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Introduction to the Developmental Contextualism Surrounding Identity Vulnerability and the Emergence of Depression and Anxiety

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An Introduction to the Developmental Contextualism Surrounding Identity
Vulnerability and the Emergence of Depression and Anxiety

By

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Abstract

According to Cicchetti and Toth (1998), the integration of inadequate biological, ecological, socioemotional, cognitive, and self-representational forces may foster psychopathological organization. These forces comprise developmental contextualism. Contextualism can be visualized as a bidirectional relationship between the individual and the context (Lerner, 2002). In other words, internal and external forces interact with one another as they are affecting the organism. Ecology, socioemotionality, cognition, and biology interact to form the self-representational sense of self or "other" source. This other source is the subjective experience of the organism and emerges as a force in and of itself and influences superceding interactions between ecology, cognition, socioemotionality, and biology. The self-representational sense of self is an internal experience of the self and is where vulnerability to the outside world develops. Vulnerability is experienced subjectively as having a weak self-structure and being easily triggered by unclear or negative contextual variables. Therefore, it seems reasonable to suggest that security in sense of self, or degree of self-integration may dictate vulnerability to common psychopathology such as depression and anxiety (Dombeck, 1995). In leau of the potential relationship between these variables, this particular study assessed how identity vulnerability, depression, and anxiety related to one another through self-reported measures. There was an indication of comorbidity suggesting that identity vulnerability is an underlying factor in the development and experience of depression and anxiety.

INTRODUCTION TO THE DEVELOPMENTAL CONTEXTUALISM
SURROUNDING IDENTITY VULNERABILITY AND THE EMERGENCE OF
DEPRESSION AND ANXIETY

A THESIS

Submitted in partial fulfillment of the requirements

For the degree of Master of Arts

By

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An Introduction to the Developmental Contextualism Surrounding
Identity Vulnerability and the Emergence of Depression and Anxiety

Contextualism refers to the bidirectional relationship between the individual and the context (Lerner, 2002). Ecology, cognition, socioemotionality, biology, and the self-representational sense of self are in constant interaction (Cicchetti & Toth, 1998). These forces exist in a dynamic, integrated fashion. To illustrate the idea of developmental contextualism, consider the conditions required to sustain fire. Other than an initial spark, there must be oxygen, combustible material, dryness, and containment of heat. If any of those variables are missing or inadequate, the fire struggles to grow and often diminishes. Much like fire is the derivative of all its ingredients, contextualism is the byproduct of all aspects of human experience and can be characterized by the integration of ecology, cognition, socioemotionality, biology, and the self-representational sense of self. Ecology refers to the physical environment in constant interaction with the self, cognition refers to the thought process, socioemotionality refers to the affective experience of the outside world, biology refers to temperament and predisposition, and the self-representational sense of self refers to the internal experience of the self or culmination of these forces at work. Collectively, these forces shape the inner experience of the organism by developing the self-representational sense of self. Perspectives of the outside world “update” the inner self over the course of time changing the way in which subsequent ecological, cognitive, socioemotional, and biological forces are integrated.

Ecology

The ecology component of developmental contextualism can be characterized as a “transaction of multilevel potentiating compensatory processes” involving four levels

(Cicchetti & Toth, 1998, p. 226). In other words, there are four coexisting dimensions of ecology that affect one another. The ontogenic component refers to the self-source; the microsystem refers to family; the exosystem refers to community; and the macrosystem refers to culture. Abrams, Theberge, and Karan (2005) utilized an ecological approach in treating depression in school children. The proposed models incorporated the student's school "life" with family and community with the intention of providing a well-rounded intervention. This research indicated that the children's self-source is in constant interaction with their microsystem (i.e., parents), their exosystem (i.e., school system), and their macrosystem (i.e., religious practice). The purpose of this research was to illustrate how important it is to maintain the balance between the individual and the system of people, places, and things that are in both direct and indirect interaction with that individual (Abrams et al., 2005).

A pivotal study conducted by Oatley and Bolton (1985) presented a "theory of reaction to life events", and suggested that when events disrupt the way in which individuals define themselves, and these individuals lack sources of self-definition, depression is likely to emerge. In other words, when an individual's self-perceived role or self-image at a particular moment is challenged by the ecological context, this vulnerable individual experiences the discrepancy as depression. Therefore, an individual lacking sources of self-definition is also likely poorly self-integrated (Oatley & Bolton, 1985; Dombek, 1995). As such, individuals with lower "thresholds" are likely to be more affected by ecological challenges. This lower threshold closely parallels the idea of identity vulnerability in that these individuals are unable to "use themselves as a resource" in the face of a changed ecological context. Therefore, depression can be

understood as a cognitive process whereby one's self-image becomes faint in the presence of discrepancy.

Cognition and the Socioemotional Process

According to Lerner (2002), "cognition refers to thought, consciousness, and knowing, and the study of cognition involves an appraisal of the processes involved in the acquisition and utilization of knowing" (p. 334). There are six key dimensions of knowing. A "process" refers to a change in the function of knowing and includes concepts such as thinking and information processing. "Abilities" refer to skills that individuals possess such as intelligence, temperamental resilience, and meta-cognition. "Motivation" refers to the conditions whereby processes or abilities are enacted. Examples of this would be exploration and curiosity. "Achievements" refer to the outcomes of these enactments. For example, exploring intelligence may lead to increased knowledge. "Contribution" refers to how abilities and achievements have affected the ecology of the organism. For example, exploration of intelligence and enhanced knowledge may lead an individual to pursue further education. Lastly, "context" refers to the role of the ecological framework on overall human development. An example of this might be the adaptive gains associated with higher education (Lerner, 2002).

According to this model of thought, abilities and achievements are important dimensions of knowing that can be adaptive or maladaptive. For example, common sense would tell us that an individual who possesses low temperamental resilience and consistently engages in maladaptive thinking is at risk for becoming poorly self-integrated. Further distorted maladaptive thought processes might contribute to the individual's already fragmented self-image, potentiating psychopathology such as

depression. Developmentally speaking, cognition is a cycle of steps whereby the self comes to know the self in relation to the outside world. It stands to reason that problems arise when appropriate self-integration does not occur (Dombeck, 1995).

According to Cicchetti and Toth (1998), socioemotionality refers to processes and abilities related to “affect regulation, attachment organization, self-esteem, interpersonal relations, guilt, and other emotive-based processes” (p. 225). Socioemotionality and cognition are highly related to one another in that socioemotionality has underlying cognitive components. Essentially, the “ability” to experience emotive-based processes is cognitive in nature while the process itself is socioemotional. The major distinction between them is that socioemotionality refers to ones ability to “feel” in response to contextual variables while cognition refers to ones ability to think or “know.”

Scheier and Carver (1977) proposed a “salience hypothesis” whereby self-awareness (a cognitive ability and enactment) directly impacts emotional intensity. Basically, if there is no internal discrepancy, they believe attention will shift to any internal experience. It should be stressed that self-awareness does not necessarily enhance internal states; it enhances awareness of them making them more salient. According to Scheier and Carver (1977), self-focused individuals are more likely to notice their affective experiences rather than experience them more strongly. Consequently, self-awareness serves to enhance the saliency of negative affective states such as anxiety. It stands to reason that individuals who experience excessive anxiety are consistently self-focused and vulnerable to negative environmental stimuli. Therefore, high anxiety may be indicative of a weak self-structure or poor self-integration

(Dombeck, 1995). If depression and anxiety are both related to poor self-integration, how do we distinguish between the two?

