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## Students' Attachment Styles to their Professors: Patterns of Achievement, Curiosity, Exploration, Self-criticism, Self-reassurance, and Autonomy

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Students' Attachment Styles to their Professors: Patterns of Achievement, Curiosity,  
Exploration, Self-criticism, Self-reassurance, and Autonomy

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Lian Conrad

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Project title: Students' Attachment Styles to their Professors: Patterns of Achievement, Curiosity,  
Exploration, Self-criticism, Self-reassurance, and Autonomy

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### Abstract

This study explored whether professors for young adult college students could serve as caring and trustworthy attachment figures who fostered certain mindsets, perceptions of the self, and academic behaviors. A convenience sample of 89 first-year college students in introductory psychology courses completed an online survey. First, the study sought to replicate the established relationships between students' achievement goal orientations and curiosity, exploration, self-criticism, and self-reassurance. Then, the study analyzed students' attachment styles to their First-Year Seminar (FYS) professors in relation to achievement goal orientations to see if attachment style could then predict similar patterns of academic behaviors. Contrary to expectations, results suggest that student-professor attachment styles are not derived from student-parent attachment styles. Regarding academic behaviors, students with high avoidant and anxious attachment to their FYS professors perceive less autonomy support. Specifically, students high in avoidant attachment are more likely to self-criticize, while those high in anxious attachment self-reassure. Overall, students are bringing a unique quality to their professor attachments, and those with stronger avoidant and anxious attachments tend to exhibit greater maladaptive academic behaviors.

Students' Attachment Styles to their Professors: Patterns of Achievement, Curiosity, Exploration, Self-criticism, Self-reassurance, and Autonomy

The transition to college represents the departure from childhood and adolescence into young adulthood. First-year college students must learn to navigate this stressful transition, which commonly includes a degree of separation from parents, increased accountability for decisions, and demanding social and academic responsibilities. First-year students may feel overwhelmed by this separation from familiarity and evaluate their abilities to cope by self-criticizing or self-reassuring. However, the stress that students experience by separating from their parents, may be remedied by forming close bonds with others, such as roommates, classmates, and professors. To cope with the many transitions of beginning college, first-year students may find comfort in the routine of a class environment, such as first-year seminars (FYS) where students enroll in a year-long class with a small group of classmates and professor. Professors are some of the first members that students can relate to in their new academic and social community. Secure student-professor relations are important because students may attach expectations towards the professor that are similar to a caregiver. Such expectations of the professor may include supporting autonomy and facilitating curiosity and exploration. The expectations may also relate to how successful the students perceive the professor as facilitating them. Expectations of autonomy, curiosity, and exploration may extend to color students' academic achievement.

In relation to academic achievement, there is extensive research on outcomes of achievement goal orientations, but more research is needed into the forces driving students to adopt particular achievement goal orientations. Achievement goal orientations are the ways individuals perceive goal attainment in academics. There are three types of achievement goal

orientations—mastery goal orientation, performance-approach goal orientation, or performance-avoidance goal orientation (Elliot & Church, 1997). Different combinations of competence, fear of failure, and achievement motivation underlie the orientations.

Elliot and Church (1997) found that a mastery goal orientation related to achievement motivation and high competence expectancies. Students with a mastery goal orientation are more likely to be intrinsically motivated to overcome challenges and hold high self-competence beliefs. They set standards for themselves that allow the mastery of the skill to develop from confidence, interest, and effort. The researchers also found that a performance-approach goal orientation also associated with achievement motivation and high competence expectancies, but also with the fear of failure. Performance-approach oriented students tend to appear successful like those with a mastery goal orientation, due to their achievement strivings and expectations of high competency. Nonetheless, the added fear of failure may deteriorate their successful functioning with prolonged academic stress. Finally, a performance-avoidance goal orientation related to a fear of failure and low competence expectancies (Elliot & Church, 1997). These students may be the most vulnerable, because not only does the fear of failure underlie the orientation, but they also do not see themselves as capable of success, which may thwart their effort.

Thus, achievement goal orientation theory may pair well with attachment theory to see if attachment clarifies why students are driven toward particular goal orientations. Prior research links students' attachments to their parents with the types of achievement goal orientations (Elliot & Reis, 2003). However, there is little research on students' attachment to their professors. More research on the role of the professor is needed because when students transition to college, the role of parents as primary authority figures minimizes. The professor,

someone who mentors and encourages learning, may then emerge as a potential attachment figure. Additionally, professors' responsibilities are not just confined to the classroom. Professors may also advise students throughout the school year on academic and non-academic concerns. Some professors, such as FYS professors, may function as more of a mentor than others. Thus, students' perceptions of professors' mentoring efforts may also relate to their academic adjustment.

Previous research also links students' achievement goal orientations to certain patterns of curiosity, exploration, self-criticism, and self-reassurance (Kashdan, Gallagher, Winterstein, Silvia, Breen, Terhar, & Steger, 2009; Powers, Koestner, Zuroff, Milyavskaya, & Gorin, 2011). If students' attachments to their professors correlate with the types of achievement goal orientations, then attachment styles may predict the similar patterns of curiosity, exploration, self-criticism, and self-reassurance. If this proposed model holds, then it may expand to explain students' perceptions of their professors' efforts, such as perceived autonomy support in the classroom climate.

While the literature reviewed frequently conceptualizes attachment theory as categorical attachment styles, the attachment measure used in the present study requires a shift in thinking towards two quantitative dimensions of attachment style. The measure conceptualizes two dimensions of attachment avoidance and attachment anxiety and allows for the assessment of attachment to figures other than parents, such as professors (Fraley, Heffernan, Vicary, & Brumbaugh, 2011). Therefore, instead of *categories* of attachment, the following study will explore attachment style in terms of the *degrees* of avoidant attachment and anxious attachment. Students with higher degrees of avoidant than anxious attachment will be conceptually "avoidantly attached"; those with greater anxious than avoidant attachment will be conceptually

“anxiously attached”, and those with low avoidant and anxious attachment will be conceptually “securely attached”.

Four main goals characterized this study. The first sought to replicate prior research that linked achievement goal orientations with curiosity, exploration, self-criticism, and self-reassurance. The second goal hoped to associate adult attachment with achievement goal orientations, to see if students’ relationships with their FYS professors contribute to their achievement goal orientations. If the relationships between attachment and achievement goal orientation held, then the third goal involved correlating attachment with curiosity, exploration, self-criticism, and self-reassurance to see if it produced similar patterns. Finally, the fourth goal asserted that if the proposed model aligned with each of the goals, then attachment to one’s FYS professor could also explain qualities of the FYS professor’s teaching style, such as perceived autonomy support.

**Goal 1: Replication of Achievement Goal Orientations and Curiosity, Exploration, Self-criticism, and Self-reassurance**

Achievement Goal Orientation theory primarily roots itself in school settings. Focusing on the years between elementary school and college, its research examines why some individuals are motivated to overcome obstacles while others give up or avoid trying. Elliot and Church (1997) identified a three-factor hierarchical model of achievement goal orientation. Mastery, performance-approach, and performance-avoidance goal orientations compose the three types of achievement goal orientations. Kaplan and Maehr (2007) found that adopting different achievement goal orientations related to different amounts of engagement in schoolwork and emotional experiences at school. Achievement goal orientations may help explain why some



first-year students adjust more effectively to their classes, classmates, and professors, than others.

