PERCEIVED PROGRESS, AFFECT, AND INTENSITY: THE ROLE OF APPROACH-AVOIDANCE TEMPERAMENT AND OPTIMISM IN JOB SEARCH

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The undersigned, appointed by the Dean of the Graduate School, have examined the dissertation entitled

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A candidate for the degree of Doctor of Philosophy of Business Administration,

And hereby certify that, in their opinion, it is worthy of acceptance.

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Four years ago started one of the most amazing journeys of my life. A journey full of challenges and invaluable rewards, a roller-coaster of emotions, one hell of a ride! I want to dedicate my Ph.D. and dissertation to my loved ones.

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PERCEIVED PROGRESS, AFFECT, AND INTENSITY: THE ROLE OF APPROACH-AVOIDANCE TEMPERAMENT AND OPTIMISM IN JOB SEARCH

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ABSTRACT

Job search is a self-regulated process during which job seekers evaluate the extent to which they are making progress toward finding a job. The purpose of this study was to better understand whether and how job seekers regulate their affect and the intensity of their behaviors during their search for employment. I drew upon control theory to examine the role of perceived progress on affect and job search intensity. I also extended prior research by differentiating the role of activated emotions (e.g., excitement, anxiety) from deactivated emotions (e.g., contentment, sadness) on job search intensity. Finally, I addressed calls to examine why some job seekers increase, while others decrease, their intensity, following the same level of progress. Specifically, I examined the role of optimism, and approach and avoidance temperaments in moderating the relationships between progress, affect, and intensity. Using weekly measures from a longitudinal sample of graduating students (n = 157), results showed that perceived progress was positively related to intensity and positive affect, and negatively to negative affect. Findings also showed that activated affect was positively related to intensity, whereas deactivated affect was negatively related to intensity. Finally, approach and avoidance temperaments moderated the relationships between perceived progress and both activated positive affect and deactivated negative affect. This study provides insights into the self-regulatory dynamics of the job search process, while also shedding light upon the role of progress, affect, and approach and avoidance temperaments in job search.

CHAPTER 1: INTRODUCTION

Job search is a dynamic, self-regulated process with the ultimate goal of finding employment (e.g., Barber, Daly, Giannantonio, & Phillips, 1994; Kanfer, Wanberg, & Kantrowitz, 2001; Wanberg, Zhu, & van Hooft, 2010). Unfortunately, there is no secret recipe to reach that goal. Further, job seekers experience ups and downs, stressful and exciting moments, and have to invest a significant amount of time and energy in the process. To reach the goal of finding a job, job seekers must engage in behaviors such as preparing a resume, looking for job opportunities, contacting sources about possible leads, applying for jobs, generating interviews, researching companies, and following-up with recruiters (Blau, 1994; Saks, 2006). Considerable evidence indicates the importance of these behaviors for job search success (e.g., Barber et al., 1994; Kanfer et al., 2001; Saks, 2006). While performing these job search behaviors, job seekers construct perceptions about the progress that they are making in their search. Evidence indicates that this perceived job search progress influences the emotions job seekers experience, while also influencing them to adjust their effort (Wanberg et al., 2010).

Specifically, Wanberg et al. (2010) drew upon control theory (Carver & Scheier, 1981, 1982) and found that perceived progress was positively related to positive affect, and negatively related to negative affect and job search effort. Such findings are supportive of control theory as they indicate that job seekers who perceive that they are making good progress toward their goal of finding a job feel more positive emotions, less negative emotions, and decrease their subsequent effort. Although prior research drew upon control theory to examine the role of progress, affect, and effort in job search, it did not differentiate the role of activated affect (e.g., excitement, anxiety) from the role of

deactivated affect (e.g., contentment, sadness) during the job search process. Interestingly, Barrett and Russell (1998, 1999) and Seo et al. (2004) suggested that activated affect has a different influence on various outcomes, such as effort and intensity, compared to deactivated affect. Furthermore, although control theory provides a useful theoretical framework for examining the influence of perceived progress on affect and intensity, it does not explain why some job seekers increase, while others decrease, their intensity, following the same level of perceived progress. Some individuals may react to increased perceived progress or affect by investing more time and energy (i.e., try harder), while other individuals may decide not to invest more effort (i.e., give up) (Carver & Scheier, 2012). Carver and Scheier (2012) further suggested that the relationship between changes in perceived progress and changes in intensity depends upon individuals' interpretation of changes in their perceived progress.

This study thus extends prior research by: (1) further investigating the influence that changes in job search progress have on changes in affect and job search intensity, as postulated by control theory; (2) describing and examining the role of changes in both *activated* and *deactivated* affect on changes in job search intensity; and (3) investigating whether and how individual differences in approach and avoidance temperaments and attributional styles (i.e., optimism) influence job seekers to either increase or decrease their intensity. Given the dynamic nature of the job search, this study follows job seekers throughout their job search, documenting their experience of ups and downs (i.e., weekly data collection throughout the process).

I draw upon control theory (Carver & Scheier, 1981, 1982, 1990) to describe and investigate the role of changes in perceived progress on changes in emotions and job

search intensity. Control theory (Carver & Scheier, 1981, 1982) suggests that individuals evaluate discrepancies between the desired (e.g., desired progress) and actual situation (e.g., actual progress). If they perceive that there is a discrepancy (e.g., actual progress is lower than desired), individuals find themselves in a discrepancy-reducing (or negative) feedback loop. For example, control theory suggests that increased perceived progress signals job seekers that they are making good progress toward goal accomplishment and thus that more intensity is not needed.

Furthermore, affect-as-information theory (Carver & Scheier, 1990; Schwarz & Clore, 1983, 2003) suggests that affect acts as a signal informing individuals of discrepancies between their desired and actual progress toward goal accomplishment (i.e., finding a job). Affect-as-information theory thus suggests that increased negative affect act as a signal that individuals are not making enough progress toward achieving their goal, and thus that more intensity is needed. This study also answers calls to examine the activation dimension of affect in addition to the valence dimension (e.g., Barrett & Russell, 1998; 1999; Carver & Scheier, 2012; Russell, 2003). For example, Carver and Scheier (2012) suggested that increased activated negative affect (e.g., anxiety) might lead to increased effort (i.e., try harder), while increased deactivated negative affect (e.g., sadness) might lead to reduced effort or reduction in priority (i.e., give up). Similarly, contentment and excitement are both positive emotions, but increased excitement (i.e., activated affect) is less likely to lead to decreased intensity than increased contentment (i.e., deactivated affect). This study thus extends prior research by investigating the role that changes in both activated and deactivated affect have throughout the job search process.

Control theory is useful in theorizing the role of perceived progress on affect and intensity throughout the job search. However, as pointed by Carver and Scheier (2012), the direction of these relationships depends upon individuals' interpretation of their progress. Job seekers have different interpretations for why they are experiencing increased progress in their search and their interpretation for this increased progress influences changes in their affect and intensity. More specifically, Carver and Scheier (2012) indicated that interpretations of progress may differ across individuals, and differences in such interpretations are likely to moderate the relationship of changes in perceived progress with changes in affect and job search intensity.

I draw upon the approach and avoidance literature (e.g., Elliot, 2006; Elliot & Thrash, 2002, 2010) to examine whether individual differences in job seekers' approach and avoidance temperaments moderate the relationships of changes in perceived progress with changes in affect and job search intensity. Elliot and Thrash (Elliot & Thrash, 2002, 2010) suggested that approach and avoidance temperaments capture two (core) individual differences in how individuals interpret and react to different events. Furthermore, affect is also likely to be influenced by individual differences in approach and avoidance temperaments (Elliot, 2006). For example, individuals high in approach temperament are more sensitive to positive stimuli (e.g., increased goal progress) than individuals low in approach. As such, individuals high in approach temperament are likely to experience activated positive emotions (e.g., excitement) to a greater extent following positive stimuli, compared to individuals low in approach (Carver, 2006; Carver & Scheier, 2012; Pekrun, Elliot, & Maier, 2006). In contrast, individuals high in avoidance temperament are more sensitive to negative stimuli (e.g., decreased goal progress), than individuals

low in avoidance. As such, individuals high in avoidance temperament are likely to experience activated negative emotions (i.e., anxiety) to a greater extent following negative stimuli compared to individuals low in avoidance (Carver, 2006; Carver & Scheier, 2012; Pekrun et al., 2006).

In job search contexts, approach and avoidance temperaments capture job seekers' individual differences in their emotional experiences and behavioral reactions following positive (i.e., increased job search progress) and negative stimuli (i.e., decreased job search progress). For example, job seekers high in avoidance temperament are more sensitive to decreased perceived progress (i.e., negative stimuli), and are thus more likely to experience stronger increases in activated negative emotions (e.g., anxious, distressed, and tense) compared to job seekers low in avoidance. Negative situations, such as decreased progress, are theorized to be aversive and thus expected to lead to increased job search intensity in order to reduce such negative emotions. As such, I theorize that individuals high in avoidance temperament are likely to increase their job search intensity to a greater extent than job seekers low in avoidance. The complete set of relationships and hypotheses deriving from the approach and avoidance literature is further developed in the theory review and hypotheses development section.

I further draw upon the attributional style literature (e.g., Mezulis, Abramson, Hyde, & Hankin, 2004; Peterson et al., 1982) to investigate whether individual differences in optimism moderate the relationship of changes in perceived progress with changes in job search intensity. Carver and Scheier (2012) suggested that whether individuals try harder to reduce discrepancies (or give up) depends on their confidence to successfully reduce the discrepancies. Deriving from attribution theory (Heider, 1958;

Weiner, 1985), scholars proposed that individuals tend to make causal attributions for similar events in the same way (i.e., attributional styles) over time (Abramson, Seligman & Teasdale, 1978; Russell, 1991). The most researched attributional style is the optimistic attributional style (Mezulis et al., 2004; Seligman, 1991). Specifically, optimistic individuals tend to make internal and stable attributions (e.g., high ability) for favorable events (i.e., increased progress) and external and unstable attributions (e.g., bad luck) for unfavorable events (i.e., decreased progress). In contrast, pessimistic individuals tend to make internal and stable attributions for unfavorable events and external and unstable explanations for favorable events. Weiner (1985) further suggested that individuals who believe that what caused them to experience decreased goal progress (i.e., unfavorable event) is something that will remain stable in the future and that is internal (e.g., lack of ability) are less likely to adjust their behaviors (i.e., increase intensity) than individuals who believe that the reason is unstable and external.

In job search contexts, attributional styles capture job seekers' individual differences in the tendency they have in making attributions about changes in their job search progress. For example, optimistic job seekers tend to believe that the reason for their decreased progress is something that will change in the future and that is external (e.g., bad luck). They are thus likely to adjust their behaviors (i.e., increase their intensity) to a greater extent than pessimistic job seekers who believe that there is nothing they can do about these decreases in perceived progress (i.e. stable and internal cause). The complete set of relationships and hypotheses deriving from the attributional style literature is further developed in the theory review and hypotheses development section.

In sum, this study makes three notable contributions to the job search literature: (1) it further investigates the role of changes in perceived progress on changes in affect and job search intensity, as postulated by control theory (Carver & Scheier, 1981, 1982); (2) it extends prior research (e.g., Song et al., 2009; Wanberg et al., 2010) by describing and examining the role of changes in both *activated* and *deactivated* affect on job search intensity; and (3) it investigates whether individual differences in approach and avoidance temperaments and optimism moderate the relationships of changes in perceived progress with changes in affect and job search intensity.

In Chapter 2, I review the different theoretical approaches, including their role in job search. While reviewing the theoretical frameworks, I develop specific hypotheses regarding the relationships between perceived progress, activated and deactivated affect, and job search intensity. I also develop specific hypotheses regarding the moderating role of optimism, and approach and avoidance temperaments. In Chapter 3, I discuss the sample and procedure, measures, and analytical strategy I used to collect the data and test the hypotheses. In Chapter 4, I review the results from the study. Specifically, I present the correlations between the study variables, before reviewing the results for each of the hypotheses. Finally, in Chapter 5, I summarize the findings of this study and present the contributions, implications, and some of the limitations of this research.

CHAPTER 2: THEORY REVIEW AND HYPOTHESES DEVELOPMENT

Control Theory and Affect-as-Information Theory

Although there are a variety of self-regulatory frameworks (e.g., control theory, social cognitive theory, and goal progress literature) that have been used to explain the extent to which individuals regulate their emotions, thoughts and actions, Carver and Scheier's (1981, 1982, 1990) conceptualization of self-regulation provides a useful theoretical framework for examining the influence of changes in perceived job search progress on changes in affect and job search intensity. Specifically, Carver and Scheier (1981, 1982) suggested that individuals continuously evaluate whether there are discrepancies between their desired and actual progress toward goal achievement. Individuals reduce these discrepancies by adjusting their behaviors throughout the process, while also experiencing changes in their emotions. As job search has consistently been conceptualized as a self-regulated process of behaviors and emotions, I believe that control theory and affect-as-information theory provide a strong theoretical framework for investigating the role of changes in perceived progress, affect, and intensity during the job search. In the following paragraphs, I review control theory and affect-as-information theory, focusing on how they have been applied in self-regulatory research, and more specifically how they have been examined in job search contexts (e.g., Song et al., 2009; Wanberg et al., 2010).

Following earlier work by Powers (1973), Carver and Scheier (1981, 1982) suggested that control theory is a general approach to understanding self-regulated processes of emotions and behaviors. Carver & Scheier (1981, 1982) proposed that when individuals move toward a specific goal, they compare their actual state, which control

theory refers to as input, with their desired state (i.e., standard or reference value). If that comparison indicates a discrepancy between the desired (standard) and actual states, individuals adjust their behaviors to bring them closer to their desired state of goal achievement. More specifically, control theory (Carver & Scheier, 1981, 1982) suggests that individuals evaluate discrepancies between the desired (e.g., desired progress) and actual situation (e.g., actual progress). If there is a discrepancy (e.g., actual progress is lower than desired), individuals find themselves in a discrepancy-reducing (or negative) feedback loop and will adjust (i.e., change) their behaviors to reduce the discrepancy and reach their goal.

Carver (2004) suggested that perceived goal progress acts as an internal signal of the comparison of individuals' current performance with their desired performance. Perceived goal progress indicates whether individuals are getting closer to achieving their goal, and whether they need to increase or decrease their effort to reach that goal. For example, if individuals experience increased perceived progress, they will maintain or decrease their effort (i.e., reprioritize goals) as they are meeting or exceeding their goal progress. However, if they experience decreased perceived progress, they will increase their effort in an attempt to accomplish their goal. Carver & Scheier (1981, 1982) highlight that individuals are actively regulating their behaviors to reach their goal. Specifically, individuals continuously evaluate to what extent they are making progress toward goal achievement, and interpret changes in perceived progress as a signal of whether to change the intensity of their behaviors (upward or downward) in order to reach their goal (e.g., find a job).

