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RELATION BETWEEN ANXIETY AND THE PERCEPTION OF EXPRESSED EMOTION

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ABSTRACT

This study investigated the relation between anxiety, expressed emotion, and perceived emotion in a face-to-face interaction task. Students (N = 56) participated in a dyadic three-phase laboratory task that involved: (1) writing about a remembered event (either anxious or serene; randomly assigned), (2) engaging in a face-to-face interaction task, and (3) completing personality and mood questionnaires. Preliminary findings suggest experimentally induced anxiety may not play a role in listener-speaker agreement about expressed/perceived affective information during face-to-face interactions. Further analysis will consider the role of context and personality on listener-speaker agreement.

INTRODUCTION

Communication is one of many tools we use to navigate our existence. Humans have evolved to be incredibly social individuals, to the point that if essential communication skills are not properly developed in early childhood, risk of psychopathology later in life increases (Cannon et al., 2002). While the concept of social interaction appears to be simple at first—think, speak, listen, respond—when observed closely, it becomes significantly more complicated. Using the Interaction Model of Communication (Figure 1 below), social interactions can be broken down into several components in which communication is a transaction with at least one sender and one receiver, a medium in which

the transaction takes place (e.g., talk, letter, email, text message, etc.), and a channel or delivery method for the chosen medium, if necessary (Richmond, McCroskey, & Payne, 1987; University of Minnesota Libraries, 2016). It is the job of the senders to: (1) determine precisely what they want to convey, and to (2) conceptualize an effective way of getting their message across. This transmission of information about the senders' internal state is known as *encoding*, and thus the senders themselves are often referred to as *encoders* (Russell, Bachorowski, & Fernández-Dols, 2003). In response, receivers must analyze the information given to them and attempt to make sense of the message that was to be communicated. This process of recognizing sent information and conceiving potential meaning from it is known as *decoding*, and, as with encoders, the receivers taking part in this process are often referred to as *decoders* (Russell et al., 2003).

Just as individuals are different, there are differences in an individual's ability to encode and decode messages. Research suggests that the majority of people think they may be more proficient communicators than they actually are, due to the "Illusion of Transparency" (Gilovich, Savitsky, & Medvec, 1998). This common cognitive bias leads individuals to believe they are being much more explicit than they really are, and that others are easily able to understand their encoded internal state (e.g., thoughts, emotions, intentions), even though only some information has been conveyed, and that small amounts of information remain ambiguous. While this may appear to be an unavoidable, yet relatively harmless byproduct of communication, allowing discrepancies like this to continue without being addressed may put individuals at a notable disadvantage. While encoders themselves are likely to be unaware that their efforts to communicate effectively have fallen short, the decoder within that interaction is left to deal with lingering ambiguities in meaning. Those with superior skills in encoding messages have a distinct advantage over their less skilled counterparts. Research by Human and Biesanz (2013) suggests that people who are more "judgeable" and more easily decoded tend to be more psychologically well-adjusted, are better liked, and possess greater relationship satisfaction than their peers. There are observable boosts in

personal well-being and social standing in people who are able to improve their skills in encoding messages.

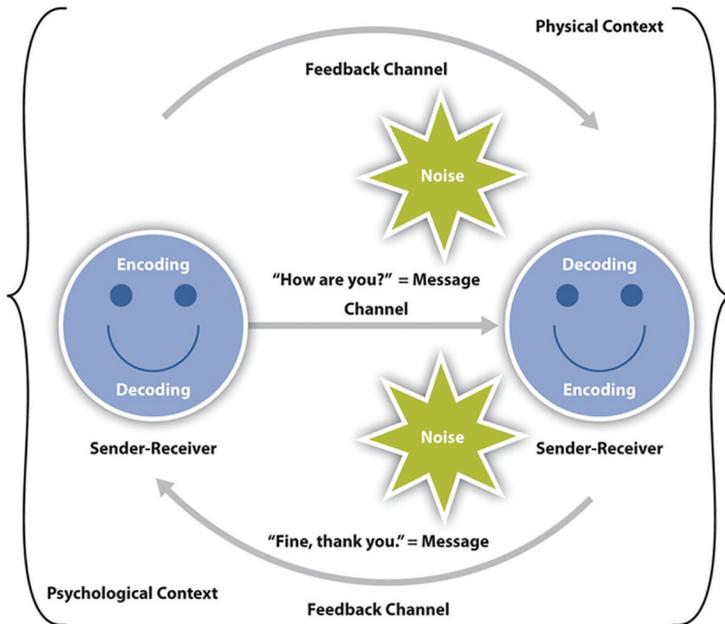


Figure 1. The Interaction Model of Communication (University of Minnesota Libraries, 2016)