In achievement settings, such as college, that are challenging and pose potential threats to the self, both achievement motivation and the fear of failure may strengthen or impede degrees of curiosity, exploration, self-criticism, and self-reassurance. Kashdan, Gallagher, Winterstein, Silvia, Breen, Terhar, and Steger (2009) defined curiosity as the willingness to acknowledge the novel, uncertain, and unpredictable nature of everyday life. They defined exploration as actively seeking opportunities for new information and experiences. Curious individuals may be more likely to entertain an open mind and ponder various possibilities, while exploration-oriented individuals may be more likely to pursue new experiences through action. Kashdan, Rose, and Fincham (2004) found that greater amounts of curiosity and exploration were associated with positive subjective experiences, positive evaluations of the self, world, and future, and the belief that goals are attainable and obstacles can be overcome. Therefore, I hypothesized that students with a mastery goal orientation would have higher curiosity and exploration because of the intrinsic motivation to enjoy effortful cognitive tasks and openness to new experiences and ideas. Refer to Table 1 in the text for a summary of the current study's hypotheses for Goal 1. This would leave students determined to explore and thrive in a college environment filled with the excitement of unfamiliar peers, new authority figures such as professors, and challenging courses. For performance-approach and performance-avoidance goal orientations, I hypothesized that students would both have lower curiosity and exploration. However, for those with a performance-approach goal orientation, they would have low curiosity and exploration because the fear of failure and high competence expectancies would deter them from embracing uncertain and unpredictable experiences that would provide personal growth. They may also

excel on evaluated course content in classes, but lack the inspiration or intrinsic motivation towards the material they are learning about. On the other hand, students with a performance-avoidance goal orientation would have low curiosity and exploration because their fear of failure and low competence expectancies may prevent them from being open to new material and experiences in the first place. These students would be less likely to question preexisting knowledge and may view course-related difficulties as too hefty to overcome, and distrust the availability of supportive resources because of their low competence expectancies.

Table 1. Hypotheses for Goal 1.

	Curiosity	Exploration	Self-criticism (Inadequate self and Hated self)	Self-reassurance	
Achievement Orientation	Mastery	High curiosity	High exploration	Low inadequate self; Low hated self	High self- reassurance
	Performance- Approach	Low curiosity	Low exploration	Low inadequate self; Low hated self	High self- reassurance
	Performance- Avoidance	Low curiosity	Low exploration	High inadequate self; High hated self	Low self- reassurance

Between achievement goal orientations and self-criticism and self-reassurance, Powers, Koestner, Zuroff, Milyavskaya, and Gorin (2011) found a negative relationship between self-criticism and goal progress. Self-critical tendencies include a preoccupation with failure, punitive self-talk, rumination about perceived criticism, and avoidant coping methods. Self-

reassurance refers to the ability for individuals to remind themselves of their competency and positive qualities. Thus, self-denigration and harsh internal judgments of the self undermined effective goal pursuit (Powers et al., 2011). However, they found that high standards that were well integrated into the self and without harsh self-critical evaluations were associated with no negative impacts to goal performance—in fact, they were positively associated (Powers et al., 2011). Further, Baião, Gilbert, McEwan, and Carvalho (2015) also compared self-criticism and self-reassurance, and delineated self-criticism into dimensions of an “inadequate self” and a “hated self”. An individual with greater values of an inadequate self, tends to view themselves as inadequate and incompetent to deal with challenges. Those with greater perceptions of a hated self, deal with challenges through self-attacking thoughts of wanting to harm or punish oneself. Therefore, I hypothesized that students with a mastery goal orientation would have low values of an inadequate self and hated self, but high self-reassurance; those with a performance-approach goal orientation would have greater values of an inadequate self, hated self, and self-reassurance, those with a performance-avoidance goal orientation would have greater values of an inadequate self, hated self, but low self-reassurance (see Table 1).

Mastery oriented students are likely to engage in activities with the goal of learning for its own sake to acquire knowledge and skills, which makes them more adaptive to failure or stressors at school. By investing effort to improve, they can call on self-reassurance to aid them in times of criticism and remind themselves of their determination. On the other hand, both performance-approach and performance-avoidance goal oriented students focus on proving one’s ability, likability, and competence. Specifically, individuals with performance-avoidance goal orientations tend to display more overt signs of distress by expressing negative emotions and withdrawing from the environment (Elliot & Reis, 2003). These students may have the greatest

difficulty in school because their avoidance prevents them from initiating any goals, since they strive to avoid performing worse than others. Instead, they may withdraw into less productive activities, ruminate, procrastinate, and self-criticize. This lack of action may poorly prepare students for the heightened responsibilities of planning, anticipating, and time management in college. Those with a performance-approach goal orientation may be able to initiate goals, but their constant search for approval and high standards of competence may hinder them from following through or feeling satisfied. This leaves students with partial skills to set goals from themselves, but with a difficulty to complete them and prolonged stress on the rest of their functioning. These students may also self-reassure because their high need to outperform others, obtain approval, and fear of failure encourages them to remind themselves of their competency. However, this self-reassurance may be an effort to soothe themselves for reasons different from the self-reassurance seen in those with mastery goal orientations (see Table 1).

Additionally, Powers, Koestner, and Zuroff (2007) found that self-criticism and autonomy motivation contribute independently to the prediction of goal progress. They found that the self-critic's tendencies to ruminate and procrastinate mediate goal progress. Performance-approach and performance-avoidance goal orientations obsess over rumination and are preoccupied with failure, which may compromise goal attainment. Research indicates a future need to examine the content and nature of these ruminations. By replicating the relationship between achievement goal orientation and curiosity, exploration, and self-criticism, I can apply attachment theory to provide insight into why students develop these achievement orientations that predict such patterns of functioning.

**Goal 2: Associate Attachment with Achievement Goal Orientation**

Attachment theory posits that the way caregivers attend to infants develops the infant's secure, avoidant, or anxious attachment style to caregivers and others (Bowlby, 1969). Infants develop internal working models which are mental representations of the availability, security, and closeness of attachment figures. As individuals mature, these internal working models are proposed to color interactions with others. Attachment styles are believed to continue into adulthood, but they are malleable and open to revision following salient interactions with others (Pinquart, Feubner, & Ahnert, 2013). Hazan and Shaver (1987) also classified adult attachment style into secure, avoidant, and anxious styles. Low amounts of attachment avoidance and anxiety (secure style) relates to a trusting and positive view of relationships, the ability to become close with others, self-disclose, and less doubt towards relationships. High avoidant attachment (avoidant style) relates to hesitancy about involvement in relationships, rejection, abandonment, and distance from the attachment figure. High anxious attachment (anxious style) relates to a demand of closeness, less trust, approval seeking, and greater emotionality (Hazan & Shaver, 1987). Accordingly, attachment styles and achievement goal orientations are related to the ways that individuals process expectations and assumptions about the availability of others and evaluate the quality of such relationships.

Elliot and Reis (2003) provided strong support of the hypothetical link between attachment and achievement goal orientation. Securely attached individuals to their parents had a high need for achievement and a low fear of failure, which supports a mastery goal orientation. Further, Learner and Kruger (1997) found that attachment security in Grades 11 and 12 (age 17), positively related to intrinsic motivation, which also concurs with a mastery goal orientation. Proposing professors as attachment figures, students' attachment anxiety relates to low academic

self-efficacy and to self-denigrating attributions for failure, while attachment avoidance relates to negative perceptions of the lecturer and course (Kogut, 2016). However, with few research examining students' attachment to their teachers, students' attachment styles to their professors are a new territory for attachment research. Students with secure attachments to their professors may view their professors as consistently available, supportive, and encouraging of exploration in the class environment. To replicate Elliot and Reis, I hypothesized that students with a mastery goal orientation would have low avoidant and anxious attachment to their first-year professor. On the other hand, students with avoidant attachment to their professors have a low need for achievement and high fear of failure, which would be consistent with a performance-avoidance goal orientation (Elliot & Reis, 2003). Students with avoidant attachments to their professors may distance themselves from the class environment, hindering their ability to collaborate and form trusting and reciprocal relations with classmates and the professor. Their classwork may consequently suffer and they may fear failure, yet all of this may be an appearance of apathy and laziness to others. Therefore, I hypothesized that a performance-avoidance goal orientation would have more avoidant attachment.

Interestingly, attachment theory predicted all aspects of achievement goal orientations except for the performance-approach goal orientation. Elliot and Reis (2003) believed that this orientation may be entangled with diverse motivational concerns that go beyond the competence expectancies solely understood in the previous research. This calls for research that clarifies the relationship between anxious attachment and performance-approach goal orientation. Both are concerned with a preoccupation with reassurance, criticism, and competency. I hypothesized that a performance-approach goal orientation would have greater anxious attachment. Students may seek closer proximity to their professors (mentally or physically) to avoid failure.