Furthermore, affect-as-information theory (Carver & Scheier, 1990; Schwarz & Clore, 1983, 2003) suggests that changes in affect also provide an internal signal about progress made toward goal attainment. Specifically, increased negative affect, which results from decreased perceived goal progress is interpreted as a signal that more intensity is needed to reach the specific goal (e.g., finding a job) (Carver, 2003). In contrast, increased positive affect, which results from increased perceived goal progress, serves as a signal that individuals can reduce or maintain effort toward that goal and/or reprioritize goals (Carver and Scheier, 2009, 2011). To summarize, increased negative affect can be conceptualized as providing information that individuals are not making sufficient progress toward achieving their goals and that they need to increase their intensity. Increased positive affect can be conceptualized as providing information that individuals are making sufficient progress toward their goals and that they can maintain or reduce their intensity.

Control theory in job search. The conceptualization of job search as a self-regulated process (e.g., Barber et al., 1994; Kanfer et al., 2001) has lead researchers to draw upon self-regulatory theories such as control theory (Carver & Scheier, 1981, 1982). As mentioned earlier, control theory provides a useful theoretical framework for examining emotional and behavioral self-regulation in job search. In the case of job search, perceived job search progress indicates whether job seekers are getting closer to their ultimate goal of finding a job (Wanberg et al., 2010). Job seekers' perceptions of their progress change throughout the process and these changes in perceived progress influence job seekers to experience specific emotions and adjust their behaviors. For example, if job seekers experience increased perceived progress, they are also likely to

experience increased positive affect and decreased negative affect, and might decrease their job search intensity.

There is some evidence supporting control theory in job search (e.g., Wanberg et al., 2010). For example, Wanberg et al. (2010) drew upon control theory to examine the influence of perceived progress on affect and job search effort over a three-week period. In a daily diary study, they found that perceived progress was positively related to positive affect, and negatively related to negative affect and to subsequent effort the following day. Their findings indicate that job seekers who perceive that they are making progress feel more positive affect, less negative affect, and decrease their subsequent effort, as suggested by control theory (Carver & Scheier, 1981, 1982). In this study, I also draw upon control theory to further investigate the influence that changes in perceived progress have on changes in affect and job search intensity.

In sum, control theory suggests that individuals, who experience increased perceived progress will decrease their effort. For example, when job seekers perceive that they are making good progress toward finding a job (e.g., more interviews, site visits, job offers) they also perceive that they do not need to exert as much intensity in their job search (i.e., reprioritize goals). As such, these job seekers might decide to decrease their job search intensity. In contrast, job seekers who perceive that they are not making good progress (e.g., rejections, no site visits, no job offer) realize that they need to intensify their search. As such, these job seekers decide to increase their job search intensity. Based on control theory, I thus expect that job seekers, who experience increased perceived progress will decrease their job search intensity, while job seekers, who experience decreased perceived progress, will increase their job search intensity.

Hypothesis 1: Changes in perceived progress will be negatively related to changes in job search intensity.

Control theory (Carver & Scheier, 1981, 1982, 1990) also suggests that individuals who experience increased perceived progress will also experience increased positive affect and decreased negative affect. Following recommendations by Russell (2003), Seo et al. (2008), and Carver and Scheier (2012), I examine both activated and deactivated dimensions of positive and negative affect. Based on control theory, I thus expect that job seekers, who experience increased perceived progress, will also experience increased activated and deactivated positive affect and decreased activated and deactivated negative affect.

Hypothesis 2: Changes in perceived progress will be positively related to changes in activated and deactivated positive affect.

Hypothesis 3: Changes in perceived progress will be negatively related to changes in activated and deactivated negative affect.

Affect-as-information theory in job search. As mentioned earlier, affect-as-information theory (Carver & Scheier, 1990; Schwarz & Clore, 1983, 2003) suggests that increased negative affect acts as a signal that individuals are not making good progress toward goal achievement and that more intensity is needed. In contrast, increased positive affect signals individuals that they are making good progress toward goal achievement and that more intensity is not needed. There is some evidence supporting affect-as-information theory. For example, in a study using an experience sampling methodology to examine entrepreneurs' effort, negative affect was positively related to subsequent effort on tasks that are required immediately (Foo et al., 2009). In another

study, Song et al. (2009) found that distress was positively related to job search effort on the next day. Such results support affect-as-information's proposition that negative affect is related to increases in effort or intensity. In this study, I further examine the influence that changes in affect have on changes in job search intensity.

Based on affect-as-information theory, I expect that job seekers who experience increased positive affect will decrease their job search intensity, while job seekers who experience increased negative affect will increase their job search intensity. However, as suggested by Barrett and Russell (1998, 1999) and Russell (2003), activated affect will have a different influence on various outcomes, such as job search intensity, than deactivated affect. Specifically, Barrett and Russell (1998, 1999) and Russell (2003) suggested that affect is not only to be considered in terms of its valence (positive or negative) but also in terms of its activation, arousal, or energy. They further suggested that the activation dimension refers to the intensity that the emotional response has in terms of brain and body activation. Activated affect will create stronger physical and emotional responses than deactivated affect (Damasio et al., 2000). As such, job seekers who experience increased activated emotions (e.g., excitement, anxiety) will have more intense reactions than job seekers who experience increased deactivated emotions (e.g., contentment, sadness). For example, increased activated positive emotions might lead to more intense effort than increased deactivated emotions (Seo, Barrett, Bartunek, 2004). Similarly, Carver and Scheier (2012) suggested that increased anxiety (i.e., activated negative emotion) might lead to increased effort (i.e., try harder), while increased sadness (i.e., deactivated negative emotion) might lead to reduced effort or downgrade in priority (i.e., give up).

In sum, I expect that job seekers, who experience increased perceived progress, will also experience both increased excitement (i.e., activated positive emotion) and contentment (i.e., deactivated positive emotion). Furthermore, as noted earlier, affect-as-information theory proposes that increased positive affect should lead to decreased job search intensity. However, Barrett and Russell (1998, 1999) and Seo et al. (2004) suggested that job seekers who experience increased excitement (i.e., activated positive emotion) also experience more intense body and brain reactions compared to job seekers who experience increased contentment (i.e., deactivated positive emotion). Job seekers who experience increased excitement, as a result of increased progress, experience more intense reactions, feel energized, and are thus likely to maintain, rather than decrease, their intensity. On the other hand, job seekers who experience increased contentment, also a result of increased perceived progress, experience less intense reactions, and will invest less time and energy in their search, as postulated by affect-as-information theory. Stated differently, the relationship between increased positive affect and decreased job search intensity will be negative *only* for deactivated positive affect.

Hypothesis 4: Changes in deactivated positive affect will be negatively related to changes in job search intensity.

Similarly, as mentioned earlier, I expect that job seekers, who experience decreased perceived progress, will also experience both increased anxiety (activated negative emotion) and sadness (i.e., deactivated negative emotion). While affect-as-information theory proposes that increased negative affect should lead to increased intensity, Barrett and Russell (1998, 1999) and Carver and Scheier (2012) suggested that job seekers who experience increased anxiety (i.e., activated negative emotion)

experience more intense body and brain reactions than job seekers who experience increased in sadness (i.e., deactivated negative emotion). Job seekers who experience increased anxiety try harder, and are thus likely to increase their intensity, as postulated by affect-as-information theory. On the other hand, job seekers who experience increased sadness experience less intense reactions, and are thus likely not to increase their intensity, as this increased sadness did not give them energy to invest more job search intensity. Stated differently, the relationship between increased negative affect and increased job search intensity will be positive *only* for activated negative affect.

Hypothesis 5: Changes in activated negative affect will be positively related to changes in job search intensity.

Affect-as-information does not predict relationships of activated positive affect and deactivated negative affect with job search intensity. Thus, although I do not have formal hypotheses for these relationships, I further investigate the role of changes in activated positive affect (e.g., excitement) and deactivated negative affect (e.g., sadness) in influencing changes in job search intensity. As mentioned earlier, in general job seekers who feel increased activated affect (e.g., excitement, anxiety) will have more intense physical and emotional reactions and will thus increase their job search intensity, whereas those who feel increased deactivated affect (e.g., contentment, sadness) will have less intense physical and emotional reactions and thus maintain or decrease their job search intensity (Carver & Scheier, 2012; Seo et al., 2004).

Finally, although Wanberg et al. (2010) did not find affect to partially mediate the relationship between perceived progress and time spent in job search, I examine whether either activated and deactivated dimensions of affect partially mediate the relationship of

perceived progress with job search intensity. Perhaps, prior research did not find support for the mediated relationship because it focused on the valence dimension (positive and negative) of affect, without considering the activation dimension of affect. As mentioned earlier, changes in activated affect do not have the same influence on job search intensity compared to changes in deactivated affect. For example, although decreased progress leads to both increased activated and deactivated negative affect, I theorize that only increased activated negative affect will lead to increased job search intensity, following more intense and persistent reactions. As such, I extend prior research by examining whether changes in specific dimensions of affect (i.e., activated negative affect and deactivated positive affect) will partially mediate the relationship between changes in perceived progress and changes in job search intensity. Furthermore, I hypothesize partial mediation, rather than full mediation, as control theory suggests that changes in perceived progress should also have a direct influence on changes in job search intensity.

> *Hypothesis 6:* Changes in (a) activated negative affect and (b) deactivated positive affect will partially mediate the relationship between changes in perceived progress and changes in job search intensity.

Approach and Avoidance Temperaments

Although control theory provides a useful theoretical framework for examining the role of perceived progress, affect, and intensity in job search, it does not explain why some job seekers increase, while others decrease, their intensity, given the same level of progress. For example, some job seekers react to decreased perceived progress by investing more time and energy (i.e., try harder), while other job seekers decide not to put more effort into it (i.e., give up). In this study, I theorize that individual differences in

job seekers' approach and avoidance temperaments can contribute to understanding whether and how changes in job search progress influence changes in the emotions job seekers experience, as well as in the intensity of their search. In the following paragraphs, I review the approach and avoidance literature, focusing on how it has been applied in self-regulatory research and more specifically how it has been examined in job search contexts.

Elliot and Covington (2001) suggested that individuals interpret most (if not all) events as providing positive or negative stimuli. Notably, the approach and avoidance distinction (i.e., temperaments) reflects two (core) individual differences in how individuals interpret and react to different events (Elliot & Thrash, 2002, 2010). Elliot and Thrash (2010) defined approach temperament as "a general neurobiological sensitivity to positive (i.e., reward) stimuli (present or imagined) that is accompanied by a perceptual vigilance for, an affective reactivity to, and a behavioral predisposition toward such stimuli." (2010, p. 866) They defined avoidance temperament as "a general neurobiological sensitivity to negative (i.e., punishment) stimuli (present or imagined) that is accompanied by a perceptual vigilance for, an affective reactivity to, and a behavioral predisposition toward such stimuli." (Elliot & Thrash, 2010, p. 866)

Approach temperament. Individuals high in approach temperament are more sensitive to positive stimuli, compared to those low in approach (Carver & White, 1994; Elliot, 2006; Elliot & Thrash, 2002, 2010). They are more sensitive to events that provide happiness, pleasure, and excitement (e.g., interviews, job offers). As individuals high in approach temperament have a predisposition for positive stimuli, they experience

more intense reactions following positive events. They are also less sensitive to negative stimuli, and experience less intense reactions following negative events.

Individuals high in approach temperament respond differently to positive and negative stimuli, compared to those low in approach. For example, individuals high in approach temperament who experience increased goal progress feel energized by these positive stimuli, and are thus more likely to continue their effort (Elliot & Thrash, 2002, 2010). As noted earlier, based on control theory, I expect individuals who experience increased progress to reduce their intensity. However, I theorize that individuals high in approach temperament are less likely to reduce their intensity because of the energy they feel following such positive events (i.e., increased perceived progress), compared to those low in approach. Hence, individuals high in approach temperament are more likely to maintain, rather than decrease, effort and intensity following positive events such as increases in goal progress.

Furthermore, as noted earlier, activated affect is associated with more intense body and brain reactions, whereas deactivated affect is associated with less intense reactions (Damasio et al., 2000). Individuals high in approach temperament have more intense positive reactions following positive events, and thus experience increased activated positive affect to a greater extent following increased perceived goal progress (i.e., positive situation), compared to those low in approach (Carver & Scheier, 2009, 2011, 2012). At the same time, individuals high in approach temperament have less intense negative reactions following negative events, and are more likely to experience deactivated negative emotions (e.g., sadness, tired, gloomy), as the result of negative stimuli (Carver & Scheier, 2009, 2011, 2012). As such, I expect individuals high in

approach temperament to experience increased deactivated negative affect to a greater extent following decreased perceived goal progress, compared to those low in approach. As noted earlier, individuals high in approach temperament experience more intense positive reactions and less intense negative reactions compared to those low in approach. As such, I do not expect individuals high in approach temperament to differ from those low in approach, in terms of their experience of both deactivated positive emotions and activated negative emotions, following changes in their perceived progress.

Avoidance temperament. Individuals high in avoidance temperament are more sensitive to negative stimuli, compared to those low in avoidance (Carver & White, 1994; Elliot, 2006; Elliot & Thrash, 2002, 2010). They are more sensitive to events that are unpleasant (e.g., rejections). As individuals high in avoidance temperament have a predisposition for negative stimuli, they have more intense reactions following negative events. For example, individuals high in avoidance temperament who experience decreased goal progress experience more intense reactions following these negative stimuli, and are thus likely to increase their effort to a greater extent, compared to those low in avoidance.

Furthermore, as activated (deactivated) emotions are associated with more (less) intense reactions, individuals high in avoidance temperament are likely to experience increased activated negative emotions to a greater extent, as the result of decreases in perceived goal progress, compared to those low in avoidance (Carver & Harmon-Jones, 2009). At the same time, individuals high in avoidance temperament are less sensitive to positive stimuli. As such, they have less intense reactions following positive events. Individuals high in avoidance temperament are more likely to experience increased

deactivated positive emotions (e.g., contentment, serenity, calmness), as a result of positive stimuli (Carver & Scheier, 2009, 2011, 2012). Therefore, I expect that individuals high in avoidance temperament experience increased deactivated positive affect to a greater extent following increases in perceived goal progress, compared to those low in avoidance. As mentioned earlier, individuals high in avoidance temperament experience more intense negative reactions and less intense positive reactions compared to those low in avoidance. As such, I do not expect individuals high in avoidance to differ from those low in avoidance, in terms of their experience of both activated positive emotions and deactivated negative emotions, following changes in their perceived progress.

