WHEN SITUATIONS ACTIVATE MORE THAN ONE TRAIT CONCURRENTLY: A STUDY OF NEUROTICISM AND CONSCIENTIOUSNESS IN EVALUATIVE AND NON-EVALUATIVE SITUATIONS

by

Amber Lane Davidson

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Approved by:

_____
Eric Heggestad

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Dr. Amy Canevello

_____
Dr. George Banks

ABSTRACT

AMBER LANE DAVIDSON. When situations activate more than one trait concurrently: a study of neuroticism and conscientiousness in evaluative and non-evaluative situations. (Under the direction of DR. ERIC HEGGESTAD)

Most scholars have come to believe behavior is determined by an interaction of personality traits and situations. Trait activation theory (Tett & Guterman, 2000) and Fleeson's (2001, 2007) conceptualization of the trait-situation interaction both suggest that a situation can activate a specific trait and lead to trait-related behaviors. However, while both of these perspectives can accommodate the notion that multiple traits can be active in a particular situation, theory and research have largely focused on single traits. This paper seeks to address this gap by examining evaluative situations, which I believe will activate both neuroticism and conscientiousness. Data were gathered using experience sampling method and are analyzed using hierarchical linear modeling to observe the within-person state conscientiousness and state neuroticism correlation when accounting for the situation. Results showed that state neuroticism and state conscientiousness scores were higher in evaluative situations than in non-evaluative situations. However, I expected situation-type would moderate the relationship between state neuroticism and state conscientiousness. While multi-level modeling did reveal a significant moderating effect, it did not take the form expected. Results are interpreted with respect to trait activation theory and Fleeson's perspective on state variability.

Keywords: Trait-activation theory, personality distributions, personality states, neuroticism, conscientiousness, experience sampling method

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

WHEN SITUATIONS ACTIVATE MORE THAN ONE TRAIT CONCURRENTLY: A STUDY OF NEUROTICISM AND CONSCIENTIOUSNESS IN EVALUATIVE AND NON-EVALUATIVE SITUATIONS

There has been much debate surrounding whether personality traits or situational characteristics have the stronger influence on behavior (Buss, 1988; Epstein & O'Brien, 1985; Fleeson, 2004; Steyer, Schmitt, & Eid, 1999). On the one hand, personality traits are good predictors of behavior when considered across time and occasions, but tend to be relatively poor predictors of behaviors in specific situations. On the other hand, situational characteristics are good predictors of behavior in specific occasions, but are relatively poor predictors of average behaviors across time. Most scholars have come to believe behavior is determined by an interaction of personality traits and situations (Buss, 1988; Epstein & O'Brien, 1985). Endler and Magnusson (1976) sum this interaction up when they say, "behavior is determined by a continuous and multidirectional interaction between person variables and situation variables" (p. 956). This interaction can be conceptualized in multiple ways. Two recent frameworks are trait activation theory (Tett & Guterman, 2000) and Fleeson's idea of personality states (Fleeson, 2001, 2007). Both of these perspectives highlight the importance of both traits and situations on behavior.

Trait activation theory suggests that only certain traits are relevant for specific situations. That is, situations have trait-relevant cues that activate that trait in the individual, causing him or her to behave in a trait-relevant way (Tett & Guterman, 2000). Take for example an individual who arrives at a party where people are behaving extrovertedly, such as, mingling, dancing, and talking to lots of people. Observing people behaving in these ways signals that extraversion-related behavior is expected in this

situation. So, the individual is likely to also engage in extraversion-related behaviors. In this way, the situation has "activated" the trait leading to trait-related behavior.

Fleeson (2007) similarly proposed that both the nature of the situation and a person's trait influence the degree of trait-related behavior expressed in the situation. He explained that the expression of an individual's personality trait within a specific situation can be conceptualized as the individual's personality state (Fleeson, 2001, 2007). For example, consider an individual is preparing for a job interview. Given that preparing for a job interview calls for attention to detail, planning, and timeliness, it is likely that this person would express a high level of conscientiousness at this particular point in time, what Fleeson (2007) would refer to as state-conscientiousness.

Trait activation theory and Fleeson's conceptualization of the trait-situation interaction both suggest that a situation can activate a specific trait and lead to trait-related behaviors. However, while both of these perspectives can accommodate the notion that multiple traits can be activated by a particular situation, the theory and research around these perspectives has largely focused on the influence of a particular situation on a behavior related to a particular trait. This paper seeks to extend the theoretical foundations of these two perspectives by examining how evaluative situations can activate behavioral patterns for two traits, namely neuroticism and conscientiousness. Additionally, I hope to show how variations in this type of situation – i.e., evaluative vs. non-evaluative situations – are differentially related to the strength of the relationships between state neuroticism and state conscientiousness.