Clark, Steer, and Beck (1994) sought to distinguish between the process of depression and anxiety by utilizing "tripartite and cognitive models." They determined that physiological arousal and positive affect are experienced exclusively in anxious individuals while depressives experienced amotivational symptoms and negative affect. What this study tells us is that cognitive factors such as negative attributional style, negative self-referent thinking, and dysfunctional beliefs are not specific to depression but instead characterize the cognitive piece of negative affect and that anxiety can be distinguished from depression by the presence of physiological hyperarousal symptoms while depression can be differentiated from anxiety by symptoms indicative of low positive affect (Clark, Steer, & Beck, 1994).

So basically, there is a cognitive aspect to the socioemotional process of negative affect whereby an individual comes to know a distorted, inadequate self devoid of positive affect. This closely resembles the emergence of a depressive state. Anxiety, on the other hand, tends to be more episodic and is characterized by physiological arousal with the ability to experience positive affect except during the subjective experience of negative affect. Depression appears to represent a more pervasive state of mind that the self comes to know that is more cognitive in nature. Anxiety seems more socioemotional in nature with cognitive implications over time as negative affect prevails. Persistent anxiety may lead to the development of depression over time and once a depressive state has emerged, there may be an enhanced vulnerability to subsequent anxiety.

Biology

According to Cicchetti and Toth (1998), biology, as it pertains to psychology, refers to predispositions such as “genetics, physiological processes, brain structural anomalies, neuroendocrine disregulation, neurotransmitter anomalies, and hemispheric activation and asymmetries” (p. 225). One might find them self compelled to consider the notion that biology sets most standards. Perhaps our personality structure, temperament, and monoaminergic potentials are predetermined and control how the outside environment affects us. Joiner, Brown, and Wingate (2005) were interested in understanding the role of neurobiological and psychological components involved in suicide, an ideation and behavior highly associated with depression. They determined that poorly regulated impulse control and tendency to experience strong psychological pain were in fact predispositional and led to suicidal ideation and behavior. This suggests that depression may also be predispositional.

While twin studies such as Roy (1992) and Roy and Segal (2001) determined that monozygotic twin pairs, over dizygotic, were far more likely to pursue suicide, Glowinski, Buchulz, Nelson, Fu, Madden, Reich, and Heath (2001) were more interested in the underlying environmental factors that foster this predisposition. Based on their data, it was determined that 48% of suicidal development was neurobiological, 44% was environmental, and 8% was shared between neurobiology and environment (at least in their subject pool). They also determined that depression over anxiety was highly related to suicide. These studies indicate an effect for neurobiology in the development of suicide. And furthermore, that depression contributed highly to the state of mind required to pursue suicide.

Wetherell, Gatz, and Pederson (2001) conducted a longitudinal study assessing anxiety and depressive symptoms over three-year intervals. Anxiety and depression correlated significantly and appeared to be temperamental. Furthermore, anxiety led to depressive onset across twin pairs over time. Those who are predisposed to anxiety and depression are therefore vulnerable to negative environmental variables and are more likely to develop anxiety and depression than those who are not predisposed. Essentially, they are poorly self-integrated in part because of deficient neurobiological processes.

To illustrate the potential role of biology, consider the following hypothetical analogy illustrated in Figure 1. The graph represents three individuals' relative positioning in the best environment will experience slightly more than individual C raised the best in terms of temperamental affectivity. The potential range between the expression outcome of best and worst environments can be called the "potentiality range," for a lack of better terms, and can be seen on the graph as v-shaped lines. The top leg represents the hypothetical limit of being raised in the worst environment possible and the lower leg represents the best.

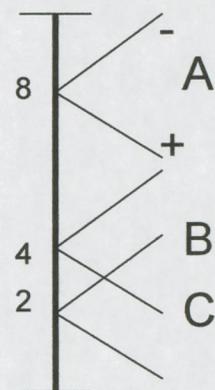
Figure 1

Hypothetical simplified temperament for negative affect for 3 individuals (A, B, and C)

A in the best environment (+) is exhibits more negative affect (>NA) than B and C in worst environments (-)

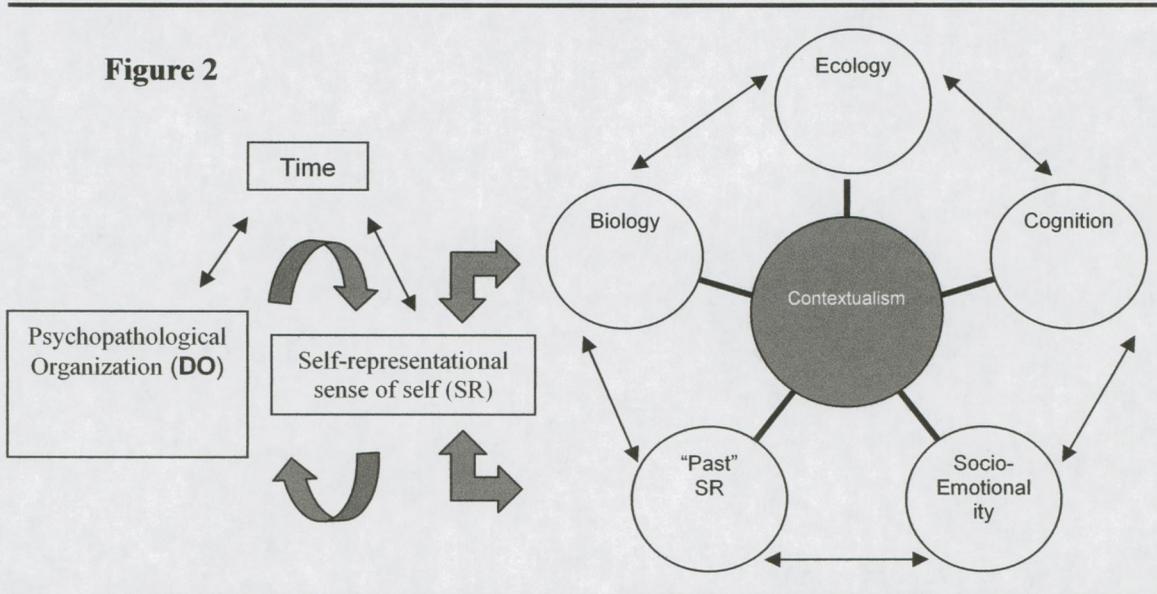
A (+E) > S than B, C (-E)

B (+E) > S than C (+E)



The "Other" Source

Within the framework of contextualism, there exists an "other" source of influence, a self-representational sense of self (Cicchetti & Toth, 1998; Lerner, 2002). The integration of the previously mentioned contextual factors exist in a dynamic, integrated fashion, moment-by-moment. Each new moment is affected by the previous, which was affected by the previous, and so on. As "moments" accumulate, the self-representational sense of self emerges and strengthens. This source affects how subsequent biological and environmental variables influence development. Figure 2 modified from Cicchetti & Toth (1998) illustrates the relationship of the above-mentioned variables within the framework of a multilevel contextualism and time. Double arrows represent the dynamic relationship between variables and the development of contextualism. Over time, the self-representational sense of self can develop psychopathologically in response to inadequate contextual variables.