Approach and avoidance temperaments in job search. In this study, I examine whether and how individual differences in approach and avoidance temperaments moderate the relationships between changes in perceived progress and changes in affect and intensity. Specifically, individuals high in approach temperament are more sensitive to positive stimuli (e.g., increased goal progress) than those low in approach (Elliot & Thrash, 2002, 2010). In contrast, individuals high in avoidance temperament are more sensitive to negative stimuli (e.g., decreased goal progress), than those low in avoidance (Elliot & Thrash, 2002, 2010). As job seekers high in approach (avoidance) temperament have a predisposition for positive (negative) events, they have stronger reactions following such events. Thus, I expect that individual differences in approach and avoidance temperaments will result in different reactions following positive and negative events (i.e., increased/decreased progress), which influence their emotional experience. I also expect approach and avoidance to influence whether and how job seekers adjust their

intensity following changes in perceived progress, as some job seekers are more likely to try harder, while other job seekers are more likely to give up.

Although the approach and avoidance distinction has received a lot of attention in fields such as education (e.g., Elliot, Murayama, & Pekrun, 2011), there is less, although some, evidence supporting an approach and avoidance distinction in job search (e.g., Creed et al., 2009; Wanberg et al., 2012). Specifically, Wanberg et al. (2012) found that job seekers high in approach motivation invested more time and energy in their job search compared to job seekers low in approach. Similarly, Creed et al. (2009) found that job seekers high in approach orientation exhibited higher levels of job search intensity measured four months later, while higher levels of avoidance orientation were not related to job search intensity measured four months later. Those studies examined the main effects of approach and avoidance temperaments on job search effort, while I investigate the moderating role of these variables.

Approach temperament in job search. As mentioned earlier, control theory suggests that changes in perceived progress are negatively related to changes in job search intensity, such that increased perceived progress leads to decreased job search intensity. In this study, I theorize that individual differences in approach temperament will moderate that negative relationship, such that individuals high in approach temperament will change their intensity to a lesser extent following changes in their perceived progress, compared to those low in approach. Job seekers high in approach temperament are more sensitive to positive stimuli (i.e., increased progress). When they experience increased perceived progress, they also experience more intense physical and emotional reactions, and are thus more likely to be energized and motivated to maintain,

rather than decrease, their intensity. Thus, I theorize that when job seekers high in approach temperament experience increased perceived progress, they are less likely to change (i.e., decrease) their job search intensity, compared to those low in approach; their positive reactions will help them maintain their intensity.

Analogously, job seekers high in approach temperament are less sensitive to negative events (i.e., decreased progress). When job seekers high in approach temperament experience decreased perceived progress, they experience less intense reactions, and are less motivated to invest more time and energy searching for a job. Thus, when job seekers high in approach temperament experience decreased progress, they are also less likely to change (i.e., increase) their job search intensity, compared to those low in approach. Combining these ideas leads to the following hypothesis.

> *Hypothesis 7:* Approach temperament will moderate the negative relationship between changes in perceived progress and job search intensity such that the relationship will be weaker for job seekers high in approach, than for those low in approach.

As described above, based on control theory I proposed a positive relationship between changes in perceived progress and changes in activated positive affect. I theorize, however, that job seekers' approach temperament will moderate that positive relationship, such that job seekers high in approach temperament will experience changes in activated positive affect to a greater extent following changes in their progress, compared to those low in approach. Job seekers high in approach temperament have a predisposition for positive stimuli, and experience more intense emotional reactions following positive events. As noted above, activated (but not deactivated) emotions are

associated with more intense emotional reactions (Damasio et al., 2000). As such, I expect that job seekers high in approach temperament will experience increased activated positive affect (e.g., excitement) to a greater extent following increased progress, compared to those low in approach. Furthermore, I do not expect individuals high in approach to differ from those low in approach, in terms of their experience of deactivated positive emotions (i.e., less intense reactions) following changes in their progress.

In sum, I expect that the positive relationship between changes in perceived progress and changes in activated positive affect will be greater for job seekers high in approach temperament, compared to those low in approach.

Hypothesis 8: Approach temperament will moderate the positive relationship between changes in perceived progress and activated positive affect, such that the relationship will be stronger for job seekers high in approach, than for those low in approach.

As described earlier, I proposed a negative relationship between changes in perceived progress and changes in deactivated negative affect. I theorize, however, that individual differences in approach temperament will moderate that negative relationship, such that job seekers high in approach temperament experience changes in deactivated negative affect to a greater extent following changes in progress, compared to those low in approach. As noted above, job seekers high in approach temperament are less sensitive to decreased perceived progress, and thus experience less intense reactions following negative events. Evidence indicates that individuals high in approach temperament are more likely to experience deactivated negative emotions (e.g., sadness), as the result of negative stimuli (Carver & Scheier, 2009, 2011, 2012). As deactivated

(but not activated) emotions are associated with less intense emotional reactions, I expect that job seekers high in approach temperament will experience increased deactivated negative affect (e.g., sadness) to a greater extent following decreased perceived progress, compared to those low in approach. Furthermore, I do not expect individuals high in approach to differ from those low in approach, in terms of their experience of activated negative emotions (i.e., more intense reactions) following changes in their progress.

In sum, I expect that the negative relationship between changes in perceived progress and changes in deactivated negative affect will be stronger for job seekers high in approach temperament, compared to those low in approach.

Hypothesis 9: Approach temperament will moderate the negative relationship between changes in perceived progress and deactivated negative affect, such that the relationship will be stronger for job seekers high in approach, than for those low in approach.

Avoidance temperament in job search. As noted above, based on control theory, I proposed that changes in perceived progress are negatively related to changes in job search intensity. I now extend that direct relationship and theorize that job seekers' avoidance temperament will moderate the relationship between changes in perceived progress and changes in job search intensity. Specifically, I theorize that the relationship will be stronger for job seekers high in avoidance than for those low in avoidance. In general, individuals high in avoidance temperament are more sensitive to decreased perceived progress; they have more intense physical and emotional reactions following such negative events, compared to those low in avoidance. As such, individuals high in avoidance temperament are more energized following negative stimuli compared to those

low in avoidance. I theorize that this energy, following decreased perceived progress, will lead them to increase their job search intensity to a greater extent, compared to those low in avoidance who have less intense reactions following negative events. Thus, I expect individuals high (versus low) in avoidance temperament with decreased progress to have more intense reactions and thus greater increases in job search intensity.

I now turn to what happens to individuals high (versus low) in avoidance temperament following increased progress, which is conceptualized as a positive situation. In general, based on control theory I expect that individuals who experience increased perceived progress will decrease their job search intensity, which is the negative relationship proposed earlier. As noted, however, individuals high in avoidance temperament have less intense reactions to positive stimuli (such as increased perceived progress), than those low in avoidance; thus, positive outcomes provide less (low) energy for individuals high versus low in avoidance. Such low energy is expected to lead to decreased job search intensity. Although increased perceived progress is perceived as positive, it is unlikely to result in energized (or activated) positive reactions. Thus, I expect individuals high (versus low) in avoidance temperament with increased progress to have less intense reactions and thus greater decreases in job search intensity. Combining these ideas leads to the following hypothesis.

> *Hypothesis 10:* Avoidance temperament will moderate the negative relationship between changes in perceived progress and job search intensity such that the relationship will be stronger for job seekers high in avoidance, than for those low in avoidance.

Earlier, I hypothesized that changes in perceived progress are negatively related to changes in activated negative affect. I theorize that individual differences in avoidance temperament will moderate that negative relationship, such that job seekers high in avoidance temperament will experience changes in activated negative affect to a greater extent, compared to those low in avoidance. As mentioned earlier, job seekers high in avoidance temperament experience more intense emotional reactions following negative events (i.e., decreased progress). Evidence indicates that individuals high in avoidance temperament are more sensitive to decreased progress (i.e., negative events) and are thus more likely to experience increased activated negative affect (Carver & Harmon-Jones, 2009). As activated (but not deactivated) affect is associated with more intense reactions, I expect that job seekers high in avoidance temperament are likely to experience increases in activated negative affect (e.g., anxiety) to a greater extent following decreased progress, compared to those low in avoidance. Furthermore, I do not expect individuals high in avoidance to differ from those low in avoidance, in terms of their experience of deactivated negative emotions (i.e., less intense reactions) following changes in their progress.

In sum, I expect that the negative relationship between changes in perceived progress and changes in activated negative affect will be stronger for job seekers high in avoidance temperament, compared to those low in avoidance.

Hypothesis 11: Avoidance temperament will moderate the negative relationship between changes in perceived progress and activated negative affect, such that the relationship will be stronger for job seekers high in avoidance, than for those low in avoidance.

Finally, based on control theory, I proposed that changes in perceived progress are positively related to changes in deactivated positive affect. In this study, I theorize that job seekers' avoidance temperament will moderate that positive relationship, such that job seekers high in avoidance temperament will experience changes in deactivated positive affect to a greater extent, compared to those low in avoidance. Specifically, job seekers high in avoidance temperament have a predisposition for negative stimuli, and experience less intense emotional reactions following positive stimuli, such as increased progress. Evidence indicates that individuals high in avoidance temperament are more likely to experience increased deactivated positive affect (e.g., contentment), as a result of positive stimuli (Carver & Scheier, 2009, 2011, 2012). As such, I expect that job seekers high in avoidance temperament will experience increased deactivated positive affect (i.e., less intense reactions) to a greater extent following increased progress, compared to those low in avoidance. Furthermore, I do not expect individuals high in avoidance to differ from those low in avoidance, in terms of their experience of activated positive affect (i.e., more intense reactions) following changes in their progress.

In sum, I expect that the positive relationship between changes in perceived progress and changes in deactivated positive affect will be greater for job seekers high in avoidance temperament, compared to those low in avoidance.

Hypothesis 12: Avoidance temperament will moderate the positive relationship between changes in perceived progress and deactivated positive affect, such that the relationship will be stronger for job seekers high in avoidance, than for those low in avoidance.

Attributional Styles

As suggested by Carver and Scheier (2012), the relationship between changes in perceived progress and changes in job search intensity depends upon individuals' interpretation of these changes in progress. Carver and Scheier (2012) further suggested that whether individuals increase effort to reduce discrepancies or disengage depends on their confidence about their success at reducing the discrepancies. Individuals who are confident about reaching a specific goal are more likely to persevere even when facing failure (Carver, Scheier, & Segerstrom, 2010). Thus, individuals, who are confident about their success at reducing discrepancies caused by decreased goal progress, are more likely to increase their intensity, compared to doubtful individuals. In this study, I theorize that the tendency that job seekers have in making attributions about changes in their progress can contribute to understanding whether and how job seekers either increase or decrease the intensity of their search. In the following paragraphs, I review the attributional style literature, focusing on how it has been applied in self-regulatory research, and more specifically how it has been examined in job search contexts.

Following earlier work by Heider (1958), Weiner (1985, 1986) suggested that individuals have beliefs about the causes of their successes and failures. These causal explanations are generated for events that individuals consider important (i.e., job search process). Stated differently, individuals want to understand the causes (e.g., effort, ability) of their outcomes in these events, so that they can be better prepared when facing similar events in the future by adjusting their behaviors. Interestingly, scholars have proposed that individuals tend to explain similar events in the same way (i.e., attributional styles) over time (Abramson et al., 1978; Russell, 1991). The most

researched attributional style is the optimistic attributional style (Mezulis et al., 2004; Seligman, 1991). Individuals with an optimistic style tend to make internal and stable attributions for favorable events and external and unstable attributions for unfavorable events. Optimistic individuals tend to believe that their success is caused by their ability or another personal attribute (i.e., internal and stable attribution) whereas they believe that their failure is caused by bad luck or another external and unstable reason. In contrast, individuals with a pessimistic style tend to make internal and stable attributions for unfavorable events and external and unstable explanations for favorable events.

Scheier et al. (1994, 2001) further suggested that pessimistic individuals, who believe that what caused them to experience decreased goal progress is something that will remain stable in the future and that is internal (e.g., lack of ability), are less likely to adjust their behaviors (i.e., increase their effort) than optimistic individuals who believe that the reason is unstable and external (e.g., bad luck). Analogously, pessimistic individuals who believe that the cause for their increased perceived goal progress is something that is unstable and external (e.g., good luck), are also less likely to adjust their behaviors (i.e., decrease their effort) than optimistic individuals who believe that the reason is stable and internal (e.g., ability).

There is some evidence supporting the moderating role that attributions have in the relationship between changes in perceived progress and changes in behaviors. For example, Thomas and Mathieu (1994) found that when individuals believed the causes for their goal achievement (i.e., success) were stable, the relationship between goal achievement and changes in self-efficacy beliefs was stronger (Thomas & Mathieu, 1994). Stated differently, individuals who believed that what caused them to succeed

(i.e., achieving their goals) is stable (e.g., ability) experienced greater increases in self-efficacy than when they attributed their success to an unstable reason (e.g., luck). These findings suggest that interpretations of changes in progress and success are likely to influence whether and how individuals adjust their behaviors and beliefs. In this study, I specifically examine whether individual differences in attributional styles moderate the relationship between changes in perceived progress and changes in job search intensity.

Attributional styles in job search. Although attributions have received a lot of attention in fields such as education and medicine (e.g., Roesch & Weiner, 2001), very little research has examined the role of causal attributions in job search. To the best of my knowledge, the only paper examining causal attributions in job search is Kulik and Rowland's paper (1989), in which they found that successful job seekers perceived a high impact of stable and internal factors on their search outcomes throughout the process.

As mentioned earlier, the attributional style literature provides a useful theoretical framework to be integrated with control theory in examining whether and how job seekers' changes in perceived progress influence them to either increase or decrease their job search intensity. Job seekers have different attributional styles which influence their interpretations of changes in their perceived progress. For example, if job seekers have an optimistic style, they are more likely to attribute decreased perceived progress to unstable and external causes (e.g., bad luck), whereas pessimistic job seekers are more likely to attribute this decreased progress to stable and internal reasons (e.g., lack of ability). Analogously, optimistic job seekers are more likely to attribute increased perceived progress to stable and internal causes (e.g., ability), whereas pessimistic job seekers are more likely to attribute this increased progress to unstable and external

reasons (e.g., good luck). As such, these tendencies (i.e., attributional styles) that job seekers have in making attributions about changes in their perceived progress will moderate the relationship between changes in perceived progress and intensity.

While control theory proposes that changes in perceived progress are negatively related to changes in intensity, the attributional style literature (Mezulis et al., 2004; Peterson et al., 1982) suggests that the extent of these changes in intensity will depend upon job seekers' individual differences in attributional styles. For example, optimistic job seekers tend to believe that the reason for their decreased progress is something that will change in the future and that is external (e.g., bad luck). They will thus increase their intensity to a greater extent than pessimistic job seekers who believe that there is nothing they can do about this decreased progress (i.e. stable and internal cause). Thus, when faced with decreased perceived progress, optimistic job seekers will try harder, while pessimistic job seekers will give up. Analogously, optimistic job seekers tend to believe that the reason for their increased progress is something that will remain stable in the future and that is internal (e.g., ability). They will thus decrease their intensity to a greater extent than pessimistic job seekers who believe that the reason for their success is pure luck (i.e., unstable and external cause). Thus, when faced with increased perceived progress, optimistic job seekers are confident in their future outcomes, while pessimistic job seekers are more doubtful and prefer to keep investing time and energy.