Trait Activation Theory and Traits as Distributions of States

Trait Activation Theory. Trait activation theory is centered on the concepts of trait relevance and situation strength (Tett & Guterman, 2000). Tett and Guterman (2000) suggest that a situation contains trait-relevant cues that trigger and call forth trait-relevant behaviors in the situation. Meaning that when an individual is exposed to a situation that prompts a particular trait, then that individual will most likely engage in behavior that is consistent with the prompted trait. Tett and Guterman (2000) provide an example using aggression: an individual high in aggression does not always behave aggressively, he or she only behaves aggressively when the situation cues it.

Situation strength is the degree to which a situation induces one to behave a certain way, despite personal tendencies (Tett & Guterman, 2000, p. 399). Continuing with the aggression example, an aggression-relevant situation will cue an aggression response. However, an individual with a naturally low inclination towards aggression will only respond with aggressive behavior in a situation that has an exceptionally strong cue for aggression (Tett & Guterman, 2000). This line of thinking suggests that while the situation cues which trait is to be expressed in a situation, the strength of the situation cues to the *extent* the trait should be expressed. Furthermore, the strength of the situation can cause an individual to behave in a way that is not consistent with the way that he or she normally acts.

Tett and Guterman (2000) tested the basic premise of trait-activation theory by having participants complete self-report assessments of risk taking, complexity, empathy, sociability, and organization. Each participant then read fifty scenarios (ten scenarios for each of the five traits) and reported what their behavioral intention would be in each

situation. The authors found evidence that a situation written to represent a specific trait would cue an increase in behavioral expression of that trait by an individual. Tett and Guterman (2000) also found that the correlation between scores on the self-report trait measures and the behavioral intentions became stronger and more positive when taking the situation into account. This finding suggests that by taking the situation into account, there can be a stronger relationship between an individual's trait and his or her behavior.

Overall, this research shows the influence of situations that are relevant to a specific trait in the expression of trait-related behavior. However, Tett and Guterman (2000) acknowledge two threats that could alter the relationship between the situation, trait, and behavioral intentions. The first is the flaw of assuming that a situation can only activate a single trait. If someone is on a dinner date, there will be cues to be nice to the person they are dining with, to chat with the waiter, to know dining etiquette, etc. Therefore, they may express extraversion and agreeableness because they are having a conversation, they may show signs of conscientiousness because they want to use the correct fork, and they may even express neuroticism because they want the date to go well. The date is a situation that activates multiple traits within the individual. Another example would be if an individual is working on a presentation with a team member, there will be cues to be cooperative and nice (agreeable traits), but also cues to perform well, pay attention to detail, and be reliable (conscientiousness traits).

The second threat is that how an individual perceives the situation will alter how they behave in the situation. If two people are asked to give a speech, one person may respond with extraversion-related behaviors because they want to have a lively discussion, while the other may respond with neuroticism-related behaviors because they

are scared of being in front of an audience. Having to give a speech may activate different traits within each individual. While the authors state that situations with multiple targeted traits and individuals' subjective perceptions of the situation may alter the trait-behavior relationship, they no do not explore this problem further (Tett & Guterman, 2000).

Traits as Distributions of States. Fleeson (2001, 2007) has defined an individual's personality state as the expression of his or her personality trait within a specific situation. Fleeson (2001) posits that the accumulated set of personality states across occasions creates a density function. Fleeson suggests that this density function is a better way to think about a personality trait – with the mean representing how the person is likely to behave on average (what one typically thinks of as a trait) and the variation representing the range of trait-related behaviors the person is likely to engage in across the situations they encounter.

To show that density functions exist as representations of personality traits, Fleeson (2001) had participants rate their personality states several times a day over a 14-day period. The data showed that a person could, and often did, experience a wide range of variability in behavior related to a single trait over the course of the study. For example, a person can experience low agreeableness in the morning while at work but high agreeableness in the afternoon having lunch with a friend. This same phenomenon is true of all the big five traits, in that a person can experience a wide range of trait-related behavior. Fleeson further found that while there was variability in trait-related behaviors over the course of the study, the means and standard deviations of each trait were unique to the individual and appeared to be relatively stable. Fleeson (2001) conducted ten

renditions of split-half reliability and correlated scores across halves to show that an individual's distribution was stable. This means that the average and dispersion of all state scores for a particular trait gathered over the course of the study was similar for an individual. For example, say an individual reports 20 instances of state agreeableness over five days. The unique mean and standard deviation from those 20 assessments will fairly accurately capture their range of agreeableness tendencies.