Consider the following hypothetical analogy. At Time 1, ecology, socioemotionality, cognition, and biology culminate to form “an internal experience.” This experience now serves as an additional force going into the next “contextual moment.” So at Time 2, biology, ecology, socioemotionality, and cognition interact with this previous internal experience, or self-representational sense of self, to create a new internal experience. As this cycle repeats, the self-representational sense is continually “updated” and emerges as an extremely prominent force, perhaps more so than the others. As the figure above illustrates, psychopathology develops from within this source and strengthens as experiences continually end with negative affective consequences. Over time, the consequences reaffirm a negative self-image or diminished sense of self. As the “self-structure” weakens, susceptibility to the effects of unclear or negative contextual variables increases and psychopathology develops (Cicchetti & Toth, 1998; Lerner, 2002; Dombeck, 1995). Some common manifestations are anxiety and depression. This subjective experience can become vicious, debilitating, habitual and difficult to overcome, especially with the passing of time.

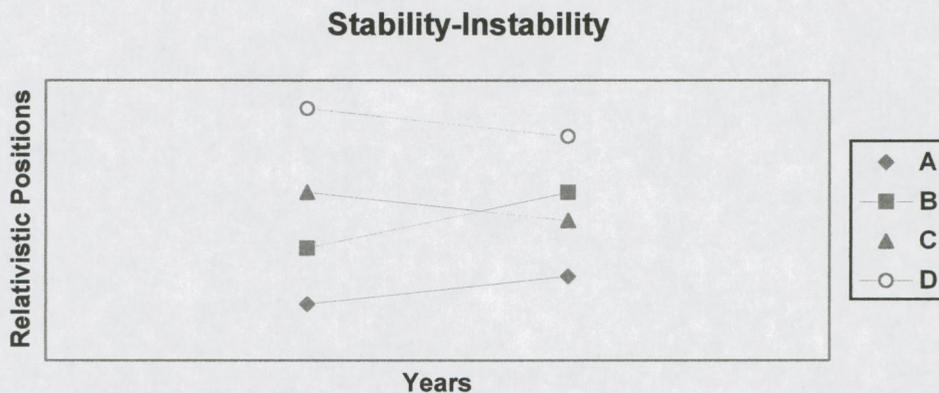
Perceived Instability and the Self-Representational Self

According to Lerner (2002), perceived instability becomes an essential issue over time as well. This refers to one’s “position” relative to everyone else (see Figure 3). Hypothetically speaking, individual (C) at time 1 perceives his or herself to lie in the 60th percentile for academic performance. One year later, this individual has not experienced substantial academic growth, but his or her peers have. Now he or she is self-perceived at the 50th percentile while previously lower individual (B) has improved. Individual (C)

now experiences increased negativity toward the self, which then continues to negatively impact future performance while individual (B) feels more positive.

However, suppose individual (A) is not at all affected by lying in the lowest relative position and (D) remains the highest, but is not content with compromising perfection while (C) has become increasingly unstable. It may be safe to say that individual (A) is less vulnerable than (C), and (D) may be the most vulnerable, especially to disruption of “perfect” self-perceived performance (relative to everyone else). In other words, if individual (D) were to drop (still above (B) and (C)); self-perceived instability could result in higher affective negativity than that of (C)’s self-perceived drop. Individual (C) may in fact begin to feel better about his or her relative position because of “perfect” (D)’s decreased performance.

Figure 3



Identity Vulnerability

The key variable within these comparisons is an inner source of vulnerability: how some are more affected than others by varying degrees of self-perceived instability. This inner vulnerability can only be related to ego identity, self-image, and physiological

arousal (Dombeck, 1995). Therefore, the concept of identity vulnerability should refer to the combined effect of temperamental resilience, and duration and salience of negative emotionality. That being said, one must consider degree of vulnerability of identity as a major predictor of depression and anxiety. Identity vulnerability can be characterized by fear of emotion, lack of confidence to cope, and identity fragmentation (Dombeck, 1995). Threat to identity is a rather unexplored domain in that few have been able to capture the essence of what is to have a weak self-structure or to be poorly self-integrated. What is for certain is that there seems to be two types of personalities: one that self-reports identity vulnerability, depression, and anxiety and one that does not.

A substantial portion of current research considers introversion over extroversion a predictor of depression, anxiety, suicidal ideation and behavior or any psychopathological dichotomy (Roy, 1998; Watson & Clark, 1997; Wiggins & Pincus, 1989). Dombeck (1995) illustrated a negative correlation between extroversion and identity vulnerability such that those who were extroverts tended to self-report less identity vulnerability. It also seems likely then that extroverts are not very focused on their own affective states and are less likely to self-report depression and anxiety than introverts. Perhaps extroverts are vulnerable to depression and anxiety, but are unaware unless introversion is somehow triggered.

Those who self attribute negative outcomes to themselves and positive to others are thought to be acting in an introverted manner, a state of objective self-awareness (Duval & Wicklund, 1972). Conversely, subjective self-awareness does not require any self-focus and can be better characterized as outward or extroverted thinking (Duval & Wicklund, 1972). Those who attribute positive outcomes toward themselves and

negative toward others are generally thought to be acting in an extroverted manner. In fact, Magnus, Diener, Fujita, and Pavot (1993) found that extroverted individuals are more likely to experience more positive objective life events while introverted individuals are more likely experience negative life events.

Sociotropy and autonomy are also significant distinctions in the development of depression and anxiety. Sociotropy refers to the tendency to work and associate with others whereas autonomy refers to the tendency to maintain independence. Some suggest that extremely sociotropic or autonomous individuals are at elevated risk for depression (Blatt & Schichman, 1983; Blatt & Zuroff, 1992; Beck, Epstein & Ranieri, 1983; and Robins, 1990). Basically, the sociotropic type fears abandonment or interpersonal loss while the autonomous individual experiences fear of failure and loss of control.

A point of interest is the parallel between introversion and autonomy and extroversion and sociotropy. The autonomous individual has internal fears whereas the sociotropic individual has external fears. The question is why are both types susceptible to depression if both do not self-report? Perhaps sociotropic individuals lack self-focus and are unaware of their true inner state. Or perhaps sociotropic individuals, like extroverts, require a "breaking point" whereby introversion consequently ensues. Regardless, one has to wonder whether introverted and autonomous coping styles are dispositional or an unconscious choice?

Watson and Clark (1984) describe a relationship between negative affectivity and disposition or neuroticism (Eysenck & Eysenck, 1968). Trait disposition toward psychopathology can promote negative affective qualities to surface with less negative stimulation than if there were no disposition. As previously implied, neurobiology can

render an individual more susceptible or vulnerable to the development of an inadequate self-structure. Accordingly, Dornik (1995) holds that low self-esteem, self-preoccupation, and insecurity are highly related cognitive states (or maladaptive abilities) that can be dispositional. Costa and McCrae (1987) and Watson and Clark (1984) describe these negative states as comprising only part of normal personality; that those with higher levels are more likely to develop depression, anxiety, or mixed anxiety-depression. Disposition can and will set the tone for a vulnerable identity structure provided the environment exacerbates things. Other factors such as self-concept play an important role in the exploitation of the vulnerable self.

Self-concept centers on conscious self-beliefs that define the limitations of the self and self-structure (Dornik, 1995). Discomfort caused by inconsistent cognitions whereby the real and ideal perceived-self vary is referred to as cognitive dissonance. Festinger (1957) holds that the awareness of ideological discrepancies or mutually exclusive beliefs within the self results in cognitive dissonance, which leads to arousal and negative affect. Accordingly, disregulated individuals with poor self-concepts are prone to experiencing a higher discrepancy. The ongoing process substantially affects self-esteem and self-efficacy (Bandura, 1977; Rosenberg, 1979). While individuals seek to reduce discrepancy between the "perceived" real and "ideal" self involving positive references, people also seek to increase discrepancy between the perceived real and ideal-self involving negative references. The autonomous types often seek to increase negatively referenced self-discrepancies while sociotropic types often seek to reduce positively referenced self-discrepancy.