**Goal 3: Associate **Attachment** with **Achievement Goal Orientation's** patterns of **Curiosity, Exploration, Self-criticism, and Self-reassurance****

If achievement goal orientations predict certain patterns of curiosity, exploration, self-criticism, and self-reassurance, and if achievement goal orientations relate to attachment styles, then it should be the case that attachment styles predict similar patterns of curiosity, exploration, self-criticism, and self-reassurance. When linking attachment theory to curiosity and exploration, Mikulincer (1997) found that information search and the integration of new information to schemas were positively related to secure attachment. Thus, students with a secure attachment to their parents are more likely to actively search for knowledge and welcome revisions to their existing schemas. Additionally, students with attachment security are more likely than their insecure peers to seek tasks that require active exploration (Grossmann, Grossmann, & Kindler, 2005). This openness may engender positive bonds between professors and peers, making students' adjustment to college more satisfying, since they can set realistic goals and avoid cognitive and motivational stagnation.

In addition, this positions securely attached individuals to be more self-reassuring than self-criticizing because their supportive bonds with others fosters the ability to recall positive qualities and a sense of determination about themselves. In contrast, Mikulincer (1997) found that avoidant and anxious attachment were associated with a high need for cognitive closure, the preference for secure and stable knowledge, and the rejection of evidence that demanded revision of existing schemas. Students with greater anxious and avoidant attachments are positioned to be more self-critical, because of their preference for dogmatic and conventional beliefs that allow them to retain familiarity without exploration. Moreover, Irons, Gilbert, Baldwin, Baccus, and Palmer (2006) linked self-criticism and self-reassurance to early parent-child experiences and

found that students who recalled parents as rejecting were significantly related to endorsing greater values of an inadequate self and hated self, however those who recalled parental warmth did not view themselves with inadequacy and hatred, and expressed greater self-reassurance. Therefore, the recalled emotional quality of parental attachment style may relate to the internal self evaluations students hold as young adults. Negative or positive recall of experiences with one's caregivers may cultivate the same vulnerabilities or resilience regarding self-critical or self-reassuring tendencies in young adults.

Therefore, I hypothesized that students with low avoidant and anxious attachment to their first-year professor would positively correlate with curiosity, exploration, and self-reassurance, but negatively correlate with values of an inadequate self and hated self. I hypothesized that students with high anxious attachment to their first-year professor would negatively correlate with curiosity, exploration, values of an inadequate self and hated self, but positively correlate with self-reassurance. Lastly, I hypothesized that students with high avoidant attachment to their first-year professor would negatively correlate with curiosity, exploration, and self-reassurance, but positively correlate with values of an inadequate self and hated self.

**Goal 4:** Associate **Attachment** with **Perceived Autonomy Support** from the professor

If attachment theory and achievement goal orientation theory predict similar patterns of adjustment, then attachment theory may clarify how students interpret their class environment through achievement orientations. Elliot and Gable (2001) found that variables of perceived classroom environment were antecedents of goal orientations. Elliot and Gable focused on the variable of professor's harsh evaluations, but suggested that further research should identify additional perceived classroom characteristics that prompt the adoption of achievement goal orientations. If students' attachments to their professors relate to their adjustment, then



characteristics of professors like caregivers are avenues to explore. Both caregivers and professors encourage some level of autonomy, and this may relate to effective student functioning. Perceived levels of autonomy support also targets the professors as the facilitators, which helps define their role in students' academic experience.

Securely attached students who endorse a mastery goal orientation would perceive higher autonomy support from their professor, because the students' intrinsic motivation drives them to investigate knowledge on their own. Also, Elliot and Harackiewicz (1996) found that in some circumstances, individuals with a performance-avoidance goal orientation could not "lose themselves in task engagement" and reduced their task involvement, whereas those with a performance-approach goal orientation could "lose themselves" and dived into new activities. Students with a performance-avoidance goal orientation would not only perceive, but also expect low autonomy support because of their tendency to withdraw and believe they lack skills worthy of developing.

Performance-approach and mastery goal orientations revealed a comparable pattern of results in some contexts and disparate ones in others (Elliot & Harackiewicz, 1996). Performance-approach and mastery goal orientations connected to the deep engagement of a task because of their achievement motivation. However, performance-approach goal orientations diverge in that its achievement motivation may lack the intrinsic quality of a mastery goal orientation. Instead, performance-approach oriented students may be motivated by the fear of failure to avoid harsh evaluations. This positions anxiously attached students to perceive less autonomy support from their professor because these students consistently seek positive evaluation and approval. However, a context where performance-approach and mastery goal orientations converge is in the manner of feedback (Elliot & Harackiewicz, 1996). Both

orientations suffer reduced self-determination and achievement motivation when feedback is given in a controlling, monotonous manner, or in the repetition of overlearned activities. In this case, both contexts would facilitate anxious and securely attached students to perceive their professor as providing less autonomy support.

Therefore, I hypothesized that students' avoidant and anxious attachments to their first-year professors would not significantly differ from each other, but both to negatively correlate with perceived autonomy support from their professors

In summary, I hypothesized that:

**Goal 1:** Replication of **Achievement Goal Orientations** and **Curiosity, Exploration, Self-criticism, and Self-reassurance**

- Students with a mastery goal orientation would have greater curiosity and exploration than those with a performance-approach or performance-avoidance goal orientation.
- Students with a mastery or performance-approach goal orientation would have greater self-reassurance, but those with a performance-avoidance goal orientation would have greater values of an inadequate self and hated self.

**Goal 2:** Associate **Attachment** with **Achievement Goal Orientation**

- Students with a mastery goal orientation would have low avoidant and anxious attachment to their first-year professor, while those with a performance-approach goal orientation would have high anxious attachment and those with a performance-avoidance goal orientation would have high avoidant attachment.

**Goal 3:** Associate **Attachment** with **Achievement Goal Orientation's** patterns of **Curiosity, Exploration, Self-criticism, and Self-reassurance**

- Students' avoidant and anxious attachments to their first-year professors would be negatively correlated with curiosity and exploration.
- Students' avoidant and anxious attachments would be positively correlated with values of an inadequate self and hated self.
- Students' avoidant attachments would be negatively correlated with self-reassurance, but anxious attachment would be positively correlated.

**Goal 4:** Associate **Attachment** with **Perceived Autonomy Support** from the professor

- Students' avoidant and anxious attachments to their first-year professors would be negatively correlated with perceived autonomy support of their professors.

### **Method**

#### **Participants**

A convenience sample consisted of first-year undergraduate college students ( $N = 89$ ), composed of 61 females and 28 males in Introductory Psychology courses from a small, private, liberal arts university. Participants received course credit towards their Introductory Psychology Lab for completing the survey study. The sample of first-year students were enrolled in year-long seminar courses (FYS). Data collection began eleven weeks into the fall semester to allow professor-student attachments to form.

#### **Measures**

**Achievement goal orientation.** The 12-item Achievement Goal Orientation Questionnaire-Revised (AGQ-R; Elliot & Murayama, 2008) assesses the type of orientation that individuals endorse when approaching academic tasks. A mastery goal orientation involves pursuing learning goals, self-improvement, and the mastery of a task through effort. The

performance-approach goal orientation involves seeking reassurance repeatedly and the performance-avoidance goal orientation involves overt negativity and withdrawal toward tasks. Both performance-approach and performance-avoidance goal orientations emphasize competence relative to others and the belief of innate ability unchangeable through effort. Examples of items on this scale are “My goal is to learn as much as possible”, “My goal is to perform better than the other students”, and “My aim is to avoid doing worse than other students.” Participants responded on a scale ranging from 1 to 5 with higher scores indicating greater degrees of agreement. The participants’ scores were averaged to form the qualitative categories of mastery goal orientation, performance-avoidance goal orientation, and performance-approach goal orientation. The category with the highest score indicates their achievement goal orientation. Cronbach’s alphas of the original study indicated .86 for mastery goal orientation, .94 for performance-avoidance goal orientation, and .92 for performance-approach goal orientation. The current study’s alphas were .77 for mastery goal orientation, .74 for performance-avoidance goal orientation, and .79 for performance-approach goal orientation.

