social failure), (2) do socially anxious individuals invest similar positive expectations in other small group social situations such as interactions with one or two long term friends, (3) what role does temporal distance between prediction and event play in the pattern of results, and (4) do these results from a specific subpopulation of young, unmarried single adults apply to clinical populations or those struggling with social anxiety for decades?
One possible explanation for positive PA prediction among more socially anxious individuals is that the combination of being freed from the perceived pressure to compete in a social dominance domain and the presence of a situational opportunity for social safety and connection (which are presumed to more rare for socially anxious individuals) creates a symptom specific motivated form of focalism. Focalism refers the tendency to narrow attention to a specific event/situation and ignore the broader context when making emotional predictions (Wilson et al., 2000). In this case, more socially anxious individuals may be generating hopeful affective predictions expecting the opportunity to relax their self-defense system without taking into account the myriad of potential difficulties a romantic holiday poses for socially anxious individuals (such as meeting their partner’s expectations, managing in the moment affect, likely activation of performance anxiety, etc.).

In their study utilizing experience sampling to evaluate social need and belongingness in social anxiety and social anhedonia, Brown, Silvia, Myin-Germeys, and Kwapil (2007) found that although those scoring high in social anxiety wished to be alone when they were interacting with others, they did not hold this preference when they themselves were alone. Instead, they longed for contact with close acquaintances. Further, it appears that closeness of relationship plays a specific role in social longing in those with higher reported social anxiety expressed the greatest wanting to be alone when interacting with people they did not know. These results speaks to the fact that those with social anxiety may have a preserved mechanism for wanting to interact in social settings with a group of close friends or a significant other (at least while they are alone), but begin to feel an increase in anxiety/negative affect when actually negotiating a social situation.
It may also be that the positivity of predicted affect reflects the temporal distance between prediction and experience. That is, does the anticipated pleasure dissipate and focalism fade as the details regarding an impending date become more salient or does the positive anticipation for socially anxious individuals continue to build until affective disappointment is manifested as the social event unfolds in real time? Finkenauer, Gallucci, van Dijk, and Pollmann (2007) explored the effect that temporal distance of forecasts has on accuracy for both negative (failing a driver's test) and positive (passing a driver's test) emotions. They reported an affect specific pattern in which positive affect predictions were more accurate the further the event was away, and declined in accuracy as the event approached but the reverse was found for accuracy of negative affect predictions. Additional research has demonstrated that people tend to lower their expectations regarding an event as it approaches, perhaps as a mechanism to protect themselves and cope in case of disappointment (Taylor, & Shepperd, 1998; van Dijk, Zeelenberg, & van der Plight, 2003). Measurements of predicted affect across a range of time points prior to upcoming social events are needed to elucidate the potentially important role of temporal distance from events in the emotional lives and behavioral choices of socially anxious individuals.

Further, the nature of our sample in terms of life history and symptom duration is another unresolved issue. Our participants may represent a subset of socially anxious individuals who are still able to secure a dating partner. In contrast, current non-daters with greater social anxiety expected a hypothetical partner would be less excited to make plans with them. The ‘hopeful’ expectations of socially anxious daters may be more characteristic of young adults and may not be observed in an older sample wherein additional years of social struggles may resolve into a pattern of resignation and avoidance. In his 2007 meta-analysis, Kashdan noted that treatment
seeking socially anxious individuals typically wait years before getting help, and therefore their symptoms are usually severe, and positive adaptations (e.g., a preserved mechanism of anticipating positive social interactions) may no longer be present. As such, additional research with community and clinical samples would help determine the applicability of our results in light of age, symptom duration, and severity.

This study was unique in providing an examination of how social anxiety is related to the prediction of affective states for actual events. The use of experience sampling also represents an advance in methodology (Kashdan & Steger, 2006). Many studies of affective forecasting involve collecting emotional responses via on-line computer surveys taken a day or two after a target event. These self-reported emotional states are, by necessity, not in the moment measurements. Consequently, reported mood is influenced by unintended and possibly contaminating aspects of retrospective recall (Kahneman, 1999; Shiffman & Stone, 1998).