A person's trait-related behavior at a given point in time is a result of the interaction between an individual's personality trait and the situation he or she is in. Fleeson (2001) concluded that people have a natural tendency to express a trait to a particular degree, but that situational characteristics cause variation in that typical behavioral expression (i.e., personality states). Fleeson (2007) went on to hypothesize that the variation of the states was a result of the psychological characteristics of the situations. To investigate this, he largely replicated the methodology of his 2001 study to assess participants' agreeableness, extraversion, and conscientiousness four times a day for fourteen days. However, in this study he also instructed participants to report the psychological characteristics for the situation they had been in for the preceding hour, specifically around the extent to which the situation involved anonymity, friendliness, and task orientation. Fleeson (2007) found statistically significant relationships between the level, or strength, of personality states and the psychological characteristics of the situation. For example, he reported that "individuals were increasingly agreeable (warm, polite, and sympathetic) as the situation became friendlier, but decreasingly agreeable (more cold, rude, and unsympathetic) as the situation increased in task orientation" (p. 840). Additionally, the friendliness of a situation and degree of state extraversion had a

significant, positive relationship. Fleeson (2007) found that the friendlier a person was to the participant, the more the participant showed state extraversion (momentary talkativeness, energy, and boldness). Lastly, task-oriented situations had a strong, positive relationship with state conscientiousness. Just as in trait-activation theory, Fleeson (2007) concluded that the psychological characteristics of the situations trigger the level of trait-related behavior expressed in the situation.

Evaluative Situations as Activating Neuroticism and Conscientiousness

Trait activation theory (Tett & Gutterman, 2000) and Fleeson's (2007) perspective both suggest that a particular situation can trigger an individual to express multiple, relevant personality traits concurrently. Such situations that could activate multiple traits are evaluative situations. Evaluative situations are settings in which somebody evaluates an individual's work or product. These evaluations can be from a person of authority, such as a supervisor, (e.g. Lawler, 1967; Peterson, Luthans, Avolio, Walumbwa, & Zhang, 2011) or from a peer (e.g. Borman, White, & Dorsey, 1995; Erez, Lepine, & Elms, 2002). People spend much of their lives in evaluative situations. For example, school and work both have large evaluative components. At school, a teacher grades a student's tests and quizzes, a student gives a report that is critiqued, and a student's paper is reviewed and edited. Likewise, at work employees are commonly evaluated through performance appraisals (Cleveland, Murphy, & Williams, 1989; Lawler, 1967), which are conducted to make salary decisions, promotion recommendations, and retention/termination decisions (Cleveland, et al., 1989; Decotiss & Petit, 1978).

Being evaluated can cause a physiological and psychological response (Dickerson & Kemeny, 2004). For instance, Dickerson and Kemeny (2004) explain how a social-evaluative threat occurs when "an important aspect of the self-identity is or could be negatively judged by others" and can "occur when failure or poor performance could reveal lack of a valued trait or ability" (p. 358). Additionally, social self-preservation theory posits that perceived threat to social esteem or social status, such as a potentially negative evaluation, can lead to a psychological response in order to cope with the stress (Dickerson & Kemeny, 2004). A performance evaluation could be the threat that causes stress, anxiety, and a need to not be viewed poorly within the individual being evaluated. These psychological responses caused by evaluation can take the form of test anxiety (Hembree, 1988), social anxiety (Schlenker &Leary, 1982), social stress (Aneshensel, 1992), fear of failure (Elliot & Thrash, 2004), choking under pressure (Baumeister, 1984), and fear of negative evaluation (Weeks et al., 2005).

Neuroticism, one of the traits within the Big Five personality model (Costa & McCrae, 1992), is characterized by tendencies to be anxious, self-pitying, tense, touchy, unstable, and worrying (McCrae & John, 1992). Because evaluative settings are characterized by stress, anxiety, and worry (all characteristics of neuroticism), these situations should activate state neuroticism (Eysenck & Calvo, 1992; Sarason, 1988; Seta, Crisson, Seta, & Wang, 1989).

As suggested by both trait activation theory (Tett & Guterman, 2000) and traits as distributions of states (Fleeson, 2001, 2007), a situation′s trait specific characteristics influence an individual to respond with trait-relevant behavior. Individuals in evaluative situations can therefore be expected to show increased stress, anxiety, worry,

perfectionism. In other words, individuals with higher levels of neuroticism are likely to perceive evaluative situations as threatening, leading them to become anxious and fearful that they will be evaluated poorly or that others will look down on them (Gallagher, 1990; Schewchuk, Elliot, MacNair, Semands, & Harkins, 1999; Schroeder & Costa, 1984; Vollrath, 2001). Therefore, I hypothesize that state neuroticism will be higher in more evaluative settings than in less evaluative settings.

Hypothesis 1a: *State neuroticism will be higher in more evaluative (i.e., work and school) settings than in less evaluative settings (i.e., leisure and other settings).*

In addition to things like worry and anxiety, evaluative situations can also activate the drive for success, resulting in increased levels of motivation. External evaluation is associated with increased desire to be evaluated well (Ryan, Mims, & Koestner, 1983), an increase in interest and performance (Butler, 1988), an increase in motivation (Geister, Konradt, & Hertel, 2006), and an increase in attention to detail (Hoffman, Nathan, & Holden, 1991).