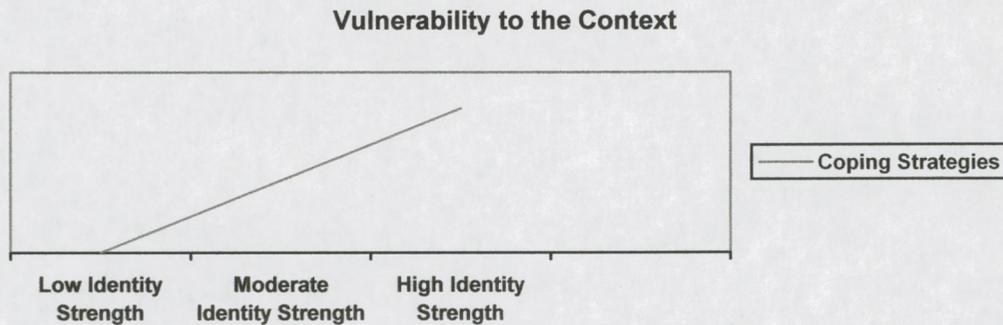
The capacity to experience positive emotion may also play a significant role in identity vulnerability and the development of depression and anxiety. Hedonic affect refers to subjective experience of pleasurable emotionality (Dombeck, 1995). Anhedonia refers to just the opposite: an inability to experience pleasurable emotionality. According to Joiner, Brown, & Wingate (2005) this may be related to dopaminergic system deficiencies, specifically a decrease in dopamine reuptake. This feature has appeared in both depressed and schizophrenic brain systems.

In parallel, Berenbaum and Connolly (1993) have found that stressful life events and chronic stress do trigger psychiatric disturbance, such as depression, in some but not all. This suggests that those who are biologically predisposed to psychopathology are more likely to experience stress-induced anhedonia. Furthermore, Quitkin et al. (1990) sets forth the notion that mood elevation through induced positive affect is common in atypical depression only. Therefore, stress should in fact contribute to typical depression by increasing negative affect and decreasing hedonia. Similarly, Berenbaum and Connolly (1993) illustrate that stress will reduce hedonic capacity and positive affect, but not negative affect. The implication of stress as a negative environmental variable affecting some more than others is highly suggestive of an underlying vulnerability.

Individuals demonstrating higher susceptibility than others to affective dysregulation may be operating from a discernible, vulnerable identity structure. A threat to identity is more or less effective when someone's sense of "who they are" and "who they've been" becomes increasingly less clear. Therefore, anyone in a self-perceived weakened state should be more susceptible to identity threats. Figure 4 illustrates that as identity strength decreases, so does the ability cope with insufficient or negative contexts.

This is clearly explained in Dombeck's (1995) dissertation pertaining to identity vulnerability.

Figure 4



Dombeck (1995) constructed the Threats to Identity Questionnaire (TIQ) to assess self-integration, which is referred to as the degree of integration current among cognitive components underlying the subjective experience of the self. Stemming from the longstanding relationship between personality and psychopathology (e.g., James, 1890; Maher & Maher, 1994), Dombeck sought to develop a means for measuring vulnerability to negative affective mind-states or psychopathology. Within this framework, poor self-integration, or disregulation, will essentially lead to vulnerable identity structure, or susceptibility to the development of depression and anxiety.

Threat to Identity Questionnaire Validity and Reliability

Others have attempted to assess ego-identity and ego-development but have lacked context regarding self-integration. The Threat to Identity Questionnaire, or TIQ (Dombeck, 1995) was constructed to assess just this. Items were designed based on qualities determined to be characteristic of a diminished sense of self via factor analysis. Poorly constructed and irrelevant items were eliminated. The TIQ measures self-

integration by assessing aspects of the self that are influenced by chronic poor self-integration (Dombeck, 1995). Questionnaire items were originally constructed to assess self-stability, fear of losing control, social withdrawal, and emotional overload. The initial list of potential items was sent out to 150 clinicians; nearly 23% responded and provided additional information surrounding the concept of self-integration. Additional measures were also suggested that could help account for the convergent and divergent validity. Once a 93-item prototype and additional measures that assess personality and demographics were compiled, participating students were administered the package.

Along with the prototype, the package included the Millon Clinical Multiaxial Inventory-II (MCMI2; Millon, 1987), the Splitting Scale (SS; Gerson, 1984), the Ego Identity Scale (EIS; Tan, Dendis, Fine, & Porac, 1977), the Intense Ambivalence Scale (IAS; Raulin, 1984), the Manifest Anxiety Scale (MAS; Taylor, 1953), and the Marlow-Crowne Social Desirability Scale (MCSDS; Crowne & Marlowe, 1960). A majority of the variance could be explained by 18 items, which were divided into three categories surrounding self-integration: fear of emotion, lack of confidence to cope, and identity fragmentation (Dombeck, 1998). The new 18-item prototype proved to reliably assess self-integration.

Next, the 18-item TIQ's three factors were compared to additional measures of personality, negative affect, and self-concept (Dombeck, 1998). Such scales included the Life Optimism Test (Scheier & Carver, 1985) and the Eysenck Personality Inventory Neuroticism Scale (Eysenck & Eysenck, 1968). Thirty-eight additional TIQ items were included in this administration. Again, nonsignificant items were removed until a 30-item prototype explained nearly 50 percent of the variance. The 30-item TIQ correlated

highly with other measures of depression, anxiety, neuroticism, schizotypal characteristics, avoidance, ambivalent cognition, splitting, and passive aggression (Dombeck, 1998).

Further confirmatory procedures utilized a 50 item-TIQ, the NEO Personality Inventory (Costa & McCrae, 1992), the Bem Sex Role Inventory (BSRI; Bem, 1974), the Fear of Negative Evaluation and Social Avoidance and Distress scales (FNE, SADS; Watson & Friend, 1969), the Adult Nowicki Strickland Internal External Control Scale (ANSIECS; Nowicki & Duke, 1983), the Positive Affect Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988; Watson & Clark, 1991), the Spielberger State-Trait Anxiety Inventory (STAI; Spielberger, 1983; Spielberger, Gorsuch & Lushene, 1970), and the Personality Style Inventory 2 (PSI2; Robins, 1991). Again, nearly 30-TIQ items explained 50% of the variance. Correlations were consistent, showing that once again that the TIQ was a reliable and valid measure of self-integration.

Additional validity analyses were needed to distinguish self-integration from affective negativity. Intercorrelations between the TIQ and Manifest Anxiety Scale suggested that perhaps the TIQ measured negative affect over self-integration. To answer this question, Dombeck (1998) looked for similarities in cognitive and personality functioning among individuals with a variety of self-reported negative affect, but who shared similar reports in self-integration. In terms of the three factors or constructs (fear of emotion, lack of confidence to cope, and identity fragmentation), partial correlations of the variances were computed and compared with those of other measures of personality to assess for convergent and divergent validity. Results indicated that the revised TIQ-30 was in fact a reliable and valid measure of self-integration.

To determine whether the TIQ assesses self-integration over negative affectivity, 108 individuals completed the revised TIQ-30 and other personality measures. Participants also engaged in a series of information processing tasks thought to be experientially free from subjective bias. The purpose of this addition was to account for some of the variance, which was characterized by those individuals who did not self-report accurately or were hesitant due to having the time to process the question.