**Curiosity and exploration.** The 10-item Curiosity and Exploration Inventory (CEI-II; Kashdan, Gallagher, Silvia, Winterstein, Breen, Terhar, & Steger, 2009) assesses the tendencies of individuals to recognize, pursue, and integrate challenging and novel experiences and information. The inventory assesses two factors: the motivation to seek knowledge and novel experiences (Exploration) and a willingness to embrace uncertainty, unpredictability and novelty in daily life (Curiosity). In the original description of the survey, exploration and curiosity were simultaneously listed as the constructs “stretching” and “embracing”, so exploration (“stretching”) and curiosity (“embracing”) were used in the present study. Examples of items on this scale are “I view challenging situations as an opportunity to grow and learn” and “I actively

seek as much information as I can in new situations.” Participants responded on a scale ranging from 1 to 5 with higher scores indicating greater degrees of agreement. The quantitative items were averaged to form the amounts of exploration and curiosity. Higher average scores indicated greater exploration and curiosity. Cronbach’s alphas in the original study were .80 for Exploration and .79 for Curiosity. The current study’s alphas were .81 for Exploration and .78 for Curiosity.

**Attachment.** The 36-item Relationship Structures Questionnaire (ECR-RS; Fraley, Heffernan, Vicary, & Brumbaugh, 2011) is a questionnaire that measures adult attachment to four figures (mother or mother-like figure, father or father-like figure, romantic partner, and best friend). Anxious attachment involves the degree to which individuals feel insecure about the availability and responsiveness of others. Avoidant attachment involves the degree to which individuals feel uncomfortable with closeness and depending on others. Secure attachment involves individuals who feel that others are available, responsive, close, and dependable. There are 9 items for each of the four figures, which ask the same set of questions. The original questionnaire labels the first two figures as “Mother or Mother-like figure” and “Father or Father-like figure”, but the labels were modified as just “Parental Figure 1” and “Parental Figure 2” to allow for flexibility in the makeup of participants’ families. The measure allows for modification of attachment figures, so the original romantic partner and best friend figures were renamed as the figures “FYS Professor” and “Professor 2”. Examples of items on this scale include “I usually discuss my problems and concerns with this person” and “I don’t feel comfortable opening up to this person”. Participants responded to items on a scale of 1 to 7 with higher scores indicating greater degrees of agreement. The scores were averaged to form the quantitative dimensions of avoidant and anxious attachment. Cronbach’s alphas for the parental

domains was .80. In the current study, Parental Figure 1 reported .87 for avoidant and .96 for anxious attachment, while Parental Figure 2 were .92 for avoidant and .97 for anxious attachment. Alphas for the FYS professor were .90 for avoidant and .81 for anxious attachment, and Professor 2 were .82 for avoidant and .88 for anxious attachment.

**Self-criticism and self-reassurance.** The 22-item The Forms of Self-Criticizing/Attacking & Self-Reassuring Scale (FSCRS; Baião, Gilbert, McEwan, & Carvalho, 2015) measures self-criticism and the ability for individuals to self-reassure. “Inadequate self” is a form of self-criticism focusing on personal inadequacy, while “Hated self” is the other form of self-criticism focusing on the desire to hurt or persecute the self. The “Reassure self” is the form of self-reassurance focusing on the ability to remind the self of positive things. Examples of items on this scale include “I remember and dwell on my failings” and “I am able to care and look after myself.” Participants responded to items on a scale of 0 to 4 with higher scores indicating greater degrees of agreement. The items corresponded to the quantitative dimensions of self-criticism (inadequate self and hated self) and self-reassurance. The original study reported Cronbach’s alpha at .90 for inadequate self and .86 for hated self and reassure self. The current study’s alphas were .91 for inadequate self, .85 for hated self, and .83 for reassure self.

**Perceived autonomy.** The 15-item Learning Climate Questionnaire (LCQ; Williams & Decai, 1996) assesses the autonomy support of an individual’s instructor or professor. The questionnaire is generally used for specific learning settings, such as a class at a college or graduate school level. Students with high perceived autonomy support perceive their professors as encouraging and conveying confidence in their students to make decisions. Students with low perceived autonomy support perceive their professors as discouraging, misunderstanding, and doubtful. Examples of items on this scale are “I feel that my professor provides me choices and

options” and “My instructor tries to understand how I see things before suggesting a new way to do things.” Participants responded on a scale from 1 to 7 with higher average scores indicating greater degrees of agreement. Cronbach’s alpha for the original study reported .96 and the current study, .98.

### **Procedure**

I administered an online cross-sectional survey to a convenience sample of first-year participants from a participant pool of Introductory Psychology students. Participants accessed the survey through a secure, online program that ensured anonymity. I began conducting the survey eleven weeks into the first semester to allow students to form at least a three-month relationship with their FYS professor. The consent process involved the participants reading the online informed consent page before taking the survey. If students agreed to participate in the study, I gave them credit for completing the survey.

Once participants provided their informed consent, they responded to initial demographic questions and pre-screen items. Demographic questions included gender, high school GPA, high school ACT score, and academic standing (year).

Participants indicated their enrollment in FYS and then took half of the Relationship Structures (ECR-RS) questionnaire. The ECR-RS measured adult attachment to four figures (Parental Figure 1, Parental Figure 2, FYS professor, and Professor 2). For each of the four figures, participants responded to 9 identical items. Participants completed half of the ECR-RS for two parental-like figures. Participants first thought of a parental figure of theirs (Parental Figure 1). They then rated the importance of Parental Figure 1 to them (*Not important, Moderately important, or Very important*), and indicated that person’s gender. Participants thought of Parental Figure 1 when completing the ECR-RS questionnaire. Next, participants

thought of a second parental figure of theirs (Parental Figure 2). They rated the importance of Parental Figure 2 to them and indicated that person's gender. Then participants thought of Parental Figure 2 when completing the ECR-RS questionnaire. After completing the demographic questions and pre-screen items, participants completed the remaining measures in the study, which involved the 12-item Achievement Goal Orientation Questionnaire-Revised, the 10-item Curiosity and Exploration Inventory, the 22-item Forms of Self-Criticizing/Attacking & Self-Reassurance Scale, the remaining 18 items (second half) of the Relationship Structures Questionnaire, and the 15-item Learning Climate Questionnaire.

The remaining 18 items of the Relationship Structures Questionnaire (ECR-RS) asked the participants to think of two CSB/SJU professors for the last two attachment figures. Participants first thought of their FYS professor. Participants then rated the importance of their FYS professor to them (*Not important, Moderately important, or Very important*) and indicated their FYS professor's gender. Participants continued thinking about their FYS professor when completing the ECR-RS 9-item questionnaire. Participants then thought of a professor that they interacted with most ("Professor 2"), but was NOT their FYS professor. If the participant interacted most with their FYS professor, then the participant thought of the next professor they interacted with most. The participants then rated the importance of "Professor 2" to them and indicated the professor's gender. Afterwards, participants continued thinking of "Professor 2" when completing the ECR-RS questionnaire.

After completing the Relationship Structures Questionnaire, participants answered four questions about their interactions with their FYS professor and "Professor 2". Participants indicated how frequently they sought help from their FYS professor and from "Professor 2". Examples of help-seeking included emailing, asking for help in class, and visiting office hours.



Participants answered either “*Never*”, “*Once a week*”, “*Twice a week*”, “*Three times a week*”, or “*More than three times a week*”. Participants then indicated how comfortable they felt around their FYS professor and around “Professor 2”. Participants answered either “*Never*”, “*Seldom*”, “*Some of the time*”, or “*Most of the time*”.

After completing the survey, data storage involved Forms Manager to export submitted data, the website to administer the survey, and SPSS software for analyzing the data. Stored data remained anonymous.

## Results

### **Goal 1: Replication of Achievement Goal Orientations and Curiosity, Exploration, Self-criticism, and Self-reassurance**

I hypothesized that students with a mastery goal orientation would have higher curiosity and exploration than students with a performance-approach or performance-avoidance goal orientation. A one-way BG ANOVA did not reveal a significant mean difference in the amount of curiosity across type of achievement goal orientation,  $F(2, 86) = .46, p > .05, MSE = .62, \eta^2 = .01$ , but it did for the degree of exploration across type of achievement goal orientation,  $F(2, 86) = 3.39, p < .05, MSE = .43, \eta^2 = .07$ . Consistent with the research hypothesis, pairwise comparisons based on the HSD procedure demonstrated that a mastery goal orientation produced a higher mean amount of exploration than did the performance-approach goal orientation. Also supported, the performance-approach and performance-avoidance goal orientations did not significantly differ from each other. However, unexpectedly, a mastery goal orientation did not produce a significantly higher mean degree of exploration than a performance-avoidance goal orientation. Therefore, the research hypothesis received partial support. Refer to Table 2 for comparison of the means.