I theorize that when optimistic job seekers experience changes in their perceived progress, they will experience changes in job search intensity to a greater extent than pessimistic job seekers. Thus, I theorize that the negative relationship between changes

in perceived progress and changes in job search intensity will be stronger for optimistic, than for pessimistic, job seekers.

Hypothesis 13: Optimism will moderate the negative relationship between changes in perceived progress and changes in job search intensity, such that the relationship will be stronger for optimistic, than for pessimistic job seekers.

CHAPTER 3: METHOD AND ANALYSES

Sample and Procedure

The sample consisted of graduating students currently on the job market. I contacted various career offices at a large Midwestern university to recruit students who were actively seeking a full-time job. I collected the data longitudinally over a 3-month period, using online questionnaires. Participants were asked to complete an initial survey and then 8 weekly surveys during their job search. The initial questionnaire (see Appendix I) collected biographical and demographical information (gender, GPA, school, and months of work experience), which were used as control variables. The initial questionnaire also asked participants to report at what stage of the job search process they were. Finally, the initial questionnaire assessed the moderator variables: individual differences in optimism and approach and avoidance temperaments. In the weekly questionnaires (see Appendix II), I asked the participants to report their perceived job search progress, along with their job search intensity, and both activated and deactivated dimensions of affect (positive and negative).

About 1,200 graduating students from various schools across campus (e.g., Business School, Engineering School, Journalism School, etc.) were contacted to participate in this study. Of those 1,200 potential participants, 225 students completed the initial survey; 68 were dropped because they did not complete any weekly survey, resulting in a final sample of 157 participants and a response rate of about 13%. However, it is unlikely that all 1,200 potential participants were searching for a full-time position (e.g., some students already had a job offer; some were applying to graduate school). As such, the response rate of 13% provides a low estimate. The response rates

to the weekly surveys were good, ranging from a low of 59% (N = 92) in week 7 to a high of 87% percent (N = 137) in week 1, for an average response rate of 64% per weekly survey. Furthermore, 56 participants responded to all 8 weekly surveys, 41 to 5-7 surveys, and 60 to 1-4 surveys. Overall, the total number of responses (i.e., observations) was 808.

Thus, analyses are based on 157 participants (and 808 observations), of whom 53% are male, 51% are enrolled in a Business School, 29% in an Engineering School, 8% in a Journalism School, and the 12% remaining in various Schools (e.g., Law School, Arts and Sciences, etc.). The participants have an average age of 22, average GPA of 3.35, and average work experience of 9.4 months. Using Kidwell et al.'s (in press) job search stage measure, 63% of the job seekers were in the early stage of their search (i.e., recently started to approach the job search process), 26% in the middle stage (i.e., searching for a job for some time and will continue to do so), and 11% in the late stage (getting very close to finding a full-time job). Respondents who only completed the initial survey (68) were compared with those who also completed weekly surveys (157) on the variables measured on the initial survey and there were no differences in gender, GPA, school, stage of job search, months of work experience, optimism, or approach and avoidance temperaments.

Measures

Initial survey. ***Approach and avoidance temperaments.*** Participants' approach and avoidance temperaments were measured in the initial survey using the 12-item Approach-avoidance Temperament Questionnaire (ATQ) developed by Elliot and Thrash (2010). Respondents were instructed to "rate the extent to which you agree with the

following items" using a 5-point scale ranging from 1 = strongly disagree to 5 = strongly agree. Sample items include: "by nature, I am a very nervous person" for avoidance temperament and "thinking about the things I want really energizes me" for approach temperament. The complete list of items can be found in Appendix I (items 7 to 18). The coefficient alpha was .74 for approach and .78 for avoidance.

Optimism. Participants' level of optimism was measured in the initial survey using the 6-item Revised Life Orientation Test (RLOT) (Scheier, Carver, & Bridges, 1994). Respondents were instructed to "rate the extent to which you agree with the following items" using a 5-point scale ranging from 1 = strongly disagree to 5 = strongly agree. Sample items include: "in uncertain times, I usually expect the best" and "if something can go wrong for me, it will." The complete list of items can be found in Appendix I (items 1 to 6). The coefficient alpha was .64 for optimism.

Control variables. Participants were asked to indicate in the initial survey: their gender, GPA, school, and months of previous job experience. The initial survey also asked respondents to report at what stage of their job search they were at the beginning of the study, using a measure developed by Kidwell-Lopez et al. (in press). Specifically, participants were instructed to report whether they were: (a) in the early stage of their search (i.e., recently started to approach the job search process), (b) in the middle stage (i.e., searching for a job for some time and will continue to do so), or (c) in the late stage (getting very close to finding a full-time job). All these variables served as control variables.

Weekly surveys. ***Perceived job search progress.*** Perceived job search progress was measured using six items developed by Wanberg et al. (2010) specifically for the job

search process. Participants were instructed to "indicate the extent to which you agree with the following statements in the last week" using 5-point scale ranging from 1 = strongly disagree to 5 = strongly agree. Items include: "I had a productive week in relation to my job search"; "I made good progress on my job search this last week"; "I moved forward with my job search this last week"; "Things did not go well with my job search this last week"; "I got a lot less done with my job search than I had hoped"; and "I hardly made any progress in looking for a job this last week." The latter three items were reverse scored for the analyses. The complete list of items can be found in Appendix II (items 1 to 6). The mean coefficient alpha (across days) was .89 for perceived progress.

Affect. Affect was assessed in the weekly surveys using 16 items adapted from both Russell (2003) and Seo et al. (2008) to capture both activated and deactivated dimensions of positive and negative affect. Positive affect included the following items: "enthusiastic", "energetic", "excited" and "cheerful" for the activated emotions, and "relaxed", "contented", "relieved" and "calm" for the deactivated emotions. Negative affect included the following items: "nervous", "anxious, "distressed", and "angry" for the activated emotions, and "sad", "gloomy", "depressed", and "miserable" for the deactivated emotions. The items can also be found in Appendix II (items 7 to 22). Respondents were instructed "as you think about your job search, rate the extent to which you have felt this way in the last week" using a 5-point scale ranging from 1 = very slightly or not at all to 5 = very frequently. The mean coefficient alpha (across days) was .94 for activated positive affect, .77 for activated negative affect, .86 for deactivated positive affect, and .90 for deactivated negative affect.

Job search intensity. Job search intensity was assessed weekly using a 5-item shortened version of Saks and Ashforth's 14-item scale (2002). Respondents were instructed to "indicate the extent to which you have used this tactic to find out about job openings in the last week" using a 5-point scale ranging from 1 = very slightly or not at all to 5 = very frequently. Sample items include: "Used the internet to locate job openings" and "Prepared/revised your resume". The complete list of items can be found in Appendix II (items 23 to 27). The mean coefficient alpha (across days) was .81 for job search intensity.

Analyses

Confirmatory factor analyses. Before testing the hypotheses, confirmatory factor analyses (CFAs) were conducted to examine whether the constructs assessed in both the initial and weekly surveys were distinct. First, I ran CFAs to examine whether the constructs collected in the initial survey had a good fit to the data. Specifically, I tested and compared three different models: a three-factor model including optimism, approach and avoidance temperaments as separate constructs; a two-factor model with both approach and avoidance items loading onto one construct; and a one-factor model with all the items loading onto one construct. For each of the models, the constructs included each of the six items from optimism, approach temperament, and avoidance temperament. The fit statistics provided adequate fit for the three-factor model, $\chi 2(132, N = 157) = 231.49$, $p < .01$, $\chi^2/df = 1.75$, IFI = .85, CFI = .85, RMSEA = .070, with all factor loadings larger than .40 and significant. This three-factor model fit the data significantly better than the two-factor model, χ^2_{diff} (2, $N = 157$) = 190.80, $p < .01$, and than the one-factor model, χ^2_{diff} (3, $N = 157$) = 220.01, $p < .01$.

Next, I conducted eight CFA models for each weekly survey, to examine whether the weekly constructs also had a good fit to the data. Specifically, I compared a six-factor model of perceived progress, the four dimensions of affect (i.e., activated and deactivated positive and negative affect), and job search intensity loading onto separate constructs with several alternatives, including a four-factor model with indicators for positive and negative loading onto one construct; a four-factor model with activated and deactivated affect loading onto one construct, and a one-factor model with all the items measured in the weekly surveys loading onto the same construct. For each of the models, the constructs included the sixteen items from affect, the six items from perceived progress, and the five items from job search intensity. Overall, the fit statistics of the eight CFAs provided adequate fit for the six-factor model, with all factor loadings larger than .40 and significant. Specifically the χ^2/df ranged from 1.89 to 2.04, IFI from .85 to .87, CFI from .85 to .86, and RMSEA from .08 to .10. Furthermore, for each weekly survey, the six-factor model fit the data significant better than either four-factor model, and than the one-factor model.

Hierarchical linear analyses. I tested the hypotheses using hierarchical linear modeling (HLM 6.0; Raudenbusch, Bryk, & Congdon, 2004), which can examine variables at multiple levels of analysis. Various scholars suggested that HLM is more robust than ordinary least squares (OLS) because HLM produces more accurate error terms and Type I error rates (Raudenbush & Bryk, 2002; Tabachnick & Fidell, 2007). Furthermore, by using HLM, the influence of within-subjects changes in perceived progress on within-subjects changes in affect and job search intensity can be specifically examined. In this study, the level 1 variables (perceived progress, activated positive

affect, activated negative affect, deactivated positive affect, deactivated negative affect, and job search intensity) were within-individual, and the level 2 variables (gender, GPA, school, stage, months of work experience, optimism, and approach and avoidance temperaments) were between-individual.

In every HLM model, I centered the level 1 predictor variables around the corresponding individual means using group mean centering (Raudenbush & Bryk, 2002; Singer & Willett, 2003). Because participants have different average levels of progress, affect, and intensity, centering the level 1 predictor variables around their individual means allows the level 1 estimates to represent only within-subjects effects. Indeed, these centered level 1 estimates correspond to within-subjects changes from the mean scores on a weekly basis, controlling for between-subjects variance in the individual means. I also centered all level 2 predictors (i.e., control variables and moderating variables) on the sample mean of the respective variables (grand mean centering). Grand mean centering level-2 variables improves the interpretation of the intercept values and reduces multicollinearity (Raudenbush & Bryk, 2002; Singer & Willett, 2003). In Chapter 4, while presenting the results for each hypothesis, I describe the analyses used to test each of the hypotheses.

Consistent with prior research, I first conducted intercept-only (null) models to examine the within- and between-subjects variance in the repeated-measures variables. Intercept-only models are similar to one-way analysis of variance and are conducted to confirm that variability in the within-subjects (level 1) variables is significantly different than zero, and thus that HLM is appropriate. Specifically, for job search intensity, 56 percent of the total variance was within-subjects (44 percent between); activated positive

affect, 45 % within; activated negative affect, 47 % within; deactivated positive affect, 46 % within; deactivated negative affect, 43 % within; and perceived progress, 55 % within. Although researchers do not state a minimum within-subjects variance that justifies the use of HLM, these results are consistent with prior research in indicating sufficient within-subjects variance in the repeated-measures variables to support the use of HLM to analyze this data (e.g., Raudenbush & Bryk, 2002; Wanberg et al., 2010).

CHAPTER 4: RESULTS

The means, standard deviations, and correlations are presented in Table 1. Given the hierarchical nature of the data, both within- and between-subjects correlations are presented. The between-individual correlations were computed by aggregating the repeated measures scores of individuals (n = 157) and are presented above the diagonal. The correlations of the within-subject measures, obtained at the same time (n = 808), are presented below the diagonal.

The within-subjects correlations in Table 1 indicated that job search intensity was positively related to perceived progress ($\underline{r}$ = .37, p < .05), to activated and deactivated positive affect (respectively $\underline{r}$ = .34 and $\underline{r}$ = .23, p < .05) and to activated and deactivated negative affect (respectively $\underline{r}$ = .23 and $\underline{r}$ = .10, p < .05). Of additional interest, the correlations showed that perceived progress was positively correlated with activated and deactivated positive affect (respectively $\underline{r}$ = .64 and $\underline{r}$ = .47, p < .05). Furthermore, perceived progress was negatively related to activated and deactivated negative affect (respectively $\underline{r}$ = -.08 and $\underline{r}$ = -.31, p < .05). Although such correlations do not provide a formal test of the hypotheses they do provide information about some of the hypothesized relationships. Indeed, consistent with hypotheses 2 and 3, perceived progress was positively related to activated and deactivated positive affect, and negatively to activated and deactivated negative affect. Consistent with hypothesis 5, activated negative affect was positively correlated with intensity. Some other correlations indicate results in the opposite direction than hypothesized. Indeed, perceived progress was positively correlated with intensity, which runs counter to hypotheses 1. Deactivated positive affect was positively related to intensity, which runs counter to hypothesis 4.

Table 1

Descriptive Statistics and Correlations for Observed Variables

Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Level 1 variables (weekly surveys)																
1. Job Search Intensity	3.01	0.97	-	.31*	.23*	.26*	.16*	.34*	.07	-.13	.17*	.06	-.10	-.10	.07	-.05
2. Activated Positive Affect	2.88	1.15	.34*	-	.76*	.09	-.07	.68*	.34*	-.14	.23*	.17*	-.10	.05	-.06	.11
3. Deactivated Positive Affect	2.51	0.96	.23*	.72*	-	-.01	.07	.48*	.24*	-.18*	.19*	.17*	.04	.01	-.04	.10
4. Activated Negative Affect	2.21	0.84	.23*	.08*	-.08*	-	.74*	-.15	-.09	.41*	-.25*	-.14	-.03	.05	.04	-.01
5. Deactivated Negative Affect	1.65	0.84	.10*	-.11*	.00	.67*	-	-.35*	-.19*	.32*	-.21*	-.14	.15	.03	.02	-.10
6. Perceived Progress	3.24	0.92	.37*	.64*	.47*	-.08*	-.31*	-	.21*	-.26*	.24*	.32*	-.17*	.10	-.05	.07
Level 2 variables (initial survey)																
7. Approach Temperament	4.04	0.50							-	.03	.31*	.03	-.20*	.14	.09	.04
8. Avoidance Temperament	2.86	0.74								-	-.47*	-.15	.01	.05	.13	-.19*
9. Optimism	3.64	0.53									-	.13	-.04	.12	-.13	.14
10. Stage	1.48	0.69										-	.06	.05	-.07	.11
11. Gender (1 = female; 2 = male)	1.53	0.50											-	-.13	-.15	.13
12. GPA	3.35	0.41												-	.01	.06
13. School	1.87	1.16													-	-.05
14. Months of Work Experience	9.44	27.81														-

* significant at $p < .05$

Note. Correlations above the diagonal are based on average scores for each person across time periods. (n = 157). Correlations below the diagonal represent within-persons correlations (N = 808).