Depression and Anxiety

Two subscales that assess for depression and anxiety include the Beck Depression Inventory (BDI: Beck & Steer, 1987) and the Beck Anxiety Inventory (BAI: Beck & Steer, 1990). They are reliable, valid, positively correlated with one another, and represent some of the most current and widely accepted assessment methods for neurosis. These scales assess appropriately according to DSM IV-TR (2003) diagnostic criteria for depressive and anxiety disorders, and serve as a reliable measure at predicting suicide in both clinical and non-clinical settings (BDI: Beck & Steer, 1987; BAI: Beck & Steer, 1990). Depression and anxiety are very common and, in most cases, part of the symptomology of other disorders such as schizophrenia or bipolar disorder (DSM IV-TR, 2003).

Beck and Steer (1987) break depression into two constructs: somatic-affective and cognitive depression. The somatic-affective dimension refers more to the physical experience of depression whereas the cognitive dimension refers more to thought processes behind it. Beck and Steer (1990) break anxiety into four constructs: neurophysiological, autonomic, panic, and subjective anxiety. Neurophysiological and autonomic anxieties refer more to the somatic dimensions of anxiety where as panic and

subjective anxieties refer more to the self-experience of anxiety. Despite the experiential differences, these constructs are highly related to one another and illustrate how depression and anxiety manifests itself differently in different people.

Depression and anxiety are also highly comorbid. In fact, Maurizio, Rankin, Wright, Alpert, Nierenberg, Pava, and Rosenbaum (2000) found that in 255 depressed outpatients (aged 18-65 yrs), anxiety disorder diagnoses were present in 50.6% of patients. Anxiety disorder diagnoses included simple and social phobias, panic disorder, generalized anxiety disorder, agoraphobia, and obsessive-compulsive disorder. One of two scenarios seems likely. Either those who suffer from depression tend suffer from anxiety or prolonged subjective experience of anxiety tends to lead to the onset of depression. Either way the two are closely related.

Depression can be conceptualized as experiencing a diminished or loss of self-security and include symptoms such as sadness, loneliness, disinterest, self-criticism, dull mood, weight gain or loss, fatigue, insomnia or hypersomnia, feelings of worthlessness, inability to concentrate or make decisions, hopelessness, and often times, anxiety (Beck & Steer, 1987; DSM IV, 2000; Lewis & Sian, 1995). Life becomes less salient, and those qualities that once comprised one's sense of identity no longer provide comfort (i.e., a favorite movie). Most would define depression by its symptomology (i.e., no sense of self-worth). The question is what is depression underneath the sadness, hopelessness, and anxiety? Is the "numbness" associated with depression actually "the self experiencing the loss of self"? In other words, does depression truly characterize empty self-experience?

Lewis and Sian (1995) qualitatively describe depression as a loss of self whereby the self is determined through social relationships. They were interested in how individuals come to subjectively identify themselves as depressed. Depression is conceptualized as being “lost in unemployment”, that individuals see themselves as experiencing bio-malfunction or inadequate social dimensions (Lewis & Sian, 1995). Essentially, individuals see themselves as affected by outside forces, beyond their control. Individuals reported that they were unaware of where the depression came from, how it was maintained, and how to put an end to it (Lewis & Sian, 1995). Individuals seemed more comforted by the biological explanation because it implies that it is beyond their control.

This study reiterates that the subjective experience of depression is different across individuals and that the common explanation offered by individuals afflicted with depression is that they experience a loss in sense of self; that they are essentially unable to use themselves as a resource. This strongly supports the idea of an inner sense of vulnerability; that the subjective experience of depression renders individuals to varying degrees unable to return back to themselves. If identity vulnerability implies that an individual's sense of self is easily disrupted, then according to this model of depression, individuals suffering from depression are vulnerable to inadequate environmental supports. This underlying vulnerability is likely to encourage the attribution of negative events to the self.

Brewin (1985) proposes five potential models of depression, all of which involve causal attribution and can be explained in terms of identity vulnerability. Self-attributional style and identity vulnerability are fundamentally similar in that they are

essentially a reflection of one another. If an individual's coping style is to self-attribute negative events, this individual is overly vulnerable to negative events. Therefore identity vulnerability may be considered the cause of depressive maintenance as much as attributional style. Brewin (1985) created and assessed five models of attribution-depression that are as follows: there is a "symptom model" whereby a bad event leads to depressive onset resulting in depressive attributions; there is an "onset model" which holds that a bad event leads to depressive attribution resulting in depressive onset; there is a "vulnerability model" which suggests that a bad event coupled with depressive attributional style leads to depressive attribution resulting in depressive onset; there is a "recovery model" whereby a bad event leads to depressive onset which leads to depressive attributional style and results in depression maintenance; and lastly there is a "coping model" which simply suggests that depressive attributional style leads to depression maintenance or onset.

There are a variety of implications and conclusions, but the essential purpose of Brewin's models is to explain depression through the learned helplessness theory, which may also be fundamentally related to identity vulnerability. Possessing a vulnerable identity is essentially a learned condition as much as it is biological. Accordingly, those individuals with a diminished sense of self, or "poor self-integration" are likely more susceptible to a cyclic self-attributional psychopathological lifestyle and are prone to depressive onset. This research beautifully illustrates the outcome of persistent negative self-attribution and demonstrates how depressed individuals come to understand themselves as helpless or vulnerable to the outside world. This study also implies that depression is a cognitive process that, when reinforced, strengthens with the passing of

time. More socioemotional in nature, anxiety seems to wax and wane depending on the changing context.

Anxiety can be characterized as a feeling of concern or intense worrying that is accompanied by “restlessness, being easily fatigued, difficulty concentrating, irritability, muscle tension, and disturbed sleeping patterns” (DSM IV, 2000, p. 472). Anxiety occurs in varying intensities and different durations. For some, anxiety may only be mild, for others, anxiety may be debilitating and encourage depressive onset. Often times, anxiety is episodic and triggered by environmental stimuli. This type of anxiety stems from conflict whereby the self is challenged by something in the environment creating dissonance (Festinger, 1957). For example, an individual might fear becoming overweight when viewing models on television. Rosenbaum (1953) held that anxiety was an internal response to previously neutral cues, which have now become associated with debilitating stimulation. So for some, anxiety may be a common aspect of subjective experience whereby things become associated with the anxious state, consequently creating triggers in the immediate environment.

Zinbarg, Brown, Barlow & Rapee (2001) assessed “anxiety sensitivity”, or excessive worry of increased negative affect in the development of panic. They define panic as a subjectively experienced, intensified and concentrated phase of anxiety with psychosomatic symptoms (Zinbarg et. al (2001). One of the more important findings in this research was that mental incapacitation concerns, one aspect of anxiety sensitivity, strongly correlated with depression. The fear of mental incapacitation is an important aspect of the anxiety sensitivity because it implies that there is a fear of being mentally “taken over” by the anxiety associated with a particular stimulus. This very closely

parallels the concept of identity vulnerability in that there is a fear of being engulfed by some outside influence; that the self is not cohesive enough to sustain injury from the outside.

Mineka and Zinbarg (2006) present a learning theory perspective on the development and characteristics of anxiety. This research explains how temperamental vulnerabilities and early learning styles impact reactions to stressful events through the utilization of a more contextual approach to understanding anxiety both pre-and-post onset. The development of anxiety is thought to stem from the combined effect of vulnerability and stress with pre-and-post conditioning processes. In this particular model vulnerability refers to genetics or temperament and learning history. In other words, poor self-integration and stress will lead to anxiety. So essentially, Mineka and Zinbarg (2006) present a contextual approach to understanding how identity vulnerability develops, and once coupled with stress, results in the onset of anxiety.