Next, I hypothesized that students with a mastery goal orientation would express greater self-reassurance but fewer values of an inadequate self and hated self. For students with a performance-approach goal orientation, I predicted greater self-reassurance and values of an inadequate self and hated self. Lastly, I hypothesized that those with a performance-avoidance goal orientation would hold higher values of an inadequate self and hated self, but less self-reassurance. An ANOVA did not reveal a significant mean difference in amount of inadequate self across type of achievement goal orientation,  $F(2, 86) = .78, p > .05, MSE = 71.99, \eta^2 = .02$ , or hated self,  $F(2, 86) = .32, p > .05, MSE = 16.14, \eta^2 = .01$ , or self-reassurance,  $F(2, 86) = 1.88, p > .05, MSE = 26.29, \eta^2 = .04$ . Therefore, the research hypothesis was not supported.

### **Goal 2: Associate Attachment with Achievement Goal Orientation**

I hypothesized that students with a mastery goal orientation would hold have low avoidant and anxious attachment to their FYS professor. For students with a performance-avoidance goal orientation, I predicted them to have higher avoidant attachment, but for those with a performance-approach goal orientation, they would have higher anxious attachment. An ANOVA did not reveal a significant mean difference in the amount of avoidant attachment across type of achievement goal orientation,  $F(2, 86) = 1.18, p > .05, MSE = 1.02, \eta^2 = .03$ , or in the amount of anxious attachment across type of achievement goal orientation,  $F(2, 86) = .18, p > .05, MSE = 2.54, \eta^2 = .00$ . Therefore, the research hypothesis was not supported.

### **Goal 3: Associate Attachment with Achievement Goal Orientation's patterns of Curiosity, Exploration, Self-criticism, and Self-reassurance**

I hypothesized that students' avoidant and anxious attachments to their FYS professors would negatively correlate with curiosity and exploration. Pearson's correlation did not reveal a significant linear relationship between avoidant attachment and curiosity,  $r(87) = .04, p > .05$ , or

between anxious attachment and curiosity,  $r(87) = -.06, p > .05$ . There was also no significant relationship between avoidant attachment and exploration,  $r(87) = .03, p > .05$ , or anxious attachment and exploration,  $r(87) = -.12, p > .05$ . Therefore, the research hypothesis was not supported. Refer to Table 3 for the correlation matrix.

Next, I predicted that students' avoidant attachments to their FYS professors would positively correlate with values of an inadequate self and hated self, but negatively correlate with self-reassurance. Further, I predicted that students' anxious attachments would positively correlate with values of an inadequate self, hated self, and self-reassurance. As expected, Pearson's correlation revealed a significant positive linear relationship between avoidant attachment and an inadequate self,  $r(87) = .31, p < .05$ , and hated self,  $r(87) = .33, p < .05$ , but did not support self-reassurance,  $r(87) = -.06, p > .05$ . There was also no significant relationship between anxious attachment and an inadequate self,  $r(87) = .11, p > .05$ , or hated self,  $r(87) = .12, p > .05$ . Opposite of my prediction, there was a significant *negative* linear relationship between anxious attachment and self-reassurance,  $r(87) = -.29, p < .05$ . Therefore, the research hypothesis received partial support. Refer to Table 4 for the correlation matrix.

**Goal 4:** Associate **Attachment** with **Perceived Autonomy Support** from the professor

Lastly, I hypothesized that students with greater avoidant and anxious attachments to their FYS professors would not differ significantly from each other, but both negatively correlate with perceived instructor autonomy support. As hypothesized, Pearson's correlation revealed a significant negative linear relationship between avoidant attachment and perceived autonomy support,  $r(89) = -.29, p < .05$ , and between anxious attachment and perceived autonomy support,  $r(89) = -.75, p < .001$ . Interestingly, avoidant and anxious attachment significantly differed and

were positively correlated,  $r(89) = .22, p < .05$ . Therefore, the research hypothesis received partial support. Refer to Table 5 for the correlation matrix.

**Summary of Goal 1:** The type of achievement goal orientation did not relate to students' degrees of curiosity, inadequate self, hated self, or self-reassurance. Students with a mastery goal orientation pursued greater exploration, which replicated prior research, but unexpectedly, so did students with a performance-avoidance goal orientation. Therefore, the research hypothesis received partial support. Refer to Table 2 for comparison of the means.

**Summary of Goal 2:** Students' attachments to their FYS professors did not predict the type of achievement goal orientation, which did not support the research hypothesis.

**Summary of Goal 3:** Students' attachments to their FYS professors did not correlate with curiosity or exploration, but partial support was found for attachment and values about the self. Students with high avoidant attachment held greater values of an inadequate self and hated self, but on the contrary, high anxious attachment expressed less self-reassurance. Refer to Tables 3 and 4 for the correlation matrices.

**Summary of Goal 4:** Supporting the research hypothesis, both avoidant and anxious attachments to FYS professors negatively correlated with perceived autonomy support. However, students' perceived autonomy support did differ significantly according to attachment. Students with higher anxious attachment perceived even less autonomy support than students with high avoidant attachment. Refer to Table 5 for the correlation matrix.

### **Exploratory Analyses**

The survey instructed students to take the ECR-RS attachment survey for two parental/parental-like figures and a second professor, identified as "Professor 2". I correlated

students' attachments to their parental/parental-like figures with students' attachments to their FYS professor and "Professor 2" to see if students' attachments with their parents transferred the same dynamics to attachments with their professors. Pearson's correlation revealed a significant positive relationship between avoidant and anxious attachments to Parental Figure 1 and to Parental Figure 2. Regarding FYS professor and Professor 2, avoidant and anxious attachments were positively correlated. Refer to Table 5 for the correlation matrix. Moreover, avoidant or anxious attachment to only one parental figure correlated positively with avoidant or anxious attachment to one's FYS professor and Professor 2. Refer to Table 6 for the correlation matrix.

### **Discussion**

Overall, the present study sought to examine first-year college students' attachments to their FYS professors and how that related to achievement goal orientations, curiosity, exploration, self-criticism, self-reassurance, and perceived autonomy support.

#### **Goal 1: Replication of Achievement Goal Orientations and Curiosity, Exploration, Self-criticism, and Self-reassurance**

The first goal sought to replicate the established research of the relationships between achievement goal orientations and curiosity, exploration, self-criticism, and self-reassurance. First, I hypothesized that students with a mastery goal orientation would have higher curiosity, exploration, and self-reassurance, but lower values of an inadequate self and hated self. Second, I hypothesized that students with a performance-approach goal orientation would have higher self-reassurance but lower curiosity, exploration, inadequate self, and hated self. Third, I hypothesized that students with a performance-avoidance goal orientation would have more values of an inadequate self, hated self, and less curiosity, exploration, and self-reassurance. Overall, the goal of replicating established research did not hold, for only one of my

hypotheses—the relationship between achievement goal orientation and exploration—received partial support. A mastery goal orientation related to higher exploration than a performance-approach goal orientation, but not for a performance-avoidance goal orientation. While students with either a mastery or performance-approach goal orientation share a sense of academic motivation and high competence expectancies, those with a performance-approach goal orientation also have a high fear of failure. This may deter students from embracing uncertain and unpredictable academic risks, which aligns them with low desires for exploration.

Further, a mastery oriented first-year student will be more likely to explore academically, because of their high motivation and belief in their competence to ask critical thinking questions and seek out sources that disconfirm or reaffirm multiple points of view. This is especially beneficial in the First-Year Seminar goal of teaching students to integrate knowledge of the self and world. A performance-approach oriented first-year student may be more at risk of not integrating knowledge of the self and world, because they may not take academic risks that would provide meaningful feedback, and instead may search for evidence that confirms what they and the professor already know. These students may provide “safe” answers that do not spark deeper discussion, even though they carry the motivation and competency capabilities to do so. An implication is that professors with performance-approach students could provide praise for novel contributions and reply with open-ended responses that challenge these students’ desire of approval and concrete answers.