The between-subjects correlations in Table 1 are also interesting as they inform about the relationships of the level 1 variables with the level 2 moderator variables. Specifically, correlations indicated that approach temperament was positively related to perceived progress ($\underline{r}$ = .21, p < .05), to both activated and deactivated positive affect (respectively $\underline{r}$ = .34 and $\underline{r}$ = .24, p < .05), and negatively related to deactivated negative affect ($\underline{r}$ = -.19, p < .05). Avoidance temperament was negatively related to perceived progress ($\underline{r}$ = -.26, p < .05), to deactivated positive affect ($\underline{r}$ = -.18, p < .05), and positively related to both activated and deactivated negative affect (respectively $\underline{r}$ = .41 and $\underline{r}$ = .32, p < .05). Finally, optimism was positively related to job search intensity ($\underline{r}$ = .17, p < .05), perceived progress ($\underline{r}$ = .24, p < .05), to both activated and deactivated positive affect (respectively $\underline{r}$ = .23 and $\underline{r}$ = .19, p < .05), and negatively related to both activated and deactivated negative affect (respectively $\underline{r}$ = -.25 and $\underline{r}$ = -.21, p < .05). These correlations suggest that job seekers high in approach temperament experienced, on average, higher levels of activated positive affect and lower levels of deactivated negative affect, which is consistent with the logic behind hypotheses 8 and 9. Similarly, job seekers high in avoidance temperament experienced, on average, higher levels of activated negative affect and lower levels of deactivated positive affect, which is also consistent with the logic behind hypotheses 11 and 12. Interestingly, only optimism was (positively) correlated with job search intensity, which is consistent with the logic behind hypothesis 13. However, neither approach nor avoidance temperament was related to job search intensity.

For all the hypotheses tested, I controlled for individual's gender, GPA, months of experience, and job seekers' stage of their search at the beginning of the study. All these

variables are level 2, between-individual variables, which were collected in the initial survey. As noted above, by centering the level 1 variables, the analyses specifically examined the within-subjects influence of changes in perceived progress on changes in affect and job search intensity. Thus, the HLM analyses examined whether intra-individual changes in a variable were related to intra-individual changes in another variable, while controlling for the individual's average score across weeks. As noted by Wanberg et al. (2010, 2012), because perceived progress, affect, and job search intensity change across time periods, theoretically, the most important variable for predicting affect and job search intensity is the perceived progressed experienced during that week. Therefore, consistent with prior research, I performed analyses that examine whether and how changes in perceived progress were related to changes in affect and job search intensity measured at the same time (Wanberg et al., 2010, 2012).

Relationships between Perceived Progress, Affect, and Job Search Intensity

Hypotheses 1 through 3 proposed a positive relationship of changes in perceived progress with changes in job search intensity (hypothesis 1) and changes in positive affect (hypothesis 2), and a negative relationship with changes in negative affect (hypotheses 3). To test these hypotheses, Model 1 in Table 2 included perceived progress as the independent variable and job search intensity as the dependent variable (hypothesis 1), while Models 2 through 5 in Table 2 included perceived progress as the independent variable and both activated and deactivated positive and negative affect as dependent variables (hypotheses 2 and 3). Specifically, as described earlier, control theory suggests that increases in perceived progress signal job seekers that they are getting closer to finding a job, and that they can thus decrease their intensity. As such, hypothesis 1

proposed that changes in perceived progress will be negatively related to changes in job search intensity. As shown in Table 2 (Model 1), this hypothesis was not supported. In fact, changes in perceived progress were positively related to changes in job search intensity ($\beta = .40$, $p < .05$). This result runs counter to both control theory predictions and prior research (Wanberg et al., 2010). Interestingly, however, this finding is consistent with social cognitive theory (Bandura, 1986, 1991), which suggests that increased perceived progress reinforce one's confidence, and is likely to stimulate individuals to spend more time and energy toward reaching their goal. Implications of this finding will be further discussed in Chapter 5.

Table 2
Hierarchical Linear Modeling Coefficients for the Relationships between Progress, Affect, and Job Search Intensity

Independent and Control Variables	**Dependent Variable**				
	Model 1: JSI	Model 2: Activated PA	Model 3: Deactivated PA	Model 4: Activated NA	Model 5: Deactivated NA
Intercept	3.03*	2.92*	2.56*	2.29*	1.73*
Control variables					
Stage	.03	.23*	.19*	-.15*	-.16*
Gender (1 = female; 2 = male)	-.14	-.25	.01	-.05	.25*
GPA	.09	.06	.01	.09	.10
School	-.04	-.06	-.03	.00	.01
Months of Work Experience	.08	.08	.08	.08	.08
Weekly measure					
Perceived Progress	.40*	.60*	.32*	.00	-.20*
-2 log-likelihood	1996.37	1844.57	1742.56	1654.88	1581.28

Note. * significant at p < .05 for a one-tailed test.

Hypothesis 2 proposed that changes in perceived progress will be positively related to changes in positive affect. As shown in Table 2 (Models 2 and 3), this hypothesis was fully supported as changes in perceived progress were positively related to changes in both activated positive affect ($\beta = .60$, $p < .05$) and deactivated positive affect ($\beta = .32$, $p < .05$). In sum, increased perceived progress was related to increased positive affect. When job seekers perceived increased progress they also experienced both increased excitement (i.e., an activated positive emotion) and relief (i.e., a deactivated positive emotion).

Hypothesis 3 proposed that changes in perceived progress will be negatively related to negative affect. As shown in Table 2 (Models 4 and 5), this hypothesis was partially supported. Indeed, changes in perceived progress were related negatively to changes in deactivated negative affect ($\beta = -.20$, $p < .05$), but not to changes in activated negative affect ($\beta = .00$, n.s.). In sum, increased perceived progress was related to decreased sadness (i.e., a deactivated negative emotion), but not anxiety.

To summarize, the results from Table 2 indicate that increased perceived progress has an overall positive impact on the job search. Specifically, changes in perceived progress were positively related to changes in job search intensity, suggesting that increased perceived progress acts as a stimulator for job seekers to spend more time and energy looking for a job. Furthermore, increased perceived progress was related to both increased excitement and relief, and to decreased sadness. After finding that changes in affect are influenced by changes in perceived progress, I now examine the effects of both activated and deactivated positive and negative affect on job search intensity, as summarized in Table 3.

As described earlier, affect-as-information theory suggests that changes in affect, which act as a signal of job seekers' progress toward finding employment, are related to job search intensity. Thus, I hypothesized a negative relationship between changes in deactivated positive affect and job search intensity (hypothesis 4) and a positive relationship between changes in activated negative affect and job search intensity (hypothesis 5). As shown in Table 3 (Model 1), hypothesis 4 was not supported as changes in deactivated positive affect were not related to changes in job search job search intensity ($\beta = -.04$, n.s.).

Table 3
Hierarchical Linear Modeling Coefficients for the Relationships of Progress and Affect with Job Search Intensity

Independent and Control Variables	**Dependent Variable**		
	Model 1: JSI	Model 2: JSI	Model 3: JSI
Intercept	3.02*	3.03*	3.03*
Control variables			
Stage	.03	.03	.03
Gender (1 = female; 2 = male)	-.14	-.14	-.14
GPA	.09	.09	.09
School	-.04	-.04	-.04
Months of Work Experience	.08	.08	.08
Weekly measure			
Perceived Progress	--	--	.36*
Activated PA	.34*	--	.10*
Deactivated PA	-.05	--	-.04
Activated NA	--	.38*	.23*
Deactivated NA	--	-.19*	-.04
-2 log-likelihood	2038.6	2063.77	1978.38

Note. * significant at $p < .05$ for a one-tailed test.

Hypothesis 5, which proposed that changes in activated negative affect will be positively related to job search intensity, was supported. Model 2 in Table 3 showed that changes in activated negative affect were positively related to changes in job search intensity ($\beta = .38$, $p < .05$). Thus, individuals who experienced increased anxiety increased their job search intensity. This result is supportive of affect-as-information theory, which suggests that increased activated negative affect (i.e., anxiety) is a signal that not enough progress is being made and that job seekers should increase the level of their job search intensity.

This study extended prior research, by examining the relationships between changes in both deactivated positive affect and activated negative affect and changes in job search intensity. However, as affect-as-information does not predict relationships between changes in activated positive affect and deactivated negative affect and changes in job search intensity, I did not propose hypotheses for those variables, although I did include them in the analyses. As shown in Model 1 in Table 3, changes in activated

positive affect were positively related to changes in job search intensity ($\beta = .34$, $p < .05$). This finding is consistent with both broaden-and-build theory and prior research (e.g., Turban, Stevens, & Lee, 2009), which has found that positive emotions have a positive influence on job search intensity and outcomes. Additionally, Model 2 in Table 3 showed that changes in deactivated negative affect were negatively related to changes in job search intensity ($\beta = -.19$, $p < .05$). This finding is consistent with prior research (e.g., Kaplan, Bradley, Luchman, & Haynes, 2009), which has found that deactivated negative emotions, such as depression, have a detrimental influence on attitudes, goal accomplishment, and work behaviors.

Finally, hypothesis 6 proposed that changes in (a) activated negative affect and (b) deactivated positive affect will partially mediate the relationship between changes in perceived progress and changes in job search intensity. Although the result for hypothesis 1 suggested a (significant) positive, rather than negative, relationship between changes in perceived progress and job search intensity, I, examined the mediation hypotheses, albeit in the opposite direction. Specifically, to test these hypotheses, the HLM model included job search intensity as the dependent variable, perceived progress as the independent variable, and both activated and deactivated affect as mediator variables at level 1. Model 4 in Table 3 showed that, when changes in (a) activated negative affect, and (b) deactivated positive affect are included in the model, the coefficient for the relationship between changes in perceived progress and changes in job search intensity remained significant, which ruled out full mediation (Baron & Kenny, 1986). As such, I turned to the product of coefficients approach (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002) to determine whether partial mediation

could be supported. However, for hypotheses 6a, the coefficient of the relationship between changes in perceived progress and changes in activated negative was not significant. For hypothesis 6b, the coefficient of the relationship between changes in deactivated positive affect and changes in job search intensity was not significant. Partial mediation was thus ruled out as well. In sum, Hypothesis 6 was not supported, as neither activated negative affect nor deactivated positive affect partially mediated the relationship between changes in perceived progress and changes in job search intensity.

To summarize, it is important to note that perceived progress was positively related to job search intensity, which runs counter to hypothesis 1 and to prior research. Interestingly, this positive relationship between progress and intensity is consistent with social cognitive theory, which I will discuss in Chapter 5. Furthermore, the results for the relationships between changes in affect and job search intensity were somewhat consistent with affect-as-information theory, although they suggested more complex relationships than theorized. For example, although greater anxiety (i.e., an activated negative emotion) was found to lead to more intensity, as predicted by affect-as-information theory, I also found that greater sadness (i.e., a deactivated negative emotion) was negatively related to job search intensity. Implications of such results, as well as directions for future research, will be discussed in Chapter 5.

Moderation Effects of Approach and Avoidance Temperaments

Hypothesis 7 through 12 proposed that approach and avoidance temperaments will moderate the relationships between changes in perceived progress and job search intensity (hypotheses 7 and 10), and between changes in perceived progress and changes in affect (hypotheses 8, 9, 11, and 12). To test hypotheses 7 and 10, Model 1 in Table 4

included job search intensity as the dependent variable, perceived progress as the independent variable, and as moderator variables the interaction terms between perceived progress and approach temperament (hypothesis 7) and between perceived progress and avoidance temperament (hypothesis 10). To test hypotheses 8, 9, 11, and 12, Models 2 through 5 in Table 4 included both activated and deactivated positive and negative affect as dependent variables, perceived progress as the independent variable, and as moderator variables the interaction terms between perceived progress and approach temperament (hypotheses 8 and 9), and between perceived progress and avoidance temperament (hypotheses 11 and 12).

Hypothesis 7 proposed that approach temperament will moderate the negative relationship between changes in perceived progress and job search intensity such that the relationship will be weaker for job seekers high in approach, than for those low in approach. Model 1 in Table 4 showed that approach temperament did not moderate the relationship between changes in perceived progress and changes in job search intensity (β = -.04, n.s.). Thus, hypothesis 7 was not supported.

Table 4

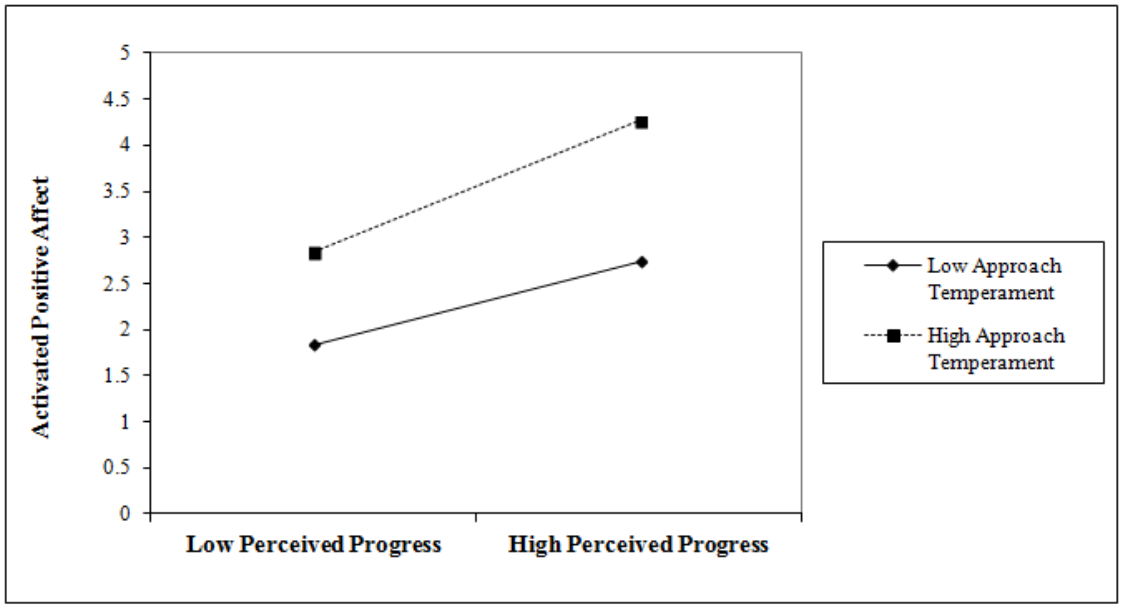
Hierarchical Linear Modeling Coefficients for the Role of Approach and Avoidance Temperaments in Moderating the Relationships of Progress with Affect and with Job Search Intensity

Independent and Control Variables	**Dependent Variable**				
	Model 1: JSI	Model 2: Activated PA	Model 3: Deactivated PA	Model 4: Activated NA	Model 5: Deactivated NA
Intercept	3.02*	2.92*	2.55*	2.29*	1.73*
Control variables					
Stage	.01	.20*	.16*	-.10	-.12
Gender	-.11	-.12	.11	-.13	.17
GPA	.11	.00	-.01	.04	.08
School	-.03	-.07	-.02	-.03	-.01
Months of Work Experience	.06	.08	.08	.08	.08
Initial measures					
Approach	.07	.63*	.40*	-.18*	-.25*
Avoidance	-.15*	-.14	-.19*	.40*	.32*
Weekly measure					
Perceived Progress	.41*	.58*	.31*	-.01	-.22*
Interactions					
Approach x Perceived Progress (slope)	-.04	.13*	.08	.06	.11*
Avoidance x Perceived Progress (slope)	-.15*	.10*	-.02	-.01	-.08*
-2 log-likelihood	1997.76	1831.46	1741.14	1638.18	1568.97

Note. * significant at $p < .05$ for a one-tailed test.