Individuals high in trait conscientiousness, a second of the Big Five traits, tend to be efficient, organized, planful, reliable, responsible, and thorough (McCrae & John, 1992). Importantly, they also tend to be achievement-oriented and persist in the face of challenges. Because evaluative settings can be characterized as increasing levels of motivation and attention to detail (characteristics of conscientiousness), these situations should activate state conscientiousness. As such, I hypothesize that state conscientiousness will be higher in more evaluative settings than in less evaluative settings.

Hypothesis 1b: *State conscientiousness will be higher in more evaluative (i.e., work and school) settings than in less evaluative settings (i.e., leisure and other settings).*

Relationships between State Neuroticism and State Conscientiousness

Considerable research has shown that neuroticism and conscientiousness are negatively correlated in the general population. For example, in a meta-analysis of the relationships between the Big Five traits, Van der Linden, te Nijenhuis, and Bakker (2010) reported a corrected correlation of $r = -0.43$ between these broad personality dimensions (see also Costa & McCrae, 1992; Johnson & Bloom, 1995; Rushton & Irwing, 2008). This negative relationship indicates that people who, across situations and over time, exhibit behaviors associated with elevated levels of conscientiousness tend also to exhibit behaviors associated with low levels of neuroticism.

In contrast to the findings that trait neuroticism and trait conscientiousness are negatively related, research by Beckmann, Wood and Minbashian (2010) has reported that state conscientiousness tends to be positively correlated with state neuroticism. These authors used an experience sampling method to assess state neuroticism and state conscientiousness five times a day for three weeks. Using these data, the authors calculated the correlations between state neuroticism and state conscientiousness scores within each of the participants in the sample. Averaging these correlations across all participants, state neuroticism and state conscientiousness were positively correlated, $r = 0.11$. This finding suggests that when an individual experiences high state conscientiousness, he or she is somewhat likely to also experience high state neuroticism. State neuroticism and state conscientiousness may be positively correlated because of the

situations the participants were in. Referring to trait activation theory (Tett & Guterman, 2000) and traits as distributions of states (Fleeson, 2001, 2007), if the situation cued for both neuroticism and conscientiousness, then the individuals would be responding with both elevated levels of state neuroticism and conscientiousness, leading to a positive correlation between these setting. Replicating the work of Beckman et al. (2010), I hypothesize that state neuroticism and state conscientiousness will be positively related.

Hypothesis 2: *The average within-person correlation between state Neuroticism and state Conscientiousness will be positive.*

Extending the work of Beckman et al., I expect that the strength of the relationship between state neuroticism and state conscientiousness will be moderated by the psychological characteristics of the situation. Specifically, because evaluative situations should active both state neuroticism and state conscientiousness, the within-person relationship observed between these states should be positive in these settings. In contrast, I do not expect that state conscientiousness or state neuroticism will be activated in leisure situations, where there is not expected to be a formal evaluative component. Without activation, a person's state scores are likely to be more of a reflection of his or her trait standing. As such, and consistent with the literature on the relationship between trait neuroticism and trait conscientiousness, I expect that state conscientiousness and state neuroticism will be negatively correlated in non-evaluative (i.e., leisure) settings. I propose the following hypothesis:

Hypothesis 3: The relationship between state conscientiousness and state neuroticism will be moderated by situational context, such that there will be a

positive relationship in evaluative situations (i.e., work and school situations) and a negative relationship in non-evaluative situations (i.e., leisure situations).

Method

The current study utilizes secondary data. Participants in the study were asked to complete a trait personality assessment in a lab setting and then to report their state personality (i.e. The Big Five) five-times a day over the subsequent two weeks. Below is the breakdown of the sample, measures, and design used during the process. While the data includes scores for at all the Big Five traits and states, I will focus solely on the state assessments of neuroticism and conscientiousness.

Participants.

Participants were 96 undergraduate students from a large Southeastern university. For their participation, participants received class credit towards their psychology course and a twenty-dollar gift certificate. The sample was as follows: 61.4% female, 62.5% Caucasian, and 24.0% African American. Participants had an age range of 18 to 37 years with a mean of 19.85 years (SD = 3.31).

Procedure

Participants were brought into the lab in groups of twelve or fewer. After obtaining informed consent, participants completed a series of questionnaires that will not be used in the present study. Participants then completed a training course on how to operate the mobile data collection device and were given information about the trait-related behaviors being explored. They were instructed on how to turn the mobile data collection device, a palm pilot, on and off, how to silence the alarm that sounded to signal it was time for a survey, and how to take the survey using the device. Participants were

also provided definitions on what classified a situation as school, work, leisure, or other. The participants were told that if they completed seventy percent or more of the surveys over the two-week period, then they would be entered to win a one hundred dollar gift card on top of the twenty dollar gift card they would already receive for completing the study.