Theory and Hypotheses

The purpose of this study was to assess the relationship between criterion variable- depression and predictor variables- fear of emotion (FE), lack of confidence to cope (LCC) and identity fragmentation (IF) vulnerability as well as criterion variable- anxiety and predictor variables- FE, LCC, and IF. Combined effects among individual predictors and their subscales will determine statistical contribution to depression and anxiety. Simple correlations will also be computed between depression, anxiety and identity vulnerability subscales. This study hypothesized the following: 1) Identity vulnerability will predict self-reported depression; 2) Identity vulnerability will predict

self-reported anxiety; 3) Depression and Anxiety will correlate; and 4) Identity Vulnerability will correlate with Depression over Anxiety.

Method

Participants

All participants were Montclair State University undergraduate students. There were 87 participants who were randomly assigned to sequential patterns. All scales were administered in an isolated laboratory setting and completed via self-report.

Design /Procedure

There were three scales (the BDI, BAI, and TIQ) administered in three rotational sequences. There were 29 participants per sequence, randomly assigned for a grand total of 87 participants. The three sequences were rotational orders of administration (i.e. BDI – TIQ, BAI – BDI, and TIQ – BAI). Participants were asked to respond carefully, but expeditiously. There were no time constraints and all participants were debriefed concluding self-report.

Results

Correlation coefficients were calculated among two depression subscales (somatic-affective and cognitive depression), four anxiety subscales (neurological, subjective, panic, and autonomic anxiety) and three threat to identity subscales (fear of emotion, lack of confidence to cope, and identity fragmentation). Use of the Bonferroni method controlled for Type 1 error across the correlations. As such, a $p < .01$ was required for significance. All correlations were statistically significant (see Table 1) except for Panic-Fear of Emotion and Panic- Lack of Confidence to Cope.

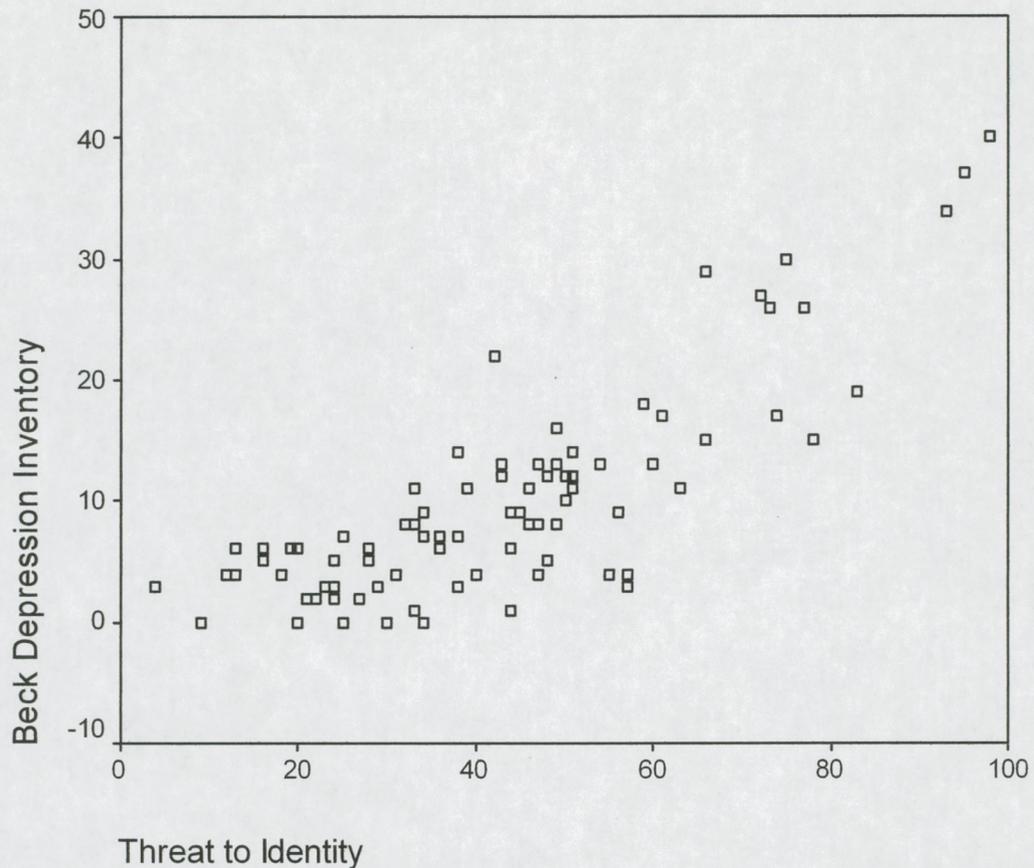
Table 1

Correlation Matrix

	BDI	Somatic- Affective	Cognitive	BAI	Neurological	Subjective	Panic	Autonomic	TIQ	Fear of Emotion	Lack of Confidence to Cope	Identity Fragmentation
BDI	1											
Somatic- Affective	.945	1										
Cognitive	.912	.728	1									
BAI	.616	.615	.522	1								
Neurological	.559	.591	.432	.840	1							
Subjective	.559	.525	.517	.886	.566	1						
Panic	.344	.352	.280	.801	.628	.655	1					
Autonomic	.537	.536	.453	.816	.606	.652	.528	1				
TIQ	.815	.742	.780	.524	.438	.496	.313	.465	1			
Fear of Emotion	.716	.672	.662	.455	.368	.430	.261	.428	.879	1		
Lack of Confidence to Cope	.696	.598	.710	.451	.420	.403	.234	.412	.890	.636	1	
Identity Fragmentation	.786	.733	.730	.518	.392	.518	.357	.431	.913	.743	.732	1

A multiple regression analysis was conducted to determine how well threat to identity predicted depression. The predictors were three subscales with the TIQ (fear of emotion, lack of confidence to cope, and identity fragmentation) and the criterion variable was the BDI. The linear combination of the TIQ measures is significantly related to the BDI, $F(3, 83) = 57.98, p < .01$. The sample multiple correlation coefficient was .82 indicating that approximately 68% of the variance of the BDI in the sample can be related to the linear combination of the TIQ subscales.