In addition to the unanswered questions discussed, the current data sets have several limitations. The samples were composed of mostly female, white, young adult college students so generalizability to other groups such as community adults, treatment seeking social anxiety patients, etc. remains to be determined. We focused on two specific holidays which are relevant to our population but do not allow for a more fine grained exploration of the role social anxiety plays in day-to-day socio-affective experience. Additional data that would help illuminate the nature of positive affect prediction-experience discrepancy in social anxiety include in vivo experiential data such as affective, physiological, and behaviors manifest during social exchanges. Such data would further our understanding of how hoped for positive affect remain largely unrealized and, arguably, appears transformed into emotional disappointment on the day in question. Emotional experiences of socially anxious individuals are hypothesized to involve
dysregulated physiological arousal and disturbances of attention (such as hypothesized introceptive cue focus; Clark & Wells, 1995), disruptive behaviors characteristic of poor social skills, and defensive/avoidant coping responses all of which may play crucial roles in creating emotional disappointment out of anticipated pleasure.
References


Table 1.

Comparison of Symptom Scales and Affect Reports by Dating Status

<table>
<thead>
<tr>
<th>Scale</th>
<th>Daters (n = 77)</th>
<th>Non-Daters (n = 104)</th>
<th>d</th>
<th>t (179)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIAS</td>
<td>22.10 (13.71)</td>
<td>24.21 (13.46)</td>
<td>-.15</td>
<td>-1.03</td>
<td>.30</td>
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<td>SPS</td>
<td>16.60 (13.51)</td>
<td>17.33 (13.85)</td>
<td>-.05</td>
<td>-.35</td>
<td>.72</td>
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<td>STAI</td>
<td>39.70 (8.80)</td>
<td>40.76 (9.87)</td>
<td>-.11</td>
<td>-.75</td>
<td>.45</td>
</tr>
<tr>
<td>CES-D</td>
<td>6.36 (5.88)</td>
<td>7.00 (6.30)</td>
<td>-.10</td>
<td>-.69</td>
<td>.49</td>
</tr>
<tr>
<td>Predicted Affect</td>
<td>4.12 (.59)</td>
<td>1.87 (.89)</td>
<td>2.88</td>
<td>19.26</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Ave. Affect</td>
<td>3.69 (.79)</td>
<td>1.44 (.48)</td>
<td>3.55</td>
<td>23.75</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Peak Affect</td>
<td>4.27 (.68)</td>
<td>1.91 (.88)</td>
<td>2.93</td>
<td>19.59</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Note. SIAS = Social Interaction Anxiety Scale; SPS = Social Phobia Scale; STAI = Spielberger Trait Anxiety Inventory; Center for Epidemiological Studies, Depression. $d =$ Cohen’s effect size. Affect data for daters reflect PA items and NA items for non-daters.
Table 2.

*Correlations among Affect Variables and Symptom Measures for Valentine’s Day vis-à-vis Date Status*