Communication is further complicated by the factors of *noise* and *context* (Schramm, Chaffee, & Rogers, 1997). Both can be broken down into two additional subtypes—*physical* and *psychological*. *Noise* includes anything that influences effective communication in such a way that it alters the interpretation (decoding) of a conversation. While this aspect of communication is usually overlooked, noise can have a profound impact both on our perception of interactions with others and our analysis of our own communication proficiency (University of Minnesota Libraries, 2016). *Physical noise* can include things such as others speaking in the immediate area, background music, an unexpected noise, and a conversation partner acknowledging someone outside of the conversation. *Psychological noise* results from preconceived notions individuals bring to conversations. Examples include things such as racial/ethnic stereotypes, reputations, biases, and

assumptions. Without acknowledgement and deliberate effort, this type of communication barrier is difficult to avoid. *Context* refers to factors that influence the outcome of communication that are outside the realm of control for those participating in it. *Physical context* can include things such as the size, layout, temperature, and lighting of the interaction environment, while *psychological context* focuses on the mental factors that can affect communication, including emotions, stress, and even love (University of Minnesota Libraries, 2016).

Communication happens both verbally and nonverbally. Everything from the encoders' tone of voice to their body movements may affect communication, and it can be difficult to encode intention accurately while simultaneously decoding physical messages. To give a simple example, some cultures perceive the crossing of arms as a sign of boredom or anger, and thus when someone takes this stance, it communicates a generally closed-off attitude (Richmond et al., 1987). Others may assume this posture simply because it is more comfortable for them. As Mullins and Duke (2004) explained in their research, interpersonal exchanges are crucial for a functioning society. In order for such exchanges to be both natural and successful, individuals must be adept at encoding and decoding both verbal and nonverbal cues to facilitate successful communication.

Research examining the nonverbal communication of a person's affective state has been heavily studied for 40 years, the vast majority of which has focused solely on decoding ability (Hall, Mast, & West, 2016). This holds true despite Kenny and La Voie's (1984) assertion that individual differences in a communication partner's decoding ability account for only 1/20th of the impact that the encoder's ability has on communication accuracy. Surprisingly, the use of face-to-face research models is uncommon in research assessing nonverbal accuracy. While this type of design is less frequently used, face-to-face models are more ecologically and externally valid than thin-slice studies that attempt to infer decoding accuracy from observing video recordings of an interaction (Raymond, 2016). Face-to-face studies provide more information about the full communication event—requiring

participants to act as both encoders and decoders, as they would be in everyday situations.

Differences in cognition may also present an additional barrier to effective communication. The Illusion of Transparency (Gilovich et al., 1998) describes encoders' assumptions that encoders are able to understand their mental state, and the decoders' assumptions that they correctly understand the mental state of the encoder. Neurodivergence and mental illness may also provide challenges to both the encoding and decoding of messages. When one considers communication through its psychological context, anxiety may prove to be a meaningful barrier. A study by Kessler et al. (2005) suggests that approximately 28.8% of the U.S. adult population is affected by some type of anxiety disorder, making anxiety the most prevalent mental illness, while some 12.1% of American adults have been specifically diagnosed with Social Phobia, or as it is more commonly known, Social Anxiety Disorder (SAD; Kessler et al., 2005).