Two Week Assessment Period. Similar to Fleeson's experience sampling method (2001; 2007), participants were instructed to keep their mobile data collection device on their person for the next two weeks in order to respond to state personality items multiple times a day. Between the hours of eleven in the morning and eleven in the evening, an alarm would occur roughly every three hours. When this occurred, students were instructed to answer the question within thirty minutes of the alarm only if doing so would not harm them or distract them from an important task, such as driving or paying attention in class. After the thirty-minute widow, the questionnaire disappeared. The assessment asked the students to think of the previous hour and rate their experience of four adjectives for each of the Big Five factors, totaling twenty adjectives in all. They were also asked to report what type of situation they had been in during that hour. At the end of the two weeks, the participants returned their mobile data collection device and were debriefed.

Measures

Personality State Assessments. This survey was administered to participants five times a day over the course of a two-week period. Participants were asked to rate their behaviors on twenty adjectives, four for each of the five traits, taken from the general adjective measure (Goldberg, 1992; see Table 1) while thinking about their

behaviors over the previous hour. For example, the student would be asked to rate how confident he/she acted in the past hour. Students rated the items using a 5-point Likert type scale that was anchored from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*) and the score for each trait was obtained by averaging the responses on the four adjectives for that trait.

Situation. When filling out the state questionnaires, participants reported the situation that best described the situation they had been in over the preceding hour. The participants classified their scenario as school, work, leisure, or other. The researchers instructed participants to use "other" when they were in "a situation that really can't be described by one of the other situations, or if you spent equal parts of the previous hour in the other two situations listed."

Results

Each participant had the opportunity to complete 70 state assessments over the course of the study, leading to a possible 6,930 assessments across the 99 participants. Participants completed 4,912 assessments for an overall response rate of 70.88%. On average, participants responded to 50 assessments, with a range of 16 to 67. Examining responses by situation type, participants completed an average of 16 assessment in evaluative situations (a range from 2 to 48) and 33 assessments in non-evaluative situations (range from 11 to 61). A detailed summary of responses by situation type are presented in Table 2.

Hypothesis 1a stated that state neuroticism would be higher in evaluative settings (i.e., work and school) than in non-evaluative settings (i.e., leisure and other settings). To test this, I first calculated average state neuroticism in evaluative situations and average

state neuroticism in non-evaluative situations for each person. Averaging across the 99 study participants, the mean within-person state neuroticism was 10.87 in evaluative situations and 9.98 in non-evaluative situations. A paired-samples t-test indicated that state neuroticism was statistically significantly higher in evaluative situations than in non-evaluative situations ($t = 6.46$, $p < 0.00$). Thus, Hypothesis 1a was supported.

We used the same method to test Hypothesis 1b, which stated that state conscientiousness would be higher in evaluative settings than in non-evaluative settings. Participants had an average within-person state conscientiousness mean of 15.61 in evaluative situations and an average within-person state conscientiousness mean of 13.85 in non-evaluative situations. A paired-samples t-test indicated that conscientiousness was statistically significantly higher in evaluative situations than in non-evaluative situations ($t = 12.39$, $p < 0.00$). Thus, Hypothesis 1b was supported.

The second hypothesis was that the average within-person correlation between state Neuroticism and state Conscientiousness would be positive. To evaluate this hypothesis, I calculated the correlation across state neuroticism scores and state conscientiousness scores for each person. I then took these 99 correlations and performed Fisher's r to z transformation on each. I then averaged the 99 z-scores and then back-transformed the average z-score to an *r*. The average within-person correlation between state neuroticism and state conscientiousness was $r = 0.01$ ($p > .05$). Thus, Hypothesis 2 was not supported.

Hypothesis 3 stated the relationship between state conscientiousness and state neuroticism would be moderated by situational context, such that there will be a positive relationship in evaluative situations and a negative relationship in non-evaluative

situations. Because the data were multilevel (i.e., multiple time points nested within one individual), I used the R multilevel software package to conduct a multilevel analysis. Multilevel analysis is preferred when data are nested because it does not assume independence of errors and avoids the inherent problems with disaggregation and aggregation (Luke, 2004). The data for this analysis include 4,912 assessments of state neuroticism, state conscientiousness, and situation nested within the 99 participants. According to the charts of Scherbaum and Ferreter (2009), I have sufficient power needed to detect small effects.

To begin, I ran the null model containing only the outcome variable to examine whether there was between-person (Level 2) variance in the outcome variables. Because I am looking at the relationship between two level 1 variables, state neuroticism and state conscientiousness, I will run two null model analyses, one for each. The first null model had state neuroticism as the outcome variable. I calculated the ICC(1) value, which indicated that 39.37% of the variance in state neuroticism was due to level-2 factors. The second null model had state conscientiousness as the outcome variable. I calculated the ICC(1) and found that 34.03% of the variance in state conscientiousness is due to a level 2 factor.