Hypothesis 8 proposed that approach temperament will moderate the positive relationship between changes in perceived progress and activated positive affect, such that the relationship will be stronger for job seekers high in approach, than for those low in approach. Model 2 in Table 4 indicated that approach temperament moderated the relationship between changes in perceived progress and activated positive affect ($\beta = .13$, $p < .05$). As depicted in Figure 1, increases in perceived progress were more strongly related to increases in activated positive affect for job seekers who were high in approach. Simple slopes analyses (Preacher, Curran, & Bauer, 2006) further indicated that the relationship of changes in perceived progress with changes in activated positive affect was .48 for individuals high in approach temperament and .31 for individuals low in approach temperament. Thus, hypothesis 8 was supported.

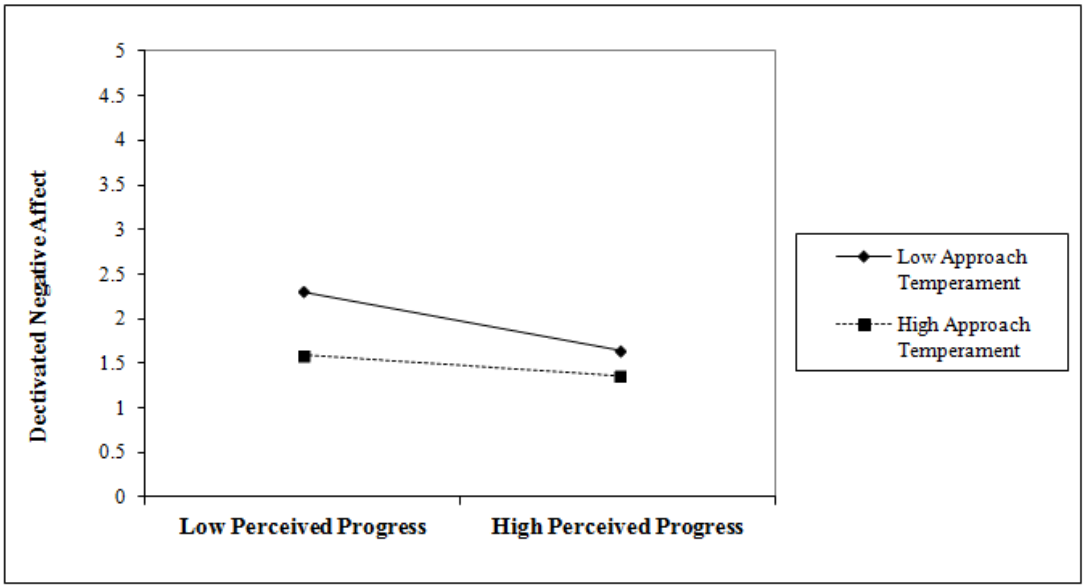
Figure 1. Relationship between Perceived Progress and Activated PA Moderated by Approach Temperament



Hypothesis 9 proposed that approach temperament will moderate the negative relationship between changes in perceived progress and deactivated negative affect, such that the relationship will be stronger for job seekers high in approach, than for those low in approach. As shown in Table 4 (Model 5), the interaction term between approach temperament and changes in perceived progress was significant ($\beta = .11$, $p < .05$). However, the moderation was in the opposite direction than hypothesized. As illustrated in Figure 2, the pattern showed that increases in perceived progress were more strongly related to decreases in sadness (i.e., deactivated negative affect) for job seekers who were low in approach, compared to those who were high in approach. Thus, job seekers who were low in approach experienced greater sadness when they had low perceived progress. In contrast, for job seekers who were high in approach their level of sadness was influenced to a lesser extent by their perceived progress. Simple slopes analyses further indicated that the relationship of changes in perceived progress with changes in

deactivated positive affect was -.13 for individuals high in approach temperament and -.38 for individuals low in approach temperament.

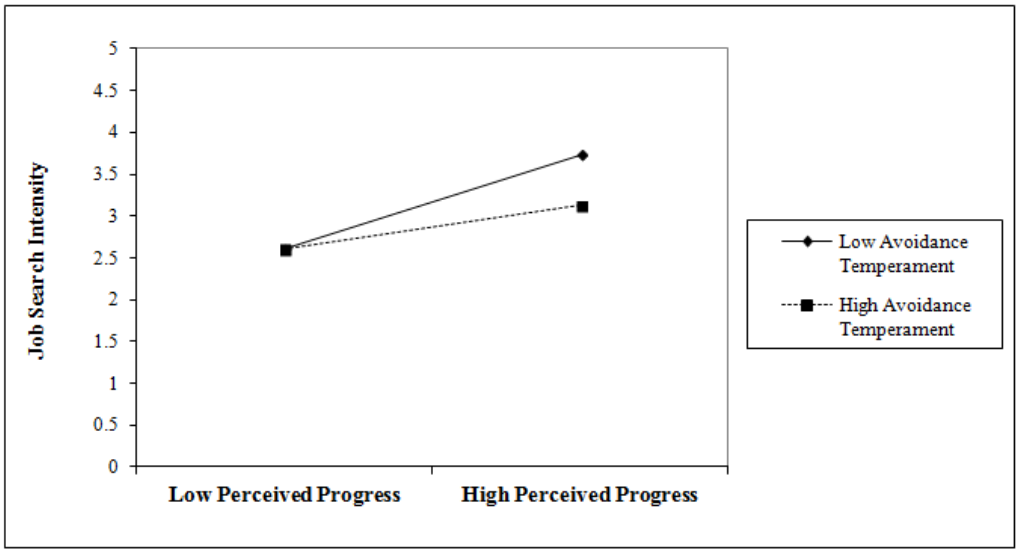
Figure 2. Relationship between Perceived Progress and Dectivated NA Moderated by Approach Temperament



Hypothesis 10 proposed that avoidance temperament will moderate the negative relationship between changes in perceived progress and job search intensity such that the relationship will be stronger for job seekers high in avoidance, than for those low in avoidance. As shown in Table 4 (Model 1), the interaction term between avoidance temperament and changes in perceived progress was significant ($\beta = -.15$, $p < .05$). However, results for hypothesis 1 showed that changes in perceived progress were positively, rather than negatively, related to changes in job search intensity. As such, the moderation was in the opposite direction than hypothesized, as avoidance temperament moderated the *positive* relationship between changes in progress and intensity. As depicted in Figure 3, the pattern showed that increases in perceived progress were more strongly related to increases in job search intensity for job seekers who were low in avoidance, compared to those who were high in avoidance. Thus, job seekers low and

high in avoidance exerted similar intensity when they experienced low progress. In contrast, when they experienced high progress, job seekers who were low in avoidance employed greater intensity. Simple slopes analyses further indicated that the relationship of changes in perceived progress with changes in job search intensity was .17 for individuals high in avoidance temperament and .37 for individuals low in avoidance.

Figure 3. Relationship between Perceived Progress and Job Search Intensity Moderated by Avoidance Temperament



Hypothesis 11 proposed that avoidance temperament will moderate the negative relationship between changes in perceived progress and activated negative affect, such that the relationship will be stronger for job seekers high in avoidance, than for those low in avoidance. Model 4 in Table 4 indicated that avoidance temperament did not moderate the relationship between changes in perceived progress and activated negative affect (β = -.01, n.s.). Thus, hypothesis 11 was not supported.

Hypothesis 12 proposed that avoidance temperament will moderate the positive relationship between changes in perceived progress and deactivated positive affect, such that the relationship will be stronger for job seekers high in avoidance. Model 3 in Table 4 showed that avoidance temperament did not moderate the relationship between changes

in perceived progress and deactivated positive affect (β = -.02, n.s.). Thus, hypothesis 12 was not supported.

Although I did not theorize a formal hypothesis for the moderating role of avoidance temperament on the positive relationship between changes in perceived progress and activated positive affect, Model 2 in Table 4 showed that avoidance temperament moderated the positive relationship between changes in perceived progress and activated positive affect (β = .10, $p < .05$). The positive relationship was stronger for job seekers high in avoidance, compared to those low in avoidance. As such, increases in perceived progress were more strongly related to increases in excitement (i.e., an activated positive emotion) for job seekers who were high in avoidance, compared to those who were low in avoidance. Thus, job seekers who were high in avoidance experienced less excitement when they had low perceived progress, compared to when they had high progress. In contrast, for job seekers who were low in avoidance their level of excitement was influenced to a lesser extent by their perceived progress.

Finally, Model 5 in Table 4 also indicated that avoidance temperament moderated the negative relationship of changes in perceived progress with changes in deactivated negative affect (β = -.08, $p < .05$). The negative relationship was stronger for job seekers high in avoidance temperament than for those low in avoidance. Job seekers, who are high in avoidance temperament, experienced stronger decreases in sadness (i.e., a deactivated negative emotion) following increases in their perceived progress, compared to those low in avoidance. Thus, job seekers who were high in avoidance experienced more sadness when they had low perceived progress, compared to when they had high

progress. In contrast, for job seekers who were low in avoidance their level of sadness was influenced to a lesser extent by their perceived progress.

To summarize, results suggest that both approach and avoidance temperaments play an important role in moderating the relationships of changes in perceived progress with changes in affect and changes in job search intensity, although the moderation effects appear to be more complex than hypothesized. Specifically, findings indicated that both approach and avoidance temperament moderated the positive relationship between changes in perceived progress and activated positive affect. Both approach and avoidance temperament also moderated the negative relationship between changes in perceived progress and deactivated negative affect. However, both approach and avoidance temperaments did not moderate the relationships between changes in perceived progress and either changes in activated negative affect or deactivated positive affect. Finally, only avoidance temperament moderated the *positive* relationship between changes in perceived progress and job search intensity, such that job seekers who were low in avoidance changed their intensity to a greater extent than those who are high in avoidance, following changes in their perceived progress. Implications of such findings, as well as directions for future research, will be discussed in Chapter 5.

Moderation Effects of Optimism

Hypothesis 13 proposed that optimism will moderate the negative relationship between changes in perceived progress and changes in job search intensity, such that the relationship will be stronger for optimistic, than for pessimistic job seekers. To test this hypothesis, the HLM model included job search intensity as the dependent variable, perceived progress as the independent variable at level 1, and the interaction term

between perceived progress (level 1 variable) and optimism (level 2 variable) as the moderator variable. As shown in Table 5 (Model 1), optimism did not moderate the relationship between changes in perceived progress and changes in job search intensity (β = .05, n.s.). As such, hypothesis 13 was not supported.

Table 5
Hierarchical Linear Modeling Coefficients for the Role of Optimism in Moderating the Relationship between Progress and Job Search Intensity

Independent and Control Variables	**Dependent Variable**
	Model 1: JSI
Intercept	3.03*
Control variables	
Stage	.02
Gender	-.13
GPA	.07
School	-.02
Months of Work Experience	.07
Initial measures	
Optimism	.18
Weekly measure	
Perceived Progress	.40*
Interactions	
Optimism x Perceived Progress (slope)	.05
-2 log-likelihood	1999.25

Note. * significant at $p < .05$ for a one-tailed test.

To summarize, results from both the main and moderation effects suggest more complex relationships between changes in perceived progress, affect, and job search intensity. Table 6 contains a summary of all the hypotheses, whether or not they were supported, and when they were in the opposite direction than hypothesized. A detailed summary of the findings, including contributions, implications, and directions for future research, will be discussed in Chapter 5.

Table 6 – Summary of Findings

Summary of Findings

Hypotheses for Relationships Among Progress, Affect, and Job Search Intensity		
H1	Changes in perceived progress will be negatively related to changes in job search intensity.	Not supported - Opposite relationship found
H2	Changes in perceived progress will be positively related to changes in positive affect.	Supported
H3	Changes in perceived progress will be negatively related to changes in negative affect.	Partially supported
H4	Changes in deactivated positive affect will be negatively related to changes in job search intensity.	Not supported
H5	Changes in activated negative affect will be positively related to changes in job search intensity.	Supported
H6a	Changes in activated negative affect will partially mediate the relationship between changes in perceived progress and changes in job search intensity.	Not supported
H6b	Changes in deactivated positive affect will partially mediate the relationship between changes in perceived progress and changes in job search intensity.	Not supported
Hypotheses for Relationships Moderated by Approach and Avoidance Temperaments		
H7	Approach temperament will moderate the negative relationship between changes in perceived progress and in job search intensity such that the relationship will be weaker for job seekers high in approach, than for those low in approach.	Not supported
H8	Approach temperament will moderate the positive relationship between changes in perceived progress and in activated positive affect, such that the relationship will be stronger for job seekers high in approach, than for those low in approach.	Supported
H9	Approach temperament will moderate the negative relationship between changes in perceived progress and in deactivated negative affect, such that the relationship will be stronger for job seekers high in approach, than for those low in approach.	Not supported - Opposite moderation found
H10	Avoidance temperament will moderate the negative relationship between changes in perceived progress and in job search intensity such that the relationship will be stronger for job seekers high in avoidance, than for those low in avoidance.	Not supported - Opposite moderation found
H11	Avoidance temperament will moderate the negative relationship between changes in perceived progress and activated negative affect, such that the relationship will be stronger for job seekers high in avoidance, than for those low in avoidance.	Not supported
H12	Avoidance temperament will moderate the positive relationship between changes in perceived progress and in deactivated positive affect, such that the relationship will be stronger for job seekers high in avoidance, than for those low in avoidance.	Not supported
Hypothesis for Relationships Moderated by Optimism		
H13	Attributional styles will moderate the negative relationship between changes in perceived progress and changes in job search intensity, such that the relationship will be stronger for optimistic, than for pessimistic job seekers.	Not supported

CHAPTER 5: DISCUSSION

Overview of Study Goals

The purpose of this study was to better understand whether and how job seekers regulate their affect and behaviors during their search for employment. Prior research has examined the role of perceived progress on affect and job search effort and intensity. Specifically, Wanberg et al. (2010) drew upon control theory, which suggests that job seekers evaluate their progress throughout the job search, and that these perceptions of progress influence their affect and intensity (Carver & Scheier, 1981, 1982). Control theory further proposes that when job seekers perceive that they are making good progress, they are likely to decrease their intensity, while also feeling more positive emotions and less negative emotions. Wanberg et al.'s (2010) results were consistent with control theory, as they found that perceived progress was positively related to positive affect and negatively related to negative affect and to subsequent effort. In this study, I also drew upon control theory to further examine whether changes in perceived progress were negatively related to changes in job search intensity and negative affect, and positively related to changes in positive affect. While the theoretical framework is similar, the methodology differed as I collected data weekly, whereas Wanberg et al. (2010) collected data daily.