SAD is categorized by its extreme fear of being scrutinized by others and subsequently being judged or humiliated by others' judgements (Kring, Johnson, Davison, & Neale, 2012). While often compared to shyness, individuals who suffer from SAD can experience symptoms severe enough to disrupt their ability to complete everyday tasks. As we know, one such daily activity is communication, and it is currently unclear what role, if any, anxiety plays within the context of face-to-face interactions. Because nonverbal communication is theorized to make up anywhere between 65-93% of all communicated meaning (Richmond et al., 1987), using nonverbal accuracy as a potential signifier of communicative ability would make theoretical sense, and the lack of research examining this form of communication from an anxious-speaker's perspective is surprising. Researchers have studied visual attendance and eye behavior to attempt to understand how stimuli are interpreted by anxious individuals (Anderson et al., 2013; Buckner, Maner, & Schmidt, 2008). Some evidence suggests that individuals with generalized SAD exhibit low levels of visual attendance, both generally and temporally, towards positive social stimuli, but appear to have no significant

differences in visual attendance when presented with negative social stimuli (Anderson et al., 2013). Others have found evidence to the contrary; research by Buckner et al. (2008) suggests that individuals with higher levels of social anxiety appear to have difficulty disengaging from negative social stimuli when compared to their level of attendance towards positive social stimuli. If these findings hold true, prolonged attendance towards negative stimuli has the risk of possibly exacerbating anxiety symptoms within individuals. To my knowledge, there is as of yet no published research examining the manner in which difficulty to disengage from negative stimuli contributes to anxiety symptoms.

It would be reasonable to assume that with possible increased levels of anxiety, affected individuals would have difficulty accurately decoding the social stimuli they are observing. Despite this assumption, and contrary to what was perceived about social anxiety and the ability to decode nonverbal cues accurately, the ability of anxious individuals to identify specific emotions appears to be unaffected by anxiety level (Mullins & Duke, 2004). Alternately, it could also be assumed that individuals experiencing heightened levels of anxiety would exhibit some external indication of their current state, and this would be noticeable by their communication partner. Harrigan and Taing (1997) found evidence against this assumption, suggesting that, when looking only at facial expression and excluding other communicative elements (e.g., body and voice), people show decreased accuracy in identifying the level of anxiety in others. This could be due to anxious individuals being aware of how society expects them to present nonverbally (e.g., fidgety, avoiding eye contact, not smiling, etc.), and thus try to mask their symptoms by being inconsistent with these social nonverbal stereotypes. Other than the evidence presented, literature examining communication success with anxious individuals as encoders and unaffected individuals as decoders is scant.

Questions therefore remain concerning the overall nonverbal communication ability of individuals with anxiety. Evidence contradicts the assumption that individuals with anxiety experience difficulty in receiving and decoding nonverbal

information. The limited available research suggests, however, that anxious individuals exhibit some degree of decreased accuracy when encoding and expressing themselves nonverbally. Because communication is multi-dimensional and requires accuracy both in encoding and decoding a message, more research is needed to fully understand the challenges posed by anxiety, especially in instances where the encoder struggles with SAD.

This study hypothesized (1) that individuals with significant levels of anxiety have no difficulty accurately decoding the nonverbal cues of others, regardless of anxiety levels or type (positive, negative, or neutral) of stimuli presented. A second hypothesis (2) stated that individuals with significant levels of anxiety have altered encoding ability of their own nonverbal cues when compared to individuals with low to nonexistent levels of anxiety.

Understanding how anxiety affects nonverbal communication has the potential to lead to more effective treatment. Clinicians may be able to apply this information to their practice and ensure that they are encoding the message they intend to share with their patients, while at the same time making sure they are accurately decoding what their patients are attempting to communicate. On a more general scale, if anxiety does distort nonverbal perceptions, and anxious people perceive this, then they may be able to use this information to alleviate some of the symptoms of anxiety they experience in a social situation. Increasing awareness of how SAD distorts perception may permit anxious individuals to address social situations with greater objectivity and calmer responses.

METHODOLOGY

Participants

This study included a sample of 56 students from Eastern Michigan University (EMU), between 18 and 38 years old ($M = 21.56$; $SD = 4.47$; 74% female). Participants were recruited using posters seeking “individuals that have trouble giving speeches.” This recruitment strategy ideally yielded a sample with varying degrees of social anxiety, without giving away the nature of the

study. Participants were also obtained using EMU's Psychology Research Sign-Up System (SONA), a Cloud-based system that gives psychology students information on studies currently being conducted by other students or professors and permits students to participate in research of interest. Participants were fluent in conversational English, per the procedural requirements to read an assigned script and carry out a conversation with another participant. Participants provided their informed consent, and procedures were approved by the Eastern Michigan University Institutional Review Board.