Our next step was to create models that added level 1 and level 2 predictors. Table 3 displays the steps used to test the models that include the predictors and the results of the multilevel analyses. In model 1, I chose to use state neuroticism as the outcome variable and added in state conscientiousness as the Level 1 predictor. In model 2, situation ("Eval," evaluative versus non-evaluative) is the level-2 predictor. I entered the level 2 predictor in the slopes-as-outcomes equation in model 2.

The level 1 predictor, state conscientiousness, has a non-significant relationship with state neuroticism ($\gamma 10 = -0.00$; $p > .05$;). However, state conscientiousness accounts for 11% of the variance in state neuroticism (pseudo $R^2 = 0.11$). The level 2 predictor of interest ("Eval"), has a significant, negative relationship with state neuroticism ($\gamma 11 = -0.13$, $p < .01$;). This relationship is statistically significant, further evidenced by the fact that 8% of the between group variance in the state neuroticism-state conscientiousness slopes is due to being in an evaluative or non-evaluative situation (pseudo $R^2 = 0.08$). Plotting the interaction (Figure 1) showed that in evaluative situations, state conscientiousness and state neuroticism have a weak negative slope. This negative relationship is not consistent with my hypothesis of a positive relationship between state neuroticism and state conscientiousness in evaluative situations. In non-evaluative situations, state conscientiousness and state neuroticism have a slope that is very near zero. I had hypothesized a negative-relationship between these two states in non-evaluative situations. Thus, Hypothesis 3 was not supported.

Discussion

Trait activation theory and Fleeson's (2007) conceptualization of the trait-situation interaction both suggest that a situation can activate a specific trait and lead to trait-related behaviors. However, while both of these perspectives can accommodate the notion that multiple traits can be active in a particular situation, theory and research around these perspectives has largely focused on the influence of a situation on behavior related to a single trait. This paper sought to move the literature forward by examining how evaluative situations might activate two personality states at the same time, specifically state neuroticism and state conscientiousness.

Consistent with trait activation theory, I found that state neuroticism and state conscientiousness were elevated in evaluative situations (in comparison to non-evaluative situations). I operationalized evaluative situations as school and work settings. I expected that because of the evaluative factors associated with these situations, such as tests and graded assignments in school and supervisor evaluations and the potential to be fired for poor performance in work, these situations would lead people to behave more conscientiously and to experience higher levels of stress and anxiety. The results support the idea that school and work are, in fact, more evaluative. Extending theory and empirical evidence to support both trait activation theory and Fleeson's (2007) perspective, these results also indicate that evaluative situations can activate both state neuroticism and state conscientiousness.

Prior research by Beckmann, Wood and Minbashian (2010) found that state conscientiousness was positively correlated with state neuroticism. However, I failed to replicate this finding in my data (Hypothesis 2). Specifically, I found that state neuroticism and state conscientiousness had a correlation very near zero. This finding was unexpected as my methodology was very similar to that of by Beckmann, et al. (2010). However, three minor differences may have contributed to my different findings. First, Beckmann et al. (2010) surveyed participants five times per day for a period of three weeks, while I surveyed participants five times a day for a period of two weeks. The extra week may have allowed Beckmann, et al. to collect a more robust sample of situations. Second, Beckmann, et al. framed their survey items to prompt participants to think of the moment "right now," while I framed questions in terms of "the preceding hour." Having this longer time frame may have confounded my situation data. A single

individual can experience many different situations within an hour and recalling all the events in a long-time frame may lead to uninterpretable results. The specificity of thinking about "right now" may remove the guess work involved with recalling all situations in the past hour. Lastly, I surveyed college students in the United States, while Beckmann, et al. (2010) surveyed middle-level managers working at large Australian companies. The samples may have been different enough as to evoke diverse outcomes. Because Beckmann, et al.'s sample was older and in the workforce, the participants may have had stronger and more frequent evaluative situations. A performance appraisal from a supervisor may evoke anxiety and the need to prepare to a greater extent than a quiz in a school context.

Although the Beckmann, et al. (2010) results were statistically significant and mine were not, it is important to note that their results were not all that different from mine. Specifically, Beckmann, et al. found a relationship of $r = 0.11$, while I found a relationship of $r = 0.01$. These findings are close enough to potentially imply that: (1) the slight differences discussed above may have influenced the 0.10 discrepancy between the correlations, or (2) Beckmann, et al.'s significant results may be due to chance.

We also did not find support for the hypothesis that the relationship between state conscientiousness and state neuroticism would be moderated by situational context. In evaluative situations, I expected to find a positive relationship between state neuroticism and state conscientiousness. This relationship did not emerge; instead, I found a slight negative relationship between these states. Conversely, I expected a negative relationship in non-evaluative situations. However, the observed relationship between the states in the non-evaluative situations was very near zero.