Prior research has also examined the role of affect on job search effort and intensity, providing mixed evidence (e.g., Song et al., 2009; Wanberg et al., 2010). For example, both Song et al. (2009) and Wanberg et al. (2010) used daily diary studies to examine the role of increased negative affect on job search effort. Song et al. (2009) found that negative affect was positively related to subsequent job search effort, whereas

Wanberg et al. (2010) found that negative affect was not related to subsequent effort. Furthermore, Wanberg et al. (2010) found that positive affect was negatively related to subsequent effort, which is consistent with affect-as-information theory (Schwarz & Clore, 1983, 2003). Specifically, affect-as-information theory suggests that increased positive affect acts as a signal that individuals are making good progress and thus that more intensity is not needed. Prior work, however, has not differentiated the role of activated affect (e.g., excitement, anxiety) from the role of deactivated affect (e.g., contentment, sadness) during the job search process. In this study, I extended prior research by examining the role of changes in *activated* and *deactivated* affect on changes in job search intensity. Specifically, I theorized that job seekers who feel increased activated negative affect (e.g., anxiety) will have more intense reactions and thus increase their job search intensity, whereas those who feel increased deactivated positive affect (e.g., contentment) will have less intense reactions and thus maintain or decrease their job search intensity (Carver & Scheier, 2012; Seo et al., 2004). Furthermore, although Wanberg et al. (2010) did not find affect to mediate the relationship between progress and effort, I extended their study by examining whether activated negative affect and deactivated positive affect partially mediated the relationship of progress with intensity.

Finally, as suggested by Carver and Scheier (2012), individuals do not react in the same way to changes in their perceived goal progress. Some individuals increase, while others decrease, their effort following changes in their perceived progress. Individuals also do not experience emotional reactions to the same extent, following changes in their perceived progress. For example, Wanberg et al. (2010) found that one's level of financial hardship moderated the negative relationship between perceived progress and

negative affect, such that those with higher financial hardship were more sensitive to increased perceived progress. In this study, I extended control theory and prior self-regulation research by examining whether individual differences in optimism and approach and avoidance temperaments influence job seekers to regulate their emotions and behaviors upward or downward, following changes in their perceived progress.

Summary of Findings and Contributions

Progress as predictor of affect and intensity. As mentioned earlier, job search is a self-regulated process in which perceptions of progress influence job seekers' affect and effort (Wanberg et al., 2010). In this study, I drew upon control theory to further examine the role of changes in perceived progress on changes in affect and job search intensity. Specifically, control theory suggests that job seekers evaluate their progress throughout the job search, such that when they experience increased perceived progress, they feel like they are doing well, and thus decide to decrease their job search intensity (*hypothesis 1*). Furthermore, I theorized that when individuals experience increased perceived progress, they feel increased activated and deactivated positive affect (*hypothesis 2*) and decreased activated and deactivated negative affect (*hypothesis 3*).

One of the most striking findings of this study was that increased perceived progress was actually *positively* related to job search intensity, which ran counter to hypothesis 1. This result also runs counter to both control theory predictions and prior research (Wanberg et al., 2010), which suggest that increased perceptions of progress act as a signal that things are going well and that job seekers can decrease their intensity. Interestingly, though, the finding that perceived progress is positively related to job search intensity is consistent with social cognitive theory (Bandura, 1986, 1991), which

proposes that increased perceived goal progress reinforces one's confidence, and is likely to stimulate individuals to intensify their effort toward goal accomplishment.

Perhaps, there are theoretical and empirical differences in the role of perceived progress in job search depending on the amount of time job seekers have to construct these perceptions of progress. In the current study, I measured both perceived progress and job search intensity every week, whereas Wanberg et al. (2010) measured it every day. Future research could examine, perhaps by collecting daily data from job seekers, whether there are differences in how individuals construct perceptions of progress after a day, a week, or even a month. For example, if job seekers have a week or a month to construct their perceptions of progress, they are more likely to have received feedback from potential employers during that time period. As such, perceptions of increased progress are likely to reinforce job seekers' confidence, and thus likely to lead them to exert greater job search intensity on a weekly or monthly basis, consistent with social cognitive theory. In contrast, if job seekers have a day to construct their perceptions of progress, they are likely to interpret increased progress as a signal that things are going well and that they can turn their attention to other tasks for a day or two, as they are waiting to hear back from potential employers. Although it might not lead to decreased intensity on a weekly or monthly basis, increased perceived progress might lead to lesser intensity on a daily basis, consistent with control theory. Such work would shed light on the contradictory findings between this study and Wanberg et al. (2010) regarding the influence of perceived progress on job search intensity and effort.

I also found that changes in perceived progress were positively related to changes in both activated (e.g., excitement) and deactivated (e.g., contentment) positive affect.

When job seekers experienced increased perceived progress, they also felt increased excitement and contentment with regard to their job search. Interestingly, this result is not only consistent with control theory, but also with social cognitive theory (Bandura, 1986, 1991) and prior research (Brunstein, 1989; Ilies & Judge, 2005), which suggest that positive self-evaluative processes reinforce one's experience of positive emotions, such as excitement and contentment.

Results also showed that changes in perceived progress were negatively related to changes in deactivated (e.g., sadness) but not activated (e.g., anxiety) negative affect. Indeed, job seekers who experienced increased perceived progress felt less sadness. Again, these results are not only consistent with control theory, but also with social cognitive theory (Bandura, 1986, 1991) and prior research (Ilies & Judge, 2005), which suggest that positive (performance) feedback is negatively related to negative affect. Surprisingly, though, job seekers who experienced increased perceived progress did not feel less anxiety. Perhaps, increased perceived progress might have a different influence on activated negative affect depending on the type of job search activity that created this increased progress. For example, job seekers who experienced increased perceived progress because they were invited to job interviews might have felt increased anxiety, as a result of the interview process (e.g., McCarthy & Goffin, 2004). In contrast, job seekers who experienced increased progress because they applied for jobs and sent out their resumes might have felt less anxiety, as a result of having accomplished important job search tasks. It could be that job seekers felt less anxiety early in the process, but actually more anxiety during face-to-face interactions, such as interviews. Combining such results during the job search could explain the null relationship between changes in

perceived progress and in activated negative affect. It could thus be interesting for future research to examine the role that the type of job search activity has in moderating the relationship between perceived progress and activated negative affect.

Overall, results showed that when they experienced increased perceived progress, job seekers actually increased their job search intensity, while feeling increased activated and deactivated positive affect, and decreased deactivated negative affect. Such findings seem to indicate that increased perceptions of progress triggered positive reactions in terms of both intensity and affect. Although only partially supportive of control theory, such results are instead more consistent with another self-regulatory approach, namely social cognitive theory. Specifically, social cognitive theory (Bandura, 1986, 1991) suggests that perceptions of one's performance influence evaluative self-reactions, such that increases in one's perceived progress are likely to increase one's confidence and positive affect.

Affect as predictor of intensity. As mentioned earlier, prior research has examined the role of affect in job search, providing mixed evidence (e.g., Song et al., 2009; Wanberg et al., 2010). Indeed, whereas Song et al. (2009) found negative affect to be positively related to job search effort, Wanberg et al. (2010) found that negative affect was not related to effort. Interestingly, though, prior work has not differentiated the role of activated affect (e.g., excitement, anxiety) from the role of deactivated affect (e.g., contentment, sadness) during the job search process. This study drew upon affect-as-information theory (Carver & Scheier, 1990; Schwarz & Clore, 1983, 2003) and extended prior research by examining the role of both activated and deactivated affect on job search intensity. Specifically, affect-as-information theory suggests that affect acts as a

signal of job seekers' progress, such that deactivated positive affect (e.g., contentment) is negatively related to job search intensity (*hypothesis 4*) and activated negative affect (i.e., anxiety) is positively related to job search intensity (*hypothesis 5*).

However, affect-as-information does not predict relationships of activated positive affect and deactivated negative affect with job search intensity. Nonetheless, although I did not have formal hypotheses, I also examined the role of activated positive affect (e.g., excitement) and deactivated negative affect (e.g., sadness) in influencing job search intensity. As mentioned earlier, in general job seekers who feel increased activated affect (e.g., excitement, anxiety) will have more intense reactions and thus increase their job search intensity, whereas those who feel increased deactivated (e.g., contentment, sadness) affect will have less intense reactions and thus maintain or decrease their job search intensity (Carver & Scheier, 2012; Seo et al., 2004).

Based on affect-as-information theory, I theorized that changes in deactivated positive affect (e.g., contentment) would be negatively related to changes in job search intensity because positive affect acts as a signal that things are going well and that more intensity is thus not needed. I actually found that deactivated positive affect was not associated with job search intensity. Interestingly, though, affect-as-information theory suggests that increased positive affect serves as a signal that things are going well and more effort is not needed, such that individuals will *maintain* or *decrease* their intensity (Carver, 2003; Carver & Scheier, 2012). Clearly, there are various interpretations of the null results between changes in deactivated positive affect and in intensity, which call for additional research. As mentioned earlier, perhaps the relationship between deactivated positive affect and intensity depends on the type of job search activity that led to this

change in affect. For example, job seekers who felt increased deactivated positive affect (e.g., contentment) because they were invited to job interviews might focus on preparing for these interviews, such that they might maintain or even increase their intensity. In contrast, job seekers who felt increased deactivated positive affect because they applied for jobs and sent out their resumes might perceive that they have done enough for now (i.e., they are waiting to hear back), and thus might decrease their intensity. Combining such results during the job search could explain the null relationship between changes in deactivated positive affect and in job search intensity. It could be interesting for future research to examine the role that the type of search activity has in moderating the relationship between changes in (deactivated positive) affect and in intensity.

Although I did not have a formal hypothesis, I also examined the relationship of changes in activated positive affect (e.g., excitement) with changes in intensity. Additional analyses showed that activated positive affect was positively related to intensity. Such finding is consistent with broaden-and-build theory, social cognitive theory, and prior research (e.g., Turban et al., 2009). For example, broaden-and-build theory (Fredrickson, 2001) suggests that positive affect can broaden individuals' thought-action repertoires, and help them build more resources, which can result in increased intensity and effort. Furthermore, Seo et al. (2004) suggested that activated positive emotions, such as excitement, are likely to influence the persistence (i.e., increased intensity) toward achieving a specific goal. In sum, whereas increased deactivated positive affect (e.g., contentment) led job seekers to maintain their intensity, activated positive affect (e.g., excitement) *energized* them to exert more intensity.

Although anxiety has typically been viewed as detrimental for job search

outcomes (McCarthy & Goffin, 2004), this study showed that increased activated negative affect (e.g., anxiety) has a positive impact on the intensity individuals exert searching for a job. Such result is consistent with affect-as-information theory, which proposes that changes in activated negative emotions, such as anxiety, provide information about a discrepancy between one's goals and progress toward those goals (Carver & Scheier, 1990; Schwarz & Clore, 1983, 2003). For example, in this case, increased activated negative affect appears to have motivated job seekers to increase their job search intensity. Increased activated negative affect might thus have been interpreted as a signal that more effort was needed to reach one's goals, as suggested by affect-as-information theory. Future research could benefit from conceptualizing other aspects of the job search process as situations that could benefit from increased activated negative affect. For example, perhaps increased anxiety could also have a positive impact in the interviewing process, which would run counter with prior work (e.g. McCarthy & Goffin, 2004). Job seekers who tend to feel increased anxiety during the interview process might exert more intensity by preparing to a greater extent for these interviews. Such increased interview preparation might increase job seekers' interview success, while also helping them feel less anxious during the interview itself. Thus, it could be important to differentiate the role of anxiety in the interview itself from the role of anxiety in other aspects of the interview and job search processes, such as interview preparation. The finding that anxiety has a positive impact on the interviewing process would actually be consistent with the idea that stressful situations can be perceived as challenges rather than threats (Folkman & Moskowitz, 2000; Song et al., 2009).

Although I did not have a formal hypothesis, I also examined the relationship of

changes in deactivated negative affect (e.g., sadness) with changes in job search intensity. Additional analyses showed that deactivated negative affect was negatively related to job search intensity. This finding is consistent with prior research (e.g., Kaplan et al., 2009), which has found deactivated negative emotions, such as depression, to have a detrimental influence on attitudes and goal accomplishment. Furthermore, depression is more likely to lead to pessimistic thinking and to a downward spiral that results in less movement toward goals (Peterson & Seligman, 1984). In sum, whereas increased activated negative affect (e.g., anxiety) *energized* job seekers to exert more intensity, increased deactivated negative affect (e.g., sadness) led job seekers to decrease their job search intensity.

Overall, the findings for the relationships of changes in affect with changes in job search intensity suggest that these relationships vary depending on whether job seekers experience changes in activated or deactivated affect. Specifically, increased activated positive and negative affect led job seekers to increase their intensity, whereas increased deactivated negative and positive affect led job seekers to either decrease or maintain their intensity, respectively. Such results indicate the importance of considering different theoretical approaches, in addition to affect-as-information theory, while describing and examining the role of both *activated* and *deactivated* affect in job search. For example, both social cognitive theory (Bandura, 1986, 1991) and broaden-and-build theory (Fredrickson, 2001) suggest that (activated) positive affect can reinforce one's confidence, broaden one's thought-action repertoires, and help one build more resources, which can thus result in increased intensity.

Affect as mediator between progress and intensity. Although prior research did not find affect to mediate the relationship of perceived progress with job search

intensity and effort, perhaps it did not find support for the mediated relationship because it investigated the valence dimension (positive and negative) of affect, without considering the activation dimension of affect (e.g., Wanberg et al., 2010). In this study, I thus extended prior research by examining whether specific dimensions of affect (i.e., activated negative affect and deactivated positive affect) would partially mediate the relationship between perceived progress and job search intensity. Furthermore, I theorized partial mediation, rather than full mediation, as control theory suggests that perceived progress can also have a direct influence on job search intensity.