Measures

The study employed three different scales to measure anxiety: (1) the Social Avoidance and Distress Scale (SADS), (2) the Fear of Negative Evaluation Scale (FNES), and (3) Visual Analog Scale (VAS). The study also used the Berkeley Expressivity Questionnaire (BEQ); to identify an individual's emotional expressivity.

The SADS (Watson & Friend, 1969) is a questionnaire including 28 true or false items (e.g., "*I try to avoid situations which force me to be very sociable*"; "*It is easy for me to relax when I am with strangers*," etc.) developed to quantify social anxiety. Scores are based on participant responses, and higher scores indicate greater social anxiety. Two aspects of anxiety are measured: four experiences distress, discomfort, fear, anxiety and the avoidance of social situations. The SADS instrument has been valued for having high reliability with its internal consistency at .94 and the test-reliability ranging from .68 (Watson & Friend, 1969).

Often used in tandem with the SADS questionnaire, the FNES was also used in this study (Watson & Friend, 1969). This instrument is a questionnaire including 30 items (e.g., "*I rarely worry about what kind of impression I am making on someone*"; "*I am afraid others will not approve of me*," etc.) in a true or false response format that measures discomfort and distress in interpersonal interactions, looking specifically at apprehension in subjects when presented with the threat of being negatively evaluated. Scale scores range from 0 (low FNE) to 30 (high FNE). The Cronbach alpha rating for the internal reliability of the FNES questionnaire is reported to be anywhere between .94 to .98. The

test-retest reliability was reported to range between .78 to .94, according to Watson and Friend (1969).

The study also used a VAS, which was used to quantify anxiety levels of participants in a self-report measure that allows them to indicate how they are feeling at a particular moment. Often used to measure the intensity or frequency of various symptoms, VAS is an instrument that tries to measure a characteristic or attitude that is believed to range across a continuum of values and cannot easily be directly measured, such as pain, happiness, or anxiety (Gould, Kelly, Goldstone, & Gammon, 2001). From the participants' perspective, this range appears continuous allowing them to rate their experience in a way that does not take discrete jumps, such as a categorization of "none," "mild," "moderate," or "severe" would suggest. The simplest way to administer this measure is a straight line of fixed length, usually 100 mm. Defined at the ends of each line are the extreme limits of the emotion being measured, oriented from left ("*none at all*") to right ("*most I've ever felt*"; Streiner & Norman, 1989). Participants indicate on the line the point that they feel best represents their perception of their current state, and VAS score is determined by measuring to the point marked. Test-retest reliability has been shown to be good, but slightly higher among literate ($r = 0.94, p = 0.001$) than illiterate individuals ($r = 0.71, p = 0.001$; Kahl & Cleland, 2005). Without an absolute way to compare the factors assessed by VAS scales, criterion validity cannot be evaluated. For construct validity, for people with a variety of rheumatic diseases, the pain VAS has been shown to be highly correlated with a 5-point verbal descriptive scale (*nil* to *very severe*) and a numeric rating scale (with response options from *no pain* to *unbearable pain*), with correlations ranging from 0.71–0.78 and 0.62–0.91, respectively (Aun, Lam, & Collett, 1986).

The final measure used within this study was the BEQ, a 16-item self-report questionnaire employing a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). This questionnaire has been shown to have high validity and reliability (Gross & John, 1995) in identifying an individual's emotional expressivity. Emotional expressivity is contextualized

by behavioral (e.g., facial, vocal, postural) changes associated with the process of experiencing emotion, and the measure itself is divided into three distinct facets: *positive expressivity* (PE), *negative expressivity* (NE), and the general strength of *emotional impulses* (IS). Items in the questionnaire include statements such as: “*It is difficult for me to hide my fear*” (NE), “*When I’m happy, my feelings show*” (PE), and “*My body reacts very strongly to emotional situations*” (IS). Scores can be calculated for each of the three facets individually, with higher scores indicating higher degrees to which emotion-response tendencies are expressed as manifest behavior and a higher general strength of these tendencies; the three facets can also be combined to form a single emotional expressivity scale. Including this measure allowed the study to consider individual differences in baseline expressivity as an additional variable in anxiety, as well as in encoding and decoding accuracy.