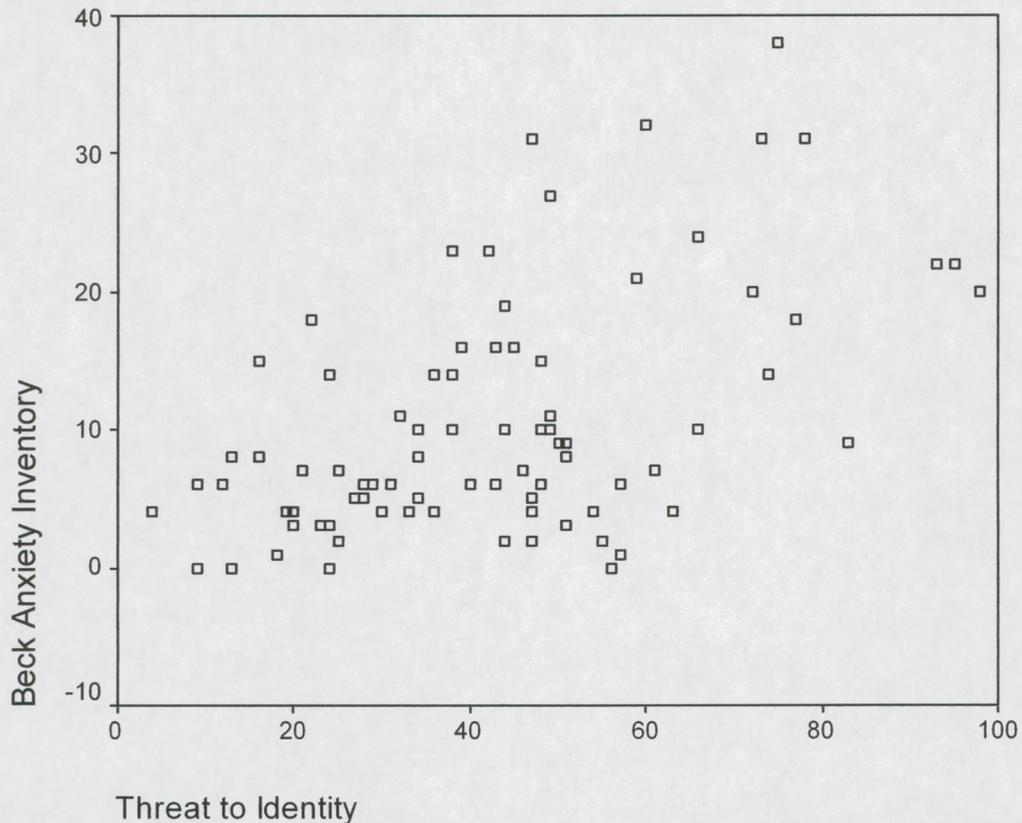
Figure 5



A second multiple regression analysis was conducted to determine how well threat to identity predicted anxiety. Again the predictors were fear of emotion, lack of confidence to cope, and identity fragmentation, but with the criterion variable BAI. The linear combination of the TIQ measures is significantly related to the BAI, $F(3, 83) = 11.11, p < .01$. The sample multiple correlation coefficient was .54 indicating that approximately 29% of the variance of the BAI in the sample can be explained by the linear combination of the TIQ subscales. Individual contribution of identity fragmentation was higher than that of fear of emotion and lack of confidence to cope.

What can be seen in the graph below is a less defined regression line than that of the BDI and the TIQ.

Figure 6



Discussion

The data obtained in this study indicate that identity vulnerability characterized by fear of emotion, lack of confidence to cope, and identity fragmentation does in fact contribute to the emergence of depression and anxiety. Of the three dimensions of identity vulnerability, identity fragmentation seemed to contribute most. Of the two dimensions of depression, most of the participants indicated that they experienced somatic-affective symptoms over cognitive. Of the four dimensions of anxiety, most of the participants indicated that they experienced subjective anxiety followed by

neurological, autonomic, and panic. Comparison of data also indicates that the relationship between identity vulnerability (and its three dimensions) and depression is clearer than that of identity vulnerability and anxiety. What do these findings suggest about the nature of the self? Findings indicate that identity fragmentation is one of the major underlying factors in the development of depression and anxiety more so than fear of emotion and lack of confidence to cope. And second, that identity vulnerability has more in common with depression than anxiety.

This study's focus was to understand the nature of contextualism and the role of the self-structure in the development of depression and anxiety. According to Cicchetti and Toth (1998) ecology, cognition, socioemotionality, biology, and the self-representational sense of self comprise our developmental existence. There is an embeddedness of these forces such that they affect us in a dynamic integrated fashion. For example, one particular individual's self-representational sense of self develops as he or she continues to learn through ecological and socioemotional influence, as a function of his or her biology. The proposition that the self exists essentially as an additional domain of influence suggests that there is an internal experiential memory. It seems likely that this is where one "learns" to experience depression and anxiety through a vulnerable, inadequate, or poorly developed sense of self. So how then are depression and anxiety "learned" and what lies underneath? What precedes their emergence?

If an individual was predisposed to neurochemical dysregulation and environmental supports were insufficient, socioemotional processes would become "unproductive" and nonconductive to age appropriate development. Human development should be visualized as a set of stages (as many have already proposed and proven)

whereby interpersonal needs must be fulfilled in order for an individual to move to the next stage. Once one of these stages is disrupted, the individual is not adequately prepared for subsequent stages. What this does over time is produce an individual with a poorly integrated sense of self. An individual's sense of self can be thought of as one's ability to appropriately utilize the self as a resource. There needs to be strength of character or an "inner self-structure". Without this, an individual is vulnerable to negative environmental influences or the effects of a lack of positive stimuli.

Understanding developmental contextualism is essential when trying to conceptualize sense of self. Without understanding the role that biology, ecology, socioemotionality, and cognition play in the development of the self as a resource, one cannot understand the implications of depression and anxiety. Consider the following hypothetical narrative. A baby is brought into a single parent world. The mother must work two jobs to support her and the baby. As such, the baby sees very little of the mother and instead forms a bond with his grandmother. As the mother becomes aware of this, she pulls the baby away from the grandmother out of resentment and begins spending more time with him. Only, this doesn't last because she must resume her second job to ensure that financial obligations are met. So the grandmother is permitted once again to become the central figure in the baby's life until the resentment is experienced again and the baby is pulled away from the grandmother again. This cycle repeats itself several times and eventually the baby enters childhood with severe attachment issues and a pervasive sense of powerlessness. Not having had the opportunity to form a secure attachment has rendered the child unable to handle the outside world.

Now let's suppose that this child suffers from poor neurochemical regulation; inherited from his mother who suffered mental illness her entire life. This child has "learned" through inadequate environmental supports to "feel" powerless and develops into a poorly adjusted child and adolescent so consumed by negativity that the self could not possibly be understood as a resource. All reassurance and self-agency must be "obtained" from the outside. If these needs are not met, the adolescent runs the risk of developing a variety of psychopathologies. Two of these potential and more common psychopathologies are depression and anxiety. What this narrative suggests is that an individual's self-representational sense of self is a direct reflection of what has been both consciously and unconsciously "learned" as a function of biology. "Feelings" or socioemotional processes guide an individual through the learning process by responding to ecological variables as a function of the "current sense of self". So essentially, self-integration or identity vulnerability, depression, and anxiety are developmental in nature, encouraged by poor neurochemical regulation and exacerbated by insufficient ecological influence.

A major question is why the data suggest that there is a clearer relationship between identity vulnerability and depression (over anxiety) and furthermore, why identity fragmentation appears to be such a strong contributor to depression and anxiety. One explanation may lie in the very nature of the variables. Like depression, a vulnerable identity structure is generally more of a persistent experience stemming from a compromised personality structure. Depressed mood states can last for years and do not seem to require situational provocation in order to maintain. Because anxiety tends to be more situational, unless feelings were provoked at the time of self-report, a majority of

participants in this particular study would tend not to indicate high levels of anxiety. The exception would be the smaller percentage of those who experience more pervasive anxiety or whose stimulus threshold is low and meet the criteria for an anxiety disorder.

Another potential explanation for the findings in this particular study is that depression may in fact be a post-traumatic response to extreme identity vulnerability. Depression has been defined by many as the self experiencing the loss of self. When an individual is poorly self-integrated, he or she is more vulnerable to the changing context, especially changes that affect the way in which the individual defines him or herself. In other words, when an individual lacks alternative sources of self-definition and is challenged by the changing context, a loss of self is experienced. This loss of self can be characterized as possessing higher identity vulnerability, or higher identity fragmentation, fear of emotion and lack of confidence to cope.