<table>
<thead>
<tr>
<th></th>
<th>Social Anxiety</th>
<th>Distress</th>
<th>Predicted Affect</th>
<th>Average Affect</th>
<th>Peak Affect</th>
<th>Accuracy Average</th>
<th>Accuracy Peak</th>
<th>Enthused Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Anxiety</td>
<td>--</td>
<td>.65**</td>
<td>.08</td>
<td>.17</td>
<td>.13</td>
<td>.03</td>
<td>.06</td>
<td>-.35**</td>
</tr>
<tr>
<td>Distress</td>
<td>.68**</td>
<td>--</td>
<td>.38**</td>
<td>.40**</td>
<td>.30**</td>
<td>.27**</td>
<td>.31**</td>
<td>-.40**</td>
</tr>
<tr>
<td>Predicted Affect</td>
<td>.30**</td>
<td>.08</td>
<td>--</td>
<td>.23*</td>
<td>.23*</td>
<td>.95**</td>
<td>.97**</td>
<td>-.11</td>
</tr>
<tr>
<td>Average Affect</td>
<td>-.28*</td>
<td>-.31**</td>
<td>.11</td>
<td>--</td>
<td>.92**</td>
<td>.00</td>
<td>.09</td>
<td>-.13</td>
</tr>
<tr>
<td>Peak Affect</td>
<td>-.12</td>
<td>-.11</td>
<td>.21</td>
<td>.80**</td>
<td>--</td>
<td>-.05</td>
<td>.00</td>
<td>-.08</td>
</tr>
<tr>
<td>Accuracy Average</td>
<td>.33**</td>
<td>.12</td>
<td>.98**</td>
<td>.00</td>
<td>.12**</td>
<td>--</td>
<td>.91**</td>
<td>-.04</td>
</tr>
<tr>
<td>Accuracy Peak</td>
<td>.33**</td>
<td>.11</td>
<td>.97**</td>
<td>-.06</td>
<td>.00</td>
<td>.99**</td>
<td>--</td>
<td>-.02</td>
</tr>
<tr>
<td>Enthused Other</td>
<td>.02</td>
<td>.01</td>
<td>.11</td>
<td>.14</td>
<td>.14</td>
<td>-.03</td>
<td>.02</td>
<td>--</td>
</tr>
</tbody>
</table>

*Note.* *p < .05; **p < .01. Data below the diagonal represents positive affect data for Daters, $n = 77$. Data above the diagonal represents negative affect data for Non-Daters, $n = 104$. Average Affect = Averaged experienced affect; Peak Affect = Peak experienced affect; Accuracy Average and Accuracy Peak = Accuracy scores calculated via regression adjustment. Enthused Other = Perceptions regarding a pre-holiday date discussion with his/her significant other for daters ($n = 41$) and imagined reactions of a potential date during pre-holiday planning for non-daters who had not made such plans at screening ($n = 94$).
Table 3.

Correlations among Affect Variables and Symptom Measures for St. Patrick’s Day

<table>
<thead>
<tr>
<th></th>
<th>Social Anxiety</th>
<th>Distress</th>
<th>Predicted Affect</th>
<th>Average Affect</th>
<th>Peak Affect</th>
<th>Accuracy Average</th>
<th>Accuracy Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Anxiety</td>
<td>--</td>
<td>.68**</td>
<td>.29**</td>
<td>.27**</td>
<td>.31**</td>
<td>.26**</td>
<td>.25**</td>
</tr>
<tr>
<td>Distress</td>
<td>.68**</td>
<td>--</td>
<td>.41**</td>
<td>.30**</td>
<td>.31**</td>
<td>.36**</td>
<td>.35**</td>
</tr>
<tr>
<td>Predicted Affect</td>
<td>-.19**</td>
<td>-.26**</td>
<td>--</td>
<td>.14</td>
<td>.17*</td>
<td>.99**</td>
<td>.98**</td>
</tr>
<tr>
<td>Average Affect</td>
<td>-.29**</td>
<td>-.33**</td>
<td>-.39**</td>
<td>--</td>
<td>.88**</td>
<td>.00</td>
<td>-.01</td>
</tr>
<tr>
<td>Peak Affect</td>
<td>-.22**</td>
<td>-.25**</td>
<td>.33**</td>
<td>.86**</td>
<td>--</td>
<td>.05</td>
<td>.00</td>
</tr>
<tr>
<td>Accuracy Average</td>
<td>-.09</td>
<td>-.14</td>
<td>.92**</td>
<td>.00</td>
<td>-.04</td>
<td>--</td>
<td>.99**</td>
</tr>
<tr>
<td>Accuracy Peak</td>
<td>-.13</td>
<td>-.19*</td>
<td>.94**</td>
<td>.11</td>
<td>.00</td>
<td>.98**</td>
<td>--</td>
</tr>
</tbody>
</table>

*Note. * p < .05; ** p < .01. n = 172. Positive affect data below the diagonal, negative affect data above the diagonal. Average Affect = Averaged experienced affect; Peak Affect = Peak experienced affect; Accuracy Average and Accuracy Peak = Accuracy scores calculated via regression adjustment.