Procedure

Participants who either responded to an advertisement or signed up through SONA came to a research laboratory in dyads and began the experiment by seating themselves at one of two available computer desks. The desks were already randomly identified as “first” or “second” participant. Each participant then completed informed consent documents and four self-report questionnaires (SADS, FNES, BEQ, and VAS: the first three electronically, and the fourth on paper) to create a baseline of their anxiety levels and emotional expressivity. The participants were subsequently assigned to one of two groups: (a) an anxiety-induced experimental group or (b) a control group. Both participants were then told they had five minutes to complete a reflection task, which asked them to read their assigned prompt on the computer, then to write as much or as little as they felt comfortable with, but to spend the entirety of the five minutes being mindful about the prompt and what they wrote. Individuals assigned to the experimental group were instructed to recall a time in which they felt anxious, while participants in the control group were instead instructed to recall a time in which they felt serene. Once time

ended for that task, both participants were asked to repeat a VAS measure to determine whether or not the induction task was successful.

In a method similar to that used by Raymond (2016), both participants were randomly assigned a set of six laminated cards. Each card contained instructions for the task, a “context” in which the participants should imagine themselves, a description of the emotions they should display about that situation, referred to as their “intent,” and a statement to be spoken aloud. Participants were instructed to read the first two parts of the card (“context” and “intent”) silently. They were then instructed to say the statement out loud to their partner, with the goal of permitting their partner to interpret the statement’s intent with the aid of their nonverbal displays (e.g., tone of voice, body language, etc.). The assigned intent on each card was also randomly assigned, fitting into one of three categories: “positive,” “negative,” or “neutral.”

For evaluation, participants received a sheet that aligned with their partner’s speaking order and were told to record what intent they thought their partner was trying to convey with their spoken statement. The evaluation sheet listed the three potential emotional intents (“positive,” “negative,” or “neutral”) their partner could have been assigned to convey. Participants identified their partner’s perceived intent as conveyed by the spoken statement and their nonverbal displays. The paired participants took turns speaking and evaluating all six of each other’s statements. With participants’ consent, this part of the procedure was recorded on two cameras, so that both participants’ displays were captured for the entirety of the task.

Participants were subsequently given the same VAS measure to determine whether their anxiety levels remained relatively constant within the induction group. Upon completion, they completed a demographics questionnaire and a materials release form. These measures were collected at the end of this study rather than the beginning in order to give participants’ anxiety levels time to decrease before debriefing them on the true purpose of the research.

RESULTS

Descriptive Statistics

Descriptive information and bivariate correlations for the questionnaire measures and percentage of listener agreement with speaker-assigned affect are listed in Table 1. Greater anxiety before writing about the remembered event (T1) was associated with greater anxiety after writing about the event (T2) and after the interaction (T3). Additionally, greater anxiety after writing about the event was associated with greater anxiety after the interaction. Higher scores on BEQ Emotional Impulses were associated with lower anxiety after writing about the remembered event. Finally, the three subscales of the BEQ were positively correlated.

| Variable | <i>M</i> (<i>SD</i>) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|------------------|------------------------|-------|-------|------|------|------|-----|-------|-------|
| 1. Anxiety T1 | 40.80 (29.6) | | | | | | | | |
| 2. Anxiety T2 | 39.50 (31.5) | .37* | | | | | | | |
| 3. Anxiety T3 | 26.79 (28.6) | .70** | .55** | | | | | | |
| 4. Agreement (%) | 57.22 (22.6) | .17 | -.07 | -.03 | | | | | |
| 5. FNE | 13.04 (6.60) | .12 | -.05 | .36 | -.07 | | | | |
| 6. SAD | 15.03 (2.65) | .07 | -.00 | -.00 | .04 | .26 | | | |
| 7. BEQ Positive | 22.87 (3.23) | -.32 | -.18 | -.12 | .01 | -.10 | .11 | | |
| 8. BEQ Negative | 23.66 (6.75) | -.19 | -.04 | -.02 | .14 | .20 | .09 | .60** | |
| 9. BEQ Emotion | 30.71 (7.51) | -.36 | -.41* | -.04 | .15 | .36 | .19 | .57** | .56** |

Note. T1 = before essay, T2 = after essay, T3 = after interaction, FNE = Fear of Negative Evaluation scale, SAD = Social Avoidance Distress Scale, BEQ = Berkeley Expressivity Questionnaire. ** $p < .01$ * $p < .05$

Table 1. Descriptive statistics and bivariate correlations between study variables.