The unexpected finding that mastery and performance-avoidance goal orientations are both related to exploration is interesting. It seems that both orientations express high degrees of exploration, but for different reasons. Mastery oriented students are likely to explore because they desire to master the goal and absorb it into their set of abilities and knowledge about the

world, like a sense of growth and ownership. Performance-avoidance students operate from a performance orientation, which means they are more concerned with execution of the goal or task, and the evaluation by others of how one looks when trying to achieve. Unlike performance-approach, performance-avoidance includes low competence expectancies in addition to a fear of failure. Therefore, performance-avoidance and mastery oriented students may both have high exploration. If the performance-avoidance students view themselves with a low capability of success, they may seek out many academic goals, but with minimal effort, so that they can avoid failure and overcommitting. These students may seem like they are jumping from academic goals to another and cannot settle on fewer ones that carry a greater risk of faulty performance, but would end up being more deeply satisfying. This suggests that professors could choose activities that expand the toolbox for performance-oriented students, but without high-stakes outcomes. This would allow performance-oriented students to retain their importance on execution, but without the pressure of high-stakes evaluation. Students may then learn to hone their skills but shift intentions for doing so, away from outcomes.

It is also important to examine why my findings mostly failed to replicate the relationships in the rest of the established research. Perhaps curiosity did not relate to achievement goal orientation because the aspect of achievement motivation did not actually strengthen one's curiosity. Additionally, curiosity was described as more of a state of mind, while exploration was about action. The action orientated nature of exploration may have aligned with the trajectory of achievement goal orientation theory, because students are trying to pursue a goal. With curiosity, students may not conceive that they are trying to "achieve" anything in the first place, and so a goal is not articulated at first. Students may ponder, develop, or sit with their curiosity until some external factor pushes them to translate their curiosity into

outward exploration. Further, Marzban, Ejei, and Bahrami (2014) found that in general, curiosity, can act as a mediator between attachment and academic achievement. Those with secure attachment to their parents and peers had significant and positive relationships with curiosity, and curiosity had positive and significant relationships with academic achievement. In the present study, it seems that professors are not figures who can replace parents as attachment figures, to bring about the similar findings of curiosity.

With achievement goal orientation and self-criticism and self-reassurance, these may be unrelated because perhaps those perceptions about the self are more internalized feelings that translate better to interpersonal relations, rather than achievement goals that are evaluated by more external and standardized means. Another possibility could be that self-criticism and self-reassurance could not be parsed according to the type of achievement goal orientation. Achievement goal orientation may include a mix of self-criticizing and self-reassuring attitudes that are too similar to be attributed to different goal orientations. This implies that certain academic situations would need to be examined to see when the orientations express self-criticism and self-reassurance differently.

**Goal 2: Associate Attachment with Achievement Goal Orientation**

The second goal sought to associate achievement goal orientation with students' attachments to their FYS professors. Perhaps the relationship of the student's attachments to their professors would provide insight into the achievement goal orientations that students use in FYS. I hypothesized that students with a mastery goal orientation would have low avoidant and anxious attachment, that a performance-avoidance goal orientation would have higher avoidant attachment, and that a performance-approach goal orientation would have higher anxious attachment. None of my hypotheses were supported. This suggests that variance in the degree



of attachment was not accounted for by the type of goal orientation, so a construct other than attachment theory may provide better reasoning into why students cultivate various achievement goal orientations. The findings also countered the research of Elliot and Reis (2003) whose study provided strong support of the hypothetical link between attachment and achievement goal orientation. However, they researched the attachment to one's parents, so their findings may not generalize to student-professor attachment style and achievement goal orientation.

My study's investigation into a new territory for attachment and achievement goal orientation may suggest that parental attachment relates to students' achievement goal orientations. After parents sustained and prolonged involvement with their child's education, then compounded with the college student's transient relationships with teachers and professors, students may already come to school with their achievement goal orientations developed. FYS professors may have little influence until they form deeper rapport that differs from the qualities of the parental attachment. However, since the goal of FYS is to integrate knowledge of the world and self, students new to college may also not have had this mission as rigorously imposed on them before, or in the way it is expressed with the college-level curriculum. Future research is needed to see if professors who are close mentors will eventually influence students' achievement goal orientations, and how they may do so. To examine this, perhaps students at the beginning of their classes could create personal learning goals in addition to the syllabi learning objectives. Then, at the end of the semester when completing course evaluations, students could reflect on the progress they made towards both types of goals, and professors could look for qualities about their teaching style that facilitated those goals. Lastly, maybe attachment and achievement goal orientations are associated, but not in predicting the type of

behaviors the present study examined. So, a direction of future research would be to investigate other pedagogical constructs.

**Goal 3: Associate Attachment with Achievement Goal Orientation's patterns of Curiosity, Exploration, Self-criticism, and Self-reassurance**

The third goal sought to examine that if students' attachments associated with the type of achievement goal orientation, then students' attachments may also predict similar patterns of curiosity, exploration, self-criticism, and self-reassurance. However, findings provided minimal and partial support for my hypotheses. This indicates a cautious interpretation of attachment theory's prediction of these relationship patterns. I hypothesized that students' avoidant attachments to their FYS professors would negatively correlate with curiosity, exploration, self-reassurance, but positively correlate with an inadequate self and hated self. With anxious attachment, I predicted that it would negatively correlate with curiosity and exploration, but positively correlate with an inadequate self, hated self, and self-reassurance. The lack of support for attachment to one's FYS professor and exploration, suggests that achievement goal orientation may be what exploration relies on, since achievement goal orientation provided the only construct in this study that related to exploration. When exploratory analyses analyzed parental attachments and "Professor 2" figures, these also did not correlate with students' exploration—this pattern also repeated for FYS and "Professor 2" attachments. The absence of attachment to one's FYS professor relating to curiosity implies that some other construct besides attachment, may be better suited. However, achievement goal orientation also did not relate to students' curiosity, but exploratory analyses of students' attachments to parental figures showed that avoidant attachment positively correlated with curiosity.

Therefore, the findings between attachment and curiosity suggest that parental figures may have more influence on students' curiosity than professors or achievement goal orientations. If one's parental figure served as a trusting, consistent and caring figure throughout childhood and adolescence, then maybe the young adult college student came to school with comfort to express a curious mindset that welcomed novel ideas and strategies, without fear or stress of "unwanted" thoughts. This aligns with one of FYS's goals of engaging in critical thinking, creative research skills, and argument building and defense skills.

The relationship between attachment to one's FYS professor and self-criticism (inadequate self and hated self) and self-reassurance, was the only hypothesis in Goal 3 that received partial support. Avoidant attachment positively correlated with an inadequate self and hated self, but did not relate to self-reassurance. High avoidant attachment suggests students' withdrawal from rapport with their FYS professors. If these students also harbor great values of an inadequate self and hated self, then these internalized thoughts may prevent them from viewing their FYS professors as consistent, attentive, or caring. Also, if students' feelings of inadequacy and self-hatred make them assume they are unworthy, they may not rely on others or bother trying to self-reassure, if self-compassionate feelings are lacked in the first place.

Contrary to the hypothesis, anxious attachment to one's FYS professor negatively correlated with self-reassurance, and no relationship to an inadequate self or hated self. Students who are more anxiously attached to their FYS professors may be less likely to self-reassure because perhaps they tend to seek reassurance from the professor, instead of providing it themselves. While this implies that anxious students can decrease anxiety through reassurance, the source of the professor may mean that these students are still stuck with their own underlying limitation of not being able to self-soothe. This may place overemphasis on seeking a

professor's approval and low confidence in managing one's own academic frustrations. When exploratory analyses of parental attachment and self-criticism and self-reassurance were conducted, the findings closely mirrored the FYS professor findings. Overall, for attachment, self-criticism, and self-reassurance, greater avoidant attachment is more likely to engender greater self-criticism, while more anxious attachment is more likely to engender less self-reassurance.

**Goal 4:** Associate **Attachment** with **Perceived Autonomy Support** from the professor

Lastly, the fourth goal sought to examine that if students' attachments and achievement goal orientations predicted similar patterns of curiosity, exploration, self-criticism and self-reassurance, then those patterns would predict students' perceived autonomy support from their professors. However, since students' attachments and achievement goal orientations did not predict similar patterns, then the findings from attachment and perceived autonomy support need to be interpreted more independently of the previous variables.