A disintegrating sense of self or fragmenting identity can and will produce depression and anxiety. The very thought of the self fading away is terrifying and would explain why this aspect of identity vulnerability contributed more to development of depression and anxiety than the others (fear of emotion and lack of confidence to cope). Some of the more ubiquitous effects of a fragmented identity structure are negative mind and mood states, like depression. Depression becomes a mechanism for the self-representational sense of self to operate from; it becomes a "way of life". Unlike the situational nature of anxiety, depression's time of onset is generally gradual and can remain for some time regardless of environmental stimuli.

Further explanation for the stronger relationship between identity vulnerability and depression may be that having a fragmented or vulnerable identity promotes a

constant search for the self. In other words, there may be a subjective yearning to secure a stable sense of self-agency that would have otherwise been developed during formative years. Because it cannot be “obtained”, there is a constant sadness or emptiness that occurs regardless of the environment.

Lewis and Sian (1995) characterize depression as being “lost in employment” or subjectively experiencing a diminished sense of self. Therefore, the search for a stable sense of self or secure identity stems from a depressive state and a vulnerable or fragmented identity. So essentially, the participants in this particular study entered the experiment lying somewhere along the identity vulnerability spectrum and were placed under minimal pressure. They responded from the perspective of current mood states. Those who felt sad, empty, and devoid of a secure sense of self were likely to score higher on identity vulnerability as well as depression.

This search for the sense of self seems to be a natural consequence of having a fragmented identity. Not “feeling” secure in one’s identity essentially keeps one from “knowing” one’s identity. Our cognitive processes persistently attempt to restore or at least create a balance and overcompensate for this loss by searching for means to fill the void. Along the way, maladaptive mental habits are learned and neural pathways are formed that heavily impact one’s state of mind. For example, an individual may learn to catastrophize, self-blame, or experience self-doubt. These cognitive habits serve only to exacerbate the already existing poorly integrated sense of self.

These habits, or beliefs, were “seeded” somewhere along life’s path and are generally in response to negative environmental stimuli. They were formed in the process of the self attempting to “repair itself”, and yet it does not. Instead these habits

enhance sensitivity and vigilance and create a more vulnerable sense of self. As they are re-experienced by way of triggers, they are reaffirmed and become integrated further into personality. So essentially, if an individual feels empty and lacks a secure sense of self, he or she runs the risk of developing these “susceptibilities” to the environment that were created at vulnerable moments in time. How can a diminished sense of self not create depression and anxiety?

Searching for security in the sense of self seems to be an instinctual or evolutionary part of survival. When one cannot “know” the self, one runs the risk of “extinction”, psychologically speaking. In extreme circumstances when an individual’s reality testing has been compromised, the effects of “physical” annihilation anxiety can be far reaching. Annihilation anxiety is associated with psychosis and often time creates a feeling of paranoia and excessive worrying that leads to delusional thinking. This may be an example of extreme identity vulnerability that is likely accompanied by extremely persistent depression and anxiety.

Those individuals who fall within the average spectrum of reality testing experience a range of stimulus thresholds that dictate when anxiety emerges. There is likely a corresponding range of depression and identity vulnerability where the fragmented sense of self fears “psychological” annihilation or nonexistence. It seems only human nature to want to securely exist in a safe, stable state of mind. The constant “gnawing” associated with the fear of the self “not existing” or “breaking down” does not easily cease in someone with a vulnerable identity structure. The search for self-security is likely to become the central priority for those individuals whose identity structures have been compromised and serve as a tremendous distraction. In fact, common sense

would dictate that many who suffer from an extremely fragmented or vulnerable identity run the risk of dissociating. In other words, aspects of the self exist in separate states that lack familiarity with one another. This type of fragmentation or vulnerability is indicative of a low stimulus threshold for anxiety and pervasive enough to maintain a depressive state.

Some may argue that depressed individuals perceive the world more accurately because they are in a more self-aware state of mind. In other words, if an individual is more aware of his or her feelings and emotions and those of others more so than the average individual, said individual should therefore be perceiving the world more accurately than the average individual. While depressed individuals may in fact be more vigilant of their environment and feelings than non-depressed individuals, this does not necessarily mean that they perceive the world accurately. An individual with a vulnerable identity structure, or fragmented identity, is likely to see the world through a "distorted lens". Some perceptions may be highly accurate; others may be off-base depending on the cognitive motive behind the perception. The difficulty lies in distinguishing between the two.

In conclusion, it seems likely that knowing one's identity means having security in one's identity. To remain unaffected, or at least less effected by negative environmental stimuli means that one has a strong or secure sense of self. Therefore, depression and anxiety are likely to emerge in someone who suffers from a vulnerable identity structure. Depression is likely to remain in effect more consistently than anxiety. Anxiety is likely to emerge episodically in response to contextual triggers. Aside from the strong relationship between identity vulnerability, identity fragmentation,

depression, and anxiety, all constructs utilized in this particular study, including fear of emotion, lack of confidence to cope, panic anxiety, neurological anxiety, autonomic anxiety, and subjective anxiety were highly associated with one another.

Future research may want to consider assessing the differences between Spielberger's (1983) "state" and "trait" anxiety as it relates to identity vulnerability or fragmentation. If identity vulnerability is a more persistent type of subjective experience, then perhaps individuals scoring high on identity vulnerability or identity fragmentation would score high on trait anxiety. According to Spielberger, trait anxiety is a predispositional aspect of an individual's personality. Just opposite is state anxiety where environmental triggers foster anxiety in an episodic fashion. So essentially, there are two factors worth considering. First off, the experimental setting and the nature of the questions in this particular study may have created state anxiety in some individuals. Second, some individuals may have been predisposed to trait anxiety, which could have been exacerbated by the experimental setting and nature of the questions. Assessment of state versus trait anxiety may lend some insight into why there is a strong relationship between anxiety and identity vulnerability, and yet why identity vulnerability relates to depression over anxiety. Could identity vulnerability have substantially facilitated the emergence of trait anxiety as it did with depression?

Aside from separating anxiety by state versus trait, future research may also want to consider breaking down the anxiety measure utilized in this particular study into separate constructs. It is possible that the three constructs of identity vulnerability lead to a single construct of anxiety just as strongly as they did with depression in this particular study. In other words, any or all of the three constructs included under the

umbrella of identity vulnerability (identity fragmentation, lack of confidence to cope, and fear of emotion) could result in the emergence of neurological, subjective, panic, or autonomic-type anxiety, exclusively. For example, identity fragmentation may prove to be the strongest contributor to subjective anxiety. As mentioned previously, one of the potential explanations for identity fragmentation leading to depression is the subjective yearning to secure a stable, consistent sense of self. So why couldn't identity fragmentation lead to high subjective anxiety? And for that matter, is subjective anxiety trait or state?

Future research may also want to consider assessing for psychotic and neurotic anxiety as it relates to identity vulnerability. Common sense would tell us that both classifications are associated with a diminished or inadequate self-structure. The question is how do the subjective experiences of anxiety differ in content, intensity, and duration? Is psychosis actually an extremely compromised self-structure with such intense and persistent anxiety that reality is "forgotten?" Is neurosis characterized by a less compromised self-structure; one that is less intense and debilitating? Could identity vulnerability be the underlying factor behind this spectrum?

Another potential strategy for future research may be to introduce manipulation to the self-reporting process. For example, creating or facilitating a state of objective self-awareness may lead to differences in the awareness and self-report of identity vulnerability, depression and anxiety. Another option is to instigate state anxiety by exposing some participants to stressful conditions via some type of performance task. One may also want to try controlling for gender differences in self-report of utilized measures.

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