Questionnaire by Mood Induction

Prior to the main analyses on the relation, a series of *t*-tests were used to assess for group differences in the questionnaire

| Variable | Serene | | Anxious | |
|--------------|------------------------|------------------------|----------|----------|
| | <i>M</i> (<i>SD</i>) | <i>M</i> (<i>SD</i>) | <i>t</i> | <i>p</i> |
| FNE | 12.21 (5.80) | 13.85 (7.44) | 0.65 | .52 |
| SAD | 14.73 (3.23) | 15.33 (1.95) | 0.61 | .54 |
| BEQ Positive | 22.53 (3.68) | 23.20 (2.80) | 0.56 | .58 |
| BEQ Negative | 22.33 (7.58) | 25.07 (5.64) | 1.10 | .28 |
| BEQ Emotion | 31.40 (8.29) | 29.92 (6.73) | 0.51 | .62 |

Note. FNE = Fear of Negative Evaluation scale, SAD = Social Avoidance Distress Scale, BEQ = Berkeley Expressivity Questionnaire.

Table 2. Descriptive statistics and significance tests for questionnaire measures by mood induction.

items on the type of remembered event. There were no differences on any of the questionnaires for those who wrote about a serene event compared to those who wrote about an anxiety-provoking event (Table 2).

Affective Agreement

A series of chi-square independence tests was used to assess the agreement between speaker-assigned and listener-rated affect. From the speaker's perspective, the listener correctly identified the valence of the statement similarly for positive (47%), neutral (60%), and negative (65%) statements, $\chi^2(2) = 4.40$, $p = .11$. From the listener's perspective, the listener correctly identified positively valenced statements (80%) more often than statements with either a neutral (47%) or a negative (51%) valence, $\chi^2(2) = 10.45$, $p = .005$. The percentage of agreement with the speaker's assigned affective valence was similar for speakers who, at the beginning of the study, wrote about an anxious memory (63%) or a serene memory (51%), $\chi^2(1) = 2.27$, $p = .13$. When accounting for statement valence, there was no difference in agreement with the speaker's assigned valence for participants who had written about a serene memory, $\chi^2(2) = 2.27$, $p = .29$, or for participants who had written about an anxiety-provoking memory, $\chi^2(1) = 2.01$, $p = .67$. When accounting for statement valence, listeners who had written about a serene memory agreed with the speakers' assigned

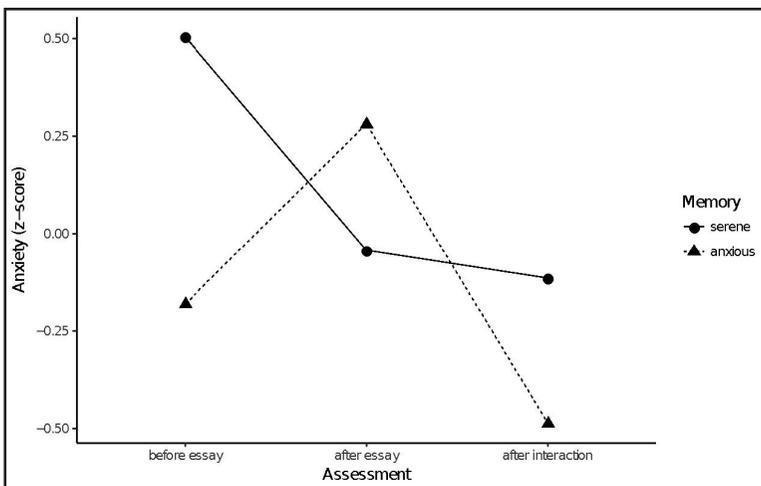


Figure 2. Interaction between memory and time on self-reported anxiety.

valence similarly for positive (75%), neutral (44%), and negative (47%) statements, $c2(2) = 4.51$, $p = .11$. However, listeners who had written about an anxiety-provoking memory showed greater agreement with positively (84%) valenced listeners, compared to neutral (50%) or negative (68%) statements, $c2(2) = 6.89$, $p = .03$.