I hypothesized that students' avoidant and anxious attachments to their FYS professors would not differ from each other, but both negatively correlate with perceived autonomy support from their professors. The findings partially supported the hypothesis, because anxious and avoidant attachment did differ from each other. While students with high avoidant and anxious attachment perceived low autonomy support, students with greater anxious attachment perceived even less autonomy support. Moreover, students who are anxiously attached may cling to their professors, but distrust them as a secure base. This cautions that the student's conflicting desire to be close to their professor in terms of feeling validated, competent, and liked, may propel them toward a self-fulfilling prophecy where they reject or are blind to the professor's attempts of autonomy, so they do not perceive the professor as providing it for them in the first place.

The professor in turn may notice that the anxiously attached students still perform very competently and are attentive to their learning and class. The professor may misattribute the students' clinginess as attentiveness and engagement with the class, and continue to respond to the student with positive evaluations and repeated approval that appease the students' worries without additionally suggesting students' independence. A suggestion would be that FYS professors relay the students' inquiries back on themselves or involve more scaffolding group and partner activities. The reversal of student-professor roles where the student "teaches" the professor or collaborates with others who are not academically superior (like the professor is), may encourage the student to think for themselves and creatively problem solve with similar-skilled peers (Riley, 2009). The overall acknowledgment that the professors are interested in hearing students' unique contributions may help anxious students gain stronger tolerance for failure and uncertainty.

Students with high avoidant attachment may perceive less autonomy support, because if these students withdraw from class engagement, the professor may be more inclined to seek them out, but only to address the negative behavior and resulting consequences. This probing from the professor may further encourage the student to withdraw from interaction, and view the professor as pestering them on their faults. Perhaps FYS professors with avoidantly attached students could recognize that these students should be given acknowledgement of the professor's belief in them, but then given more space with an attitude of openness. Avoidantly attached individuals who naturally seek more distance in rapport with others, would know that any increased autonomy support is not the professor "giving up" or "abandoning" them. Students with low avoidant and anxious attachment are more likely to perceive greater autonomy support, because they perceive their FYS professor as someone who they may turn to with difficult

questions that they have first tried independently to solve. They may also be students who need less reliance exhaustive explanations, and are content with occasional “check-ins” and can perceive the professor as viewing them as autonomous workers.

Overall, attachment and autonomy support suggests that students with more avoidant and anxious attachment are unable to see that the professor usually views them as capable of independent work, thus distortedly perceiving their FYS classroom environment with professors who are “hypervigilant” (for anxious attachment) or “intrusive” (for avoidant attachment)

### **Exploratory Analyses**

Interestingly, exploratory analyses performed on the relationships between parental attachment and professor attachment found that students’ attachment tendencies to their parental figures related more to each other. Students with high avoidant or anxious attachment to one of their parental figures related to high avoidant or anxious attachment to their second parental figure. Students’ attachment to their FYS professor and Professor 2 also related more to each other. Students with high avoidant or anxious attachment to their FYS professor related to high avoidant or anxious attachment to Professor 2.

The student may be bringing some characteristic or behavior to their professor-attachments that does not derive from their parental attachments. Russell, Wentzel, and Donlan (2016) found that student-teacher trust is a unique form of trust and self-image related to the social roles involved. This research might provide the reasoning that trust between students and their professors differs from trust between students and their parents. Russell et al. (2016) found that teachers develop rapport with students by inquiring about the students’ lives and how they are going and self-disclose their own interests. Some teachers also suggested that student

interactions should involve genuineness and honesty, self-disclosure that shows vulnerabilities, and acknowledging mistakes but maintaining appropriate student-teacher boundaries. However, teachers in the study still expressed differing opinions concerning whether they expect students to trust them as people or instructional leaders.

To better understand my study, this research could suggest that trust and self-image in parent-child attachment may relate to accepting parental roles that impose less freedom on how their child views them. Instead of multiple roles, parents enforce their image and retain the authority to do so through family kinship and social order. On the other hand, professors may have more room to be perceived by the student as people or instructional leaders. Students with greater avoidant or anxious attachment to their parents may not transfer their attachment tendencies to their professors, because the students can perceive their professors as people or instructional leaders. With self-image, the student may view their parental attachment as more enduring and stable, but in negative ways that are not imposed on the professor, since that relationship is more transient and focused on academic learning. The student must now navigate their own academic trajectory with greater influence and guidance from their professor attachment than parental attachment.

### **Limitations**

The current study's correlational nature prevents the assertion of causal claims. The method of survey research and emphasis on parental figures and professors may have pressured participants to present themselves in socially desirable ways inconsistent with their true feelings. Additionally, if students did not have an adequate amount time to attach to their professor before data collection, then students may have been overly identified as relatively securely attached. The convenience sample of first-year college students at small, rural, liberal arts school with a

Catholic identity may not generalize to first-year students at schools that are larger, urban, non-liberal arts, or secular school. First-year students at a larger school may not participate in year-long seminar classes, or any classes similar to this study's FYS class may be significantly larger. This may weaken the students' attachment to their professors, if the professors oversee hundreds of students and make personal connections with a select few of students. The Catholic identity of the small school in the present study places strong emphasis on community which helps facilitate personal rapport between professors and students. However, the values of community may not translate into the same behaviors at larger secular schools. Stronger attachments may be fostered among students, teaching-assistants, and roommates—a wider network of figures whom students receive support, understanding, and guidance for academic learning, than primarily relying on a professor.

### **Future Research**

Future research could replicate the study with a larger sample size that includes a balanced gender ratio, since this study involved 61 females and only 28 males. This could increase power to find significant relationships and examine the relationship of gender. The gender of professors could also be examined to see if female professors are associated with less avoidant and anxious attachment than male professors, as most societies in our Western culture socialize females with caregiving and relationship-oriented tendencies.

Future research could clarify students' attachments to their parents and professors by examining hierarchical conceptualizations of internal working models. Some research suggests that adults may hold a set of expectations and assumptions about attachment relationships in general on a basic level, and on another level, store qualities about relationship-specific interactions and events (Pietromonaco & Barrett, 2000; Rholes & Simpson, 2004). Stored



assumptions and expectations may vary between basic and specific levels. Students may then hold different internal working models for different relationships. More research is needed to clarify what qualities are unique to the student-professor relationship or clarify how basic-level assumptions about relationships become expressed differently in student-professor relationships.

Another direction of research could examine how well FYS professors advance emotional maturity, regulation, and well-being, in addition to positive academic attitudes and rigor in their students. FYS professors are viewed as year-long mentors who foster emotional as well as academic well-being, but may emphasize such dimensions to various degrees. By continuing research into the quality of student-professor relationships, this would provide insight into strategies that students and professors can use to navigate the stressful transition to college, while also strengthening rapport.

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Table 2

*Mean Amount of Exploration by Achievement Goal Orientation*

Goal Orientation	Mean	SD	n
Mastery	3.80	.66	28
Performance-approach	3.37	.70	32
Performance-avoidance	3.66	.60	29

*Note.* Exploration ratings ranged from 1 (*Very Slightly or Not At All accurate*) to 5 (*Extremely accurate*).

Table 3

*Correlation Matrix of FYS Attachment, Curiosity, and Exploration*

---

	Avoidant	Anxious	Curiosity	Exploration
Avoidant	--			
Anxious	.22*	--		
Curiosity	.04	-.06	--	
Exploration	.03	-.12	.68*	--

---

*Note.* \* $p < .05$ .

Table 4

*Correlation Matrix of FYS Attachment and Self Variables*

	Avoidant	Anxious	Inadequate Self	Hated Self	Reassure Self
Avoidant	--				
Anxious	.22*	--			
Inadequate Self	.31**	.11	--		
Hated Self	.33**	.12	.71**	--	
Reassure Self	-.06	-.29**	-.58**	-.60**	--

*Note.* \* $p < .05$ . \*\* $p < .01$ .



Table 5

*Correlation Matrix of FYS Attachment and Autonomy Variables*

	Avoidant	Anxious	Autonomy
Avoidant	--		
Anxious	.22*	--	
Autonomy	-.29**	-.75**	--

*Note.* \* $p < .05$ . \*\* $p < .01$ . Autonomy = students' perceived autonomy support of their FYS professor.