When faced with findings that are not consistent with one's hypothesis, researchers must decide whether their theory was wrong, their data did not provide for a fair test of the theory, or some combination of these factors were at play. In this case, it may be a combination of these factors. I propose four reasons for the lack of support for the moderation hypothesis. The first reason lies in the methodology. The situation categories, evaluative and non-evaluative, that I used in this study may have been too broad. That is, while school and work certainly have evaluative components, they are not always evaluative. For example, a participant may have been reading alone in the library when prompted with a questionnaire. While they would have been in a "school" setting, there would have been very little evaluation in this particular school setting. Thus, it may be that listing a situation as school or work is not specific enough to capture a truly evaluative moment. In the future it will be necessary to create more nuanced situational categories to better capture when a participant was truly in an evaluative situation.

Second, it may be that I am correct in thinking that work and school contexts trigger higher levels of neuroticism, but wrong in assuming leisure would not. More specifically, leisure time could include hobbies, such as a competitive sport or cooking food for others, that will be critiqued and, as such, contain an evaluative component. Additionally, it could be that rumination is happening during leisure time. When not busy, such as during leisure time, individual's may ruminate or worry about upcoming evaluations or other stressful events. Rumination involves the act of fixatedly reflecting on a situation in order to gain understanding and some sort of control and is associated with symptoms of anxiety (Nolen-Hoeksema, 2000). If this is the case, then the neurotic behaviors triggered by school and work may be manifesting outside of the work and

school context and spilling over into leisure situations. Additionally, the spillover effect provides further evidence for how work and evaluative situations can influence leisure time and personal life (Williams & Alliger, 1998).

Third, it may be that individuals high in conscientiousness will be well prepared and organized, and therefore, not nervous or anxious in evaluative settings. Conscientiousness is associated with being careful, dependable, organized, hardworking, achievement oriented, and planful (Barrick & Mount, 1991). If a participant is high on conscientiousness and exhibiting these characteristics, then the participant may be mitigating the stress and worry of neuroticism by being prepared for the situation and determined to do well.

Lastly, if I am correct in my theory that evaluative situations evoke both neuroticism and conscientiousness, then it may be that busy and stressed participants are not taking time away from handling an evaluative situation to take the survey. The missing data may be from those who are experiencing high neuroticism and high conscientiousness and don't have the ability to take the survey in that moment. Missing this subset of the data causes a negative relationship between state conscientiousness and state neuroticism when in evaluative situations and, ultimately, leads to a lack of support for my moderation hypothesis. If this data exists and I am able to capture it, then it is possible that the relationship between state conscientiousness and state neuroticism would change from negative to positive and I would see that evaluative situations do moderate as I predicted.

Overall, I believe the main limitation for this study is, as mentioned above, the broad categories for evaluative and non-evaluative situations. Referring to such

overarching categories and referencing the preceding hour may have hindered us from getting adequately specific information about the nature of the situations participants were in at the state assessments were administered. In the future, I should (1) be more specific about the type of situation participants are experiencing, and (2) have the participant think of that situation only, not a whole hour worth of situations. Future research should consider having participants self-report what situation they are in (e.g. at a study group, family dinner, etc.) and rate the level of evaluation they believe the situation possesses. Fleeson (2007) had participants rate the situation they were in in the last half hour on 11 characteristics. Examples of these characteristics included, how many people were present, how much did you interact with others, was this situation chosen by you or imposed on you, etc. (Fleeson, 2007). Gathering additional information such as this will be useful for researchers and allow them to better understand how the participants are perceiving the situation, which may provide more accurate situational data for a study such as this.

Summary and Conclusions

In the current study, I explored the relationship between state neuroticism and state conscientiousness, as well as whether the relationship between state neuroticism and state conscientiousness was influenced by the nature of the situation as evaluative or non-evaluative. Based on the literature on trait activation theory (Tett & Gutterman, 2000) and personality distributions (Fleeson, 2007), I believed that evaluative situations would activate state neuroticism and state conscientiousness concurrently, creating a positive relationship that would be moderated by the evaluative nature of the situation. Evaluative situations were found to have higher state neuroticism and state conscientiousness scores

than non-evaluative situations. However, I did not find the positive relationship between state conscientiousness and state neuroticism that I predicted, and situation also did not moderate this relationship as expected. I believe that this theory should be further tested with a more tailored approach, involving more precise measures, in order to collect more specific data.

Table 1. Adjectives Included in the Trait-Related Behavior Assessment.

Neuroticism	*Conscientiousness*
Calm	Ambitious †
Anxious	Disorganized
Moody	Efficient
Self-critical†	Careless

Note: †indicates that the adjective was not taken from Goldberg but one that was added to fit in the work and school contextualized measures (1992); Goldberg referred to Neuroticism as Emotional Stability

Table 2. Count of situations reported by participants.