Change in Anxiety

A repeated measures ANOVA was used to test for differences in self-reported anxiety over time (within subjects) based on the type of remembered event (between subjects) and the interaction between time and remembered event. The main effect of the remembered event was not significant, $F(1, 28) = 0.56$, $p = .46$. The main effect of time was significant $F(2, 54) = 4.11$, $p = .02$, $\eta^2 = .04$), however, it was qualified by a significant interaction with the remembered event, $F(1, 28) = 4.66$, $p = .01$, $\eta^2 = .03$. The interaction effect is illustrated in Figure 2. Tukey *HSD post hoc* tests indicate that for people who wrote about a serene memory, there was a significant decline in anxiety from the first to last assessments, $t(54) = 2.62$, $p = .03$. For people who wrote about an anxiety-provoking memory, there was a significant decline in anxiety from the middle to the last assessments, $t(54) = 3.00$, $p = .01$. Prior to writing the essay, the difference in anxiety for those who wrote about a “serene” event compared to those who wrote about an “anxious” event approached significance, $t(28) = 1.93$, $p = .063$.

DISCUSSION

We predicted that anxious individuals would have similar nonverbal decoding ability to their non-anxious counterparts regardless of statement valence. It was also predicted that anxious individuals, when compared to their non-anxious counterparts, would be less successful at encoding nonverbal cues. The first hypothesis *initially* appears to be supported with there being no statistically significant difference between statement valence agreement in the assigned “anxious” and “serene” groups. However, once each participant’s overall change in anxiety over time is taken into account, the true significance of the findings becomes unclear. While the levels of self-reported anxiety at the

beginning of this study were on the verge of being significantly different, that difference was not quite reached, and those who reported higher levels of anxiety overall happened to be in the assigned serene group. Additionally, while the remembered event procedure was successful as far as participants generally reporting stronger feelings in their assigned direction in comparison to their beginning state, there was no significant difference in the anxiety levels of their group at the time the interaction took place.

Furthermore, because we only have self-report data to measure individual feelings of anxiety, and there were no significant differences in baseline questionnaire data between groups, it is not possible for us to know whether or not the participants in this study are truly representative of a general sample. The way in which participants were recruited for this study, calling for individuals who feel as though they have trouble with public speaking, was done to ensure that our sample would include people with varying degrees of social anxiety. It is possible then that our sample could just happen to include individuals who fall to the right of the mean—higher in anxiety than average—when looking at a standard deviation that represents the general population.

These results logically lead to one overarching question: Does anxiety influence the encoding or decoding of affective information? Our findings suggest that potential differences are on the side of the decoder in the ability to identify the emotional affect of statements accurately. Our results suggest that positively valenced statements are more accurately agreed upon, however, it is unclear whether that effect is because of the encoded information, the decoded information, or a property of the dyad. Research investigating similar aspects of nonverbal communication utilizing a face-to-face methodology has also encountered this problem in respect to assigning accuracy (Raymond, 2016). It is difficult in dyadic face-to-face studies to account for individual differences and the confounding variables they present: do errors in judging come from an encoder being unreadable or from the decoder in a particular interaction being generally poor at judging?

In regards to this research specifically, how much of that individual difference can be attributed to psychological context— anxiety—and how much is within the average scope of variability

in communicative accuracy? Within our findings, there were no significant differences in anxiety before the interaction task, although both groups did experience change in anxiety during the laboratory task. Because of the trend for people who wrote about a serene event to be more anxious before the writing task, the role of anxiety in the expression and perception of affective information remains unclear. Additional analyses will focus on exploring changes of the other emotional states (e.g., happiness, calm) across the three phases to understand better the role of reflective writing and participant mood and how this mood may relate to variation in listener-speaker agreement. It will also investigate the writing samples provided by participants during their remembered event task, looking for emotionally latent language and potential patterns within and between groups. We anticipate findings will add a more complete picture of the role psychological context may play in expressing, as well as perceiving, affective information during face-to-face interactions.

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