Table 6

*Correlation Matrix of Attachment Variables*

	Parent 1 AVD	Parent 1 ANX	Parent 2 AVD	Parent 2 ANX	FYS AVD	FYS ANX	Prof. 2 AVD	Prof. 2 ANX
Parent 1 AVD	--							
Parent 1 ANX	.55**	--						
Parent 2 AVD	.58**	.46**	--					
Parent 2 ANX	.30*	.58**	.71**	--				
FYS AVD	.06	.28*	.05	.11	--			
FYS ANX	.23*	.21*	.04	.09	.22*	--		
Prof. 2 AVD	-.09	.31*	.11	.26*	.53**	-.09	--	
Prof. 2 ANX	.21*	.20	.09	.06	.10	.38**	.09	--

*Note.* \* $p < .05$ . \*\* $p < .001$ . AVD = Avoidant and ANX = Anxious. Prof. 2 = Professor 2.

## Appendices

## Appendix A

## Achievement Goal Orientation Questionnaire-Revised

(1 = *strongly disagree*, 5 = *strongly agree*)

My aim is completely master the material presented in this class.

I am striving to do well compared to other students.

My goal is to learn as much as possible.

My aim is to perform well relative to other students.

My aim is to avoid learning less than I possibly could.

My goal is to avoid performing poorly compared to others.

I am striving to understand the content as thoroughly as possible.

My goal is to perform better than the other students.

My goal is to avoid learning less than it is possible to learn.

I am striving to avoid performing worse than others.

I am striving to avoid an incomplete understanding of the course material.

My aim is to avoid doing worse than other students.

Mastery: items 1, 7, 3, 5, 11, 9

Performance-approach: items 4, 2, 8

Performance-avoidance: items 12, 10, 6

## Appendix B

## Curiosity and Exploration Inventory

Instructions: Rate the statements below for how accurately they reflect the way you generally feel and behave. Do not rate what you think you should do, or wish you do, or things you no longer do. Please be as honest as possible.

(1 = *Very slightly or not at all accurate* 2 = *A little bit accurate* 3 = *Moderately accurate*  
4 = *Quite a bit accurate* 5 = *Extremely accurate*)

1. I actively seek as much information as I can in new situations.
2. I am the type of person who really enjoys the uncertainty of everyday life.
3. I am at my best when doing something that is complex or challenging.
4. Everywhere I go, I am out looking for new things or experiences.
5. I view challenging situations as an opportunity to grow and learn.
6. I like to do things that are a little frightening.
7. I am always looking for experiences that challenge how I think about myself and the world.
8. I prefer jobs that are excitingly unpredictable.
9. I frequently seek out opportunities to challenge myself and grow as a person.
10. I am the kind of person who embraces unfamiliar people, events, and places.

Stretching (Exploration): 1,3,5,7,9 / Embracing (Curiosity): 2,4,6,8,10.

## Appendix C

## The Forms of Self-Criticizing/Attacking &amp; Self-Reassurance Scale

When things go wrong in our lives or don't work out as we hoped, and we feel we could have done better, we sometimes have negative and self-critical thoughts and feelings. These may take the form of feeling worthless, useless or inferior etc. However, people can also try to be supportive of themselves. Below are a series of thoughts and feelings that people sometimes have. Read each statement carefully and circle the number that best describes how much each statement is true for you.

Please use the scale below.

(0 = *Not at all like me* 1 = *A little bit like me* 2 = *Moderately like me*

3 = *Quite a bit like me* 4 = *Extremely like me*)

When things go wrong for me:

1. I am easily disappointed with myself.
2. There is a part of me that puts me down.
3. I am able to remind myself of positive things about myself.
4. I find it difficult to control my anger and frustration at myself.
5. I find it easy to forgive myself.
6. There is a part of me that feels I am not good enough.
7. I feel beaten down by my own self-critical thoughts.

8. I still like being me.
9. I have become so angry with myself that I want to hurt or injure myself.
10. I have a sense of disgust with myself.
11. I can still feel lovable and acceptable.
12. I stop caring about myself.
13. I find it easy to like myself.
14. I remember and dwell on my failings.
15. I call myself names.
16. I am gentle and supportive with myself.
17. I can't accept failures and setbacks without feeling inadequate.
18. I think I deserve my self-criticism.
19. I am able to care and look after myself.
20. There is a part of me that wants to get rid of the bits I don't like.
21. I encourage myself for the future.
22. I do not like being me.

**SCORING: KEY FOR SUBSCALES:**

is= inadequate self, items 1, 2, 4, 6, 7, 14, 17, 18, 20

rs= reassure self, items 3, 5, 8, 11, 13, 16, 19, 21      hs= hated self, items 9, 10, 12, 15, 22

## Appendix D

## Relationship Structures Questionnaire

This questionnaire is designed to assess the way in which you mentally represent important people in your life. You'll be asked to answer questions about your parents, your romantic partners, and your friends. Please indicate the extent to which you agree or disagree with each statement by circling a number for each item. Avoidance score: items 1-6, Anxiety score: items 7-9. (1 = *strongly disagree*, 7 = *strongly agree*)

-----

Please answer the following questions about your mother or a mother-like figure

-----

1. It helps to turn to this person in times of need.
2. I usually discuss my problems and concerns with this person.
3. I talk things over with this person.
4. I find it easy to depend on this person.
5. I don't feel comfortable opening up to this person.
6. I prefer not to show this person how I feel deep down.
7. I often worry that this person doesn't really care for me.
8. I'm afraid that this person may abandon me.
9. I worry that this person won't care about me as much as I care about him or her.

-----  
Please answer the following questions about your father or a father-like figure  
-----

1. It helps to turn to this person in times of need.
2. I usually discuss my problems and concerns with this person.
3. I talk things over with this person.
4. I find it easy to depend on this person.
5. I don't feel comfortable opening up to this person.
6. I prefer not to show this person how I feel deep down.
7. I often worry that this person doesn't really care for me.
8. I'm afraid that this person may abandon me.
9. I worry that this person won't care about me as much as I care about him or her.

-----  
Please answer the following questions about your dating or marital partner.  
-----

Note: If you are not currently in a dating or marital relationship with someone, answer these questions with respect to a former partner or a relationship that you would like to have with someone.  
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1. It helps to turn to this person in times of need.
2. I usually discuss my problems and concerns with this person.
3. I talk things over with this person.
4. I find it easy to depend on this person.
5. I don't feel comfortable opening up to this person.
6. I prefer not to show this person how I feel deep down.
7. I often worry that this person doesn't really care for me.
8. I'm afraid that this person may abandon me.
9. I worry that this person won't care about me as much as I care about him or her.

-----

Please answer the following questions about your best friend

-----

1. It helps to turn to this person in times of need.
2. I usually discuss my problems and concerns with this person.
3. I talk things over with this person.
4. I find it easy to depend on this person.
5. I don't feel comfortable opening up to this person.
6. I prefer not to show this person how I feel deep down.

7. I often worry that this person doesn't really care for me.

8. I'm afraid that this person may abandon me.

9. I worry that this person won't care about me as much as I care about him or her.

## Appendix E

## Learning Climate Questionnaire

This questionnaire contains items that are related to your experience with your instructor in this class. Instructors have different styles in dealing with students, and we would like to know more about how you have felt about your encounters with your instructor. Your responses are confidential. Please be honest and candid. (1 = *strongly disagree*, 7 = *strongly agree*)

1. I feel that my instructor provides me choices and options.
2. I feel understood by my instructor.
3. I am able to be open with my instructor during class.
4. My instructor conveyed confidence in my ability to do well in the course.
5. I feel that my instructor accepts me.
6. My instructor made sure I really understood the goals of the course and what I need to do.
7. My instructor encouraged me to ask questions.
8. I feel a lot of trust in my instructor.
9. My instructor answers my questions fully and carefully.
10. My instructor listens to how I would like to do things.
11. My instructor handles people's emotions very well.
12. I feel that my instructor cares about me as a person.
13. I don't feel very good about the way my instructor talks to me.

14. My instructor tries to understand how I see things before suggesting a new way to do things.

15. I feel able to share my feelings with my instructor.