	All Situations	Evaluative Situations	Non-Evaluative Situations
Maximum Reported	67	48	61
Minimum Reported	16	2	11
Average	50.00	16.19	33.00
Total (Across Sample)	4912	1603	3309

Table 3

Hierarchical Linear Models and Results

Model	Coefficients				Variance Components		
	γ_{00}	γ_{01}	γ_{11}	γ_{10}	σ^2	τ_{00}	τ_{11}
Model 1 – Regression of C on N L1: $N_{ij} = \beta_{0j} + \beta_{1j}(C_{ij}) + r_{ij}$ L2: $\beta_{0j} = \gamma_{00} + U_{0j}$ L2: $\beta_{1j} = \gamma_{10} + U_{1j}$	10.36**			-0.00	5.52	18.76	0.07
Model 2 – Regression of C, Eval, and C:Eval on N L1: $N_{ij} = \beta_{0j}+\beta_{1j}(C_{ij})+r_{ij}$ L2: $\beta_{0j} = \gamma_{00}+\gamma_{01}(\text{Eval}) + U_{0j}$ L2: $\beta_{1j} = \gamma_{10}+\gamma_{11}(\text{Eval}) + U_{1j}$	10.46**	2.94**	-0.13**	-0.03	5.35	17.10	0.07

Note. L1= Level 1, $N = 4912$; L2 = Level 2, N=99; N = Neuroticism; C = Conscientiousness; Eval = Evaluative situation (1 = Evaluative situation, 0 = Non-evaluative situation); γ_{00} = intercept of Level 2 regression predicting $\beta 0j$; γ_{01} = regression coefficient for Eval in Level 2 regression predicting $\beta 0j$; γ_{11} = regression coefficient for Eval in Level 2 regression predicting $\beta 1j$; γ_{10} = intercept of Level 2 regression predicting $\beta 1j$ (pooled Level 1 slopes); σ^2 = variance in Level 1 residual (i.e., variance in rij); τ_{00} = variance in Level 2 residual for models predicting $\beta 0j$ (i.e., variance in $U0$); τ_{11} = variance in Level 2 residual for models predicting $\beta 1j$ (i.e., variance in $U1$). * indicates $p < .05$. ** indicates $p < .01$.

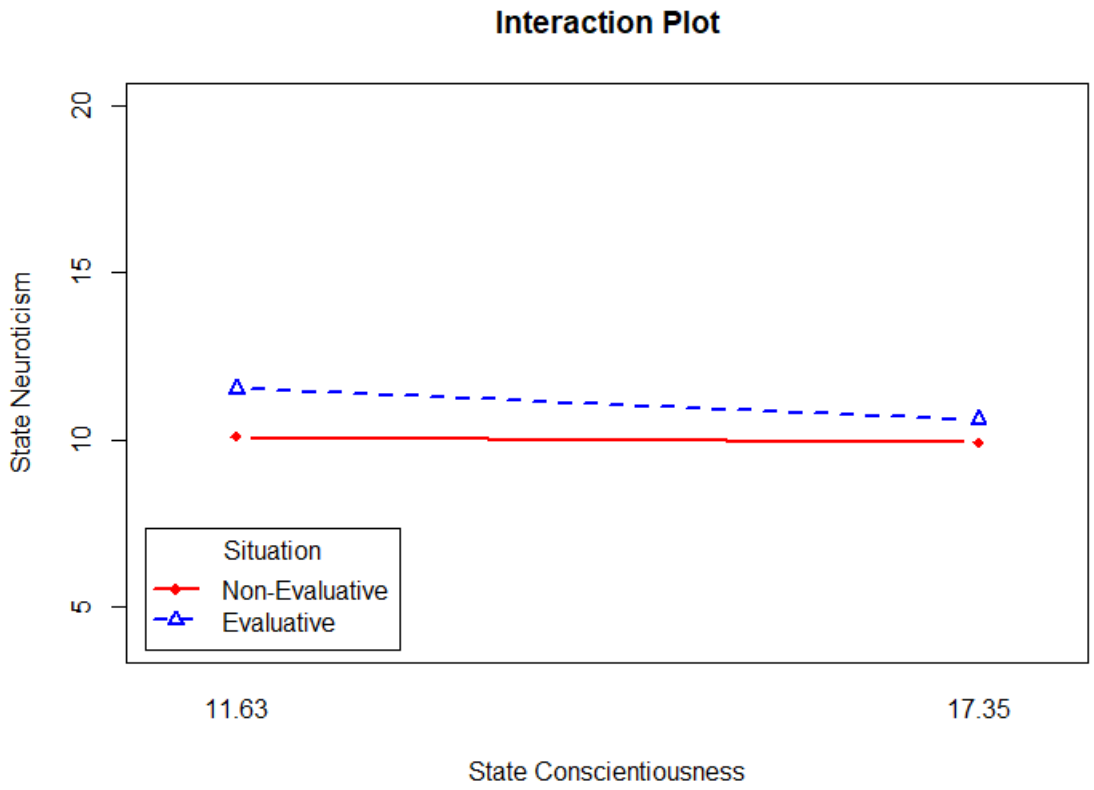

Figure 1. Outcomes of hypothesis 3. State neuroticism and state conscientiousness moderated by situation.

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