Results showed that affect did not mediate the relationship of perceived progress with intensity. Although I drew upon both control theory and affect-as-information theory to hypothesize that both activated negative affect and deactivated positive affect mediated the relationship between perceived progress and job search intensity, the finding that mediation was not supported is consistent with Wanberg et al. (2010). Future research could examine the role that other variables could have in (partially) mediating the relationship between perceived progress and job search intensity. For example, perhaps, the attributions that job seekers make about their job search progress could (partially) mediate the positive relationship between perceived progress and job search intensity. As mentioned earlier, attribution theory (Weiner, 1985, 1986) suggests that individuals make attributions for their progress toward goal accomplishment. If job seekers experience increased progress, they might make more internal and stable attributions for this increased progress, which will in turn motivate them to exert more intensity. In contrast, if job seekers experience decreased progress, they might make more external and unstable attributions for this decreased progress, which will in turn

lead them to decrease their intensity. As such, future research could examine processes through which perceived progress influences intensity.

Approach temperament as moderator. Although control theory predicts relationships between perceived progress, affect, and intensity, Carver and Scheier (2012) recently called for research to investigate whether and how these relationships might vary depending upon individuals' interpretation of their progress. In this study, I addressed this call by drawing upon the approach and avoidance literature (e.g., Elliott & Thrash, 2002, 2010), which suggests that individuals high in approach temperament are more sensitive to positive situations (e.g., increased progress) than those low in approach. Individuals high in approach are also less sensitive to negative situations (e.g., decreased progress) than those low in approach. When individuals high in approach temperament experience increased perceived progress, they also experience more intense physical and emotional reactions, and are thus more likely to be motivated to maintain, rather than decrease, their intensity, compared to those low in approach (*hypothesis 7*). The approach and avoidance literature further suggests that, as job seekers high in approach temperament experience more intense physical and emotional reactions, they are more likely to experience stronger increases in activated positive affect (*hypothesis* 8) and stronger decreases in deactivated negative affect (*hypothesis 9*), compared to individuals low in approach.

Results showed that approach temperament did not moderate the relationship of changes in perceived progress with changes in job search intensity, failing to support hypothesis 7. Perhaps, rather than examining the role of individual and relatively general differences in approach temperament, it could be interesting for future research to

examine the role of approach motivation specific to the type of job search activity in which job seekers are engaged. For example, perhaps job seekers are high in approach motivation for job search activities such as sending out resumes or applying for jobs. When they experience increased progress, they would thus increase their intensity to a greater extent for such job search activities, than for activities for which they are low in approach motivation, such as interviewing with potential employers. A related direction for future work would be to collect measures of approach motivation throughout the job search process to investigate whether within-subjects changes in approach motivation during the job search would moderate the relationship between changes in perceived progress and in intensity. Indeed, if they experience increased progress, job seekers might increase their intensity to a greater extent when their approach motivation is high, such as early in the process, compared to when their approach motivation is low, such as during the interview process. It could thus be interesting for future research to examine the role of within-subjects changes in approach motivation in job search, in addition to between-subjects differences in approach temperament. Such work would expand our understanding of the role of approach motivation throughout the job search process.

Based on the approach and avoidance literature, I theorized that approach temperament would moderate the positive relationship of changes in perceived progress with changes in activated positive affect, such that the relationship is stronger for those high in approach. In support of hypothesis 8, results showed that job seekers high in approach temperament were more sensitive to positive stimuli (i.e., increased progress), and thus experienced greater increases in activated positive affect following increased progress, compared to those low in approach. This result is consistent with the idea that

individuals high in approach experience more intense emotional reactions (i.e., increased activated positive affect), as a result of positive outcomes, such as increased perceived progress, compared to those low in approach (e.g., Elliot & Thrash, 2002, 2010).

Approach temperament also moderated the negative relationship between changes in perceived progress and in deactivated negative affect (e.g., sadness), such that the relationship was stronger for job seekers low in approach temperament, compared to those high in approach. This result ran contrary to hypothesis 9, which proposed that the negative relationship would be stronger for job seekers high in approach, as they tend to be more sensitive to increased progress. This finding actually indicated that despite having higher levels of deactivated negative affect (e.g., sadness), job seekers low in approach temperament experienced greater decreased deactivated negative affect as a result of increased progress, compared to those high in approach.

In sum, findings for the moderating role of approach temperament in job search suggest that, when they experience increased perceived progress, job seekers high in approach experience stronger increases in activated positive emotions (e.g., excitement), compared to those low in approach. Interestingly, though, job seekers high in approach also experience *weaker*, rather than stronger, decreases in deactivated negative emotions (e.g., sadness), compared to those low in approach.

Avoidance temperament as moderator. As described above, I drew from the approach and avoidance literature (e.g., Elliot & Thrash, 2002, 2010) to investigate whether and how the relationships between perceived progress, affect, and intensity vary depending upon individuals' interpretation of their progress. Specifically, the approach and avoidance literature proposes that individuals high in avoidance temperament

experience less intense physical and emotional reactions following positive situations (e.g., increased progress), compared to those low in avoidance. They are instead more sensitive to negative situations (e.g., decreased progress). As such, I theorized that job seekers high in avoidance would increase their job search intensity, following decreased perceived progress, to a greater extent compared to those low in avoidance who have less intense reactions following such negative situations (*hypothesis 10*). Furthermore, as job seekers high in avoidance temperament experience more intense physical and emotional reactions following decreased progress, they are also more likely to experience stronger increases in activated negative affect (*hypothesis 11*) and stronger decreases in deactivated positive affect (*hypothesis 12*), compared to those low in avoidance.

Although control theory proposed a negative relationship between perceived progress and job search intensity, results for hypothesis 1 showed that progress was actually *positively* related to intensity. Interestingly, I also found that avoidance temperament moderated this *positive* relationship between perceived progress and job search intensity, such that the relationship was weaker for job seekers high in avoidance than for those low in avoidance. Indeed, job seekers high in avoidance were less sensitive to increased perceived progress compared to those low in avoidance, and thus increased their intensity to a lesser extent. This finding is actually consistent with the idea that individuals high in avoidance tend to be less sensitive to positive outcomes such as increased perceived progress. As mentioned earlier, rather than examining the role of individual and general differences in avoidance temperament, future research could examine the role of avoidance motivation specific to the type of job search activity in which job seekers are engaged. For example, perhaps job seekers are low in avoidance

motivation for job search activities such as sending out resumes or applying for jobs. When they experience increased progress, they would thus increase their intensity to a greater extent for such activities, than for activities for which they are high in avoidance motivation, such as interviewing with potential employers. Such future work would help better understand the role of avoidance temperament in job search.

Although hypothesis 11 proposed that avoidance temperament would moderate the relationship between changes in perceived progress and in activated negative affect (e.g., anxiety), this hypothesis was not supported. It appears that job seekers' activated negative affect did not vary differently depending upon their avoidance temperament, as a result of increased perceived progress. Interestingly, although not hypothesized, avoidance temperament moderated the relationship between changes in perceived progress and in *deactivated* negative affect (e.g., sadness). Specifically, for job seekers high in avoidance, deactivated negative affect decreased as a result of increased progress, whereas for job seekers low in avoidance, deactivated negative affect was influenced to a lesser extent by increased perceived progress.

Furthermore, hypothesis 12 was not supported, as avoidance temperament did not moderate the relationship of perceived progress and deactivated positive affect (e.g., contentment). Interestingly, although not hypothesized, avoidance temperament moderated the relationship between changes in perceived progress and in *activated* positive affect (e.g., excitement). Specifically, job seekers high in avoidance experienced greater increases in activated positive affect as a result of increased progress, compared to those low in avoidance. In contrast, for job seekers low in avoidance, their level of activated positive affect was less sensitive to changes in their perceived progress.

In sum, findings for the moderating role of avoidance temperament suggest that increased progress leads to greater intensity for job seekers low in avoidance than for those high in avoidance, which is consistent with idea that job seekers high in avoidance are less sensitive to positive situations (i.e., increased progress). Furthermore, when they experience increased perceived progress, job seekers high in avoidance experience stronger increases in activated positive affect (e.g., excitement) and deactivated negative affect (e.g., sadness), compared to those low in avoidance. Thus, for job seekers high in avoidance, their activated positive affect and deactivated negative affect are actually more sensitive to their increased progress, than for job seekers low in avoidance.

Overall, the findings for both approach and avoidance temperaments indicated that both activated positive affect (e.g., excitement) and deactivated negative affect (e.g., sadness) were influenced by the interaction of perceived progress with approach and avoidance temperaments. Interestingly, though, deactivated positive affect (e.g., contentment) and activated negative affect (e.g., anxiety) were not influenced by the interaction terms. Such findings suggest that job seekers' excitement and sadness are more sensitive to increased perceived progress than their contentment and anxiety, depending upon individual differences in approach and avoidance temperaments. For example, both individuals high in approach and avoidance experienced stronger increases in activated positive affect (e.g., excitement) following increased perceived progress, suggesting that for both job seekers high in approach and in avoidance their excitement is more sensitive to increased progress, than for those low in approach and in avoidance.

Optimism as moderator. While control theory proposes that changes in perceived progress are negatively related to changes in intensity, the attributional style

literature (Mezulis et al., 2004; Peterson et al., 1982) suggests that the extent of these changes in intensity will depend on job seekers' individual differences in attributional styles. I theorized about the role of one specific attributional style, namely optimism. Thus, this study extended control theory (Carver & Scheier, 1981, 1982) by investigating whether individual differences in optimism influence job seekers either to increase or decrease their intensity following changes in their progress (*hypothesis 13*). For example, if job seekers are high in optimism, they are more likely to attribute decreases in perceived progress to unstable and external causes (e.g., bad luck), whereas job seekers low in optimism are more likely to attribute these decreases to stable and internal reasons (e.g., lack of ability). Analogously, job seekers high in optimism are more likely to attribute increases in perceived progress to stable and internal causes (e.g., ability), whereas job seekers low in optimism are more likely to attribute these increases to unstable and external reasons (e.g., good luck).

Interestingly, though, optimism did not moderate the relationship between changes in perceived progress and in job search intensity. It is important to note, however, that I used a relatively general measure of optimism, which is not attribution-based. Perhaps, as mentioned earlier, it could be interesting for future research to directly examine whether attributions that job seekers make regarding their perceived progress moderate the relationship between changes in progress and in intensity. For example, perhaps when job seekers make external attributions (e.g., bad economy) for their lack of progress, they will increase their intensity to a lesser extent than when they make internal attributions (e.g., lack of effort), following decreases in their perceived progress.

Overall summary. To summarize, these findings suggest that the relationships between perceived progress, affect, and intensity cannot be fully explained by the theoretical approaches used in this study (i.e., control theory, affect-as-information theory, approach and avoidance literature, and attributional style literature). As such, this research contributes to the job search literature by showing: (1) that the role of perceived progress appear to be more consistent with social cognitive theory, such that increased perceived progress led to increased job search intensity and positive affect; (2) activated emotions create stronger reactions than deactivated emotions, such that activated emotions led to increased intensity, whereas deactivated emotions led to unchanged or decreased intensity; and (3) activated positive affect (e.g., excitement) and deactivated negative affect (e.g., sadness) were influenced by the interaction between perceived progress and either approach or avoidance temperament, suggesting that job seekers' excitement and sadness are more sensitive to changes in their perceived progress, depending upon individual differences in approach and avoidance temperaments.

I also presented directions for future research which can be summarized in three relatively broad categories. First, future research could conceptualize other aspects of the job search process as situations that could also be positively influenced by increased anxiety and excitement. For example, perhaps both increased anxiety and excitement can have a positive impact in the interviewing process, such that increased anxiety leads job seekers to better prepare for the interviews, whereas increased excitement leads them to thrive during the interview itself. Second, it could be interesting for future work to examine the role of the type of job search activity during the process (e.g., apply for job, interview with potential employers, follow-up with recruiters, etc.). For example, there

could be differences in the way job seekers react to changes in their progress depending on the job search activity which created these changes in perceived progress. Similarly, there could also be differences in the way job seekers react to changes in their level of affect depending on the job search activity which created these changes in affect. Third, future research could investigate measures of optimism and approach and avoidance motivation that are more specific to the job search process, the type of job search activity, and/or change over time. Indeed, prior research has found theoretical and empirical differences between general and specific measures of achievement motivation (e.g., Baranik, Barron, & Finney, 2010; DeShon & Gillespie, 2005).

Limitations

While this research contributes to the job search literature, there are also a few limitations with the sample, measures, and methodology. This study focused on one specific part of the job search process, namely the intensity that job seekers invest in various job search behaviors through a 3-month period. As the main purpose of this study was to examine the influence of perceived progress on affect and job search intensity, only proximal job search behaviors (e.g., prepared resume, spoke with others, etc.) were examined. However, future research could benefit from examining how changes in perceived progress and in both activated and deactivated affect influence interview and site visit success.

Although the goal of this study was to examine the role of relatively general individual differences in optimism, and approach and avoidance temperaments, future research could examine constructs that are more domain specific, such as constructs that are specific to job search activities, as they can have very different theoretical and

empirical implications (e.g., DeShon & Gillespie, 2005). Along the same line, although this study specifically examined individual and stable differences in optimism, and approach and avoidance, it could also be interesting to investigate the role of changes in such constructs during the job search process. Indeed, perhaps, the attributions that job seekers make for their progress vary on a daily or weekly basis, which I could not investigate in this study as I collected dispositional measures of attributional styles (i.e., optimism) in the initial survey. Similarly, perhaps, the approach and avoidance motivation that job seekers have vary depending on the type of job search activity (e.g., applying for jobs vs. interviewing with potential employers), or stage of the process, in which they are engaged.

Consistent with prior research, I performed analyses that examined the relationships between changes in perceived progress, affect, and job search intensity measured at the same time. Specifically, Wanberg et al. (2010, 2012) proposed that because these variables change across time periods, theoretically, the most important variable for predicting affect and intensity is the perceived progressed experienced during that week. Although I carefully developed a theoretical rationale for the direction of the hypothesized relationships, I cannot completely rule out alternative causal models. For example, it might be that changes in intensity also influenced changes in perceived progress and affect. Future research could possibly collect data from secondary sources (e.g., career centers, unemployment agencies) to obtain additional measures of affect and intensity across time periods.

In this study, a 3-month period was used, measuring perceived progress, affect, and job search intensity weekly. Although the weekly measure period allowed enough

time for job seekers' perceived progress, affect, and intensity to evolve, and addressed calls to extend the time frame used by daily diary studies (Song et al., 2009), future research could examine even more extended time periods of the job search process. However, taking an extended time period approach adds other limitations such as individuals finding jobs at various times throughout the study period, and therefore dropping out of the study.

The sample size (n = 157) could also be considered a limitation of this study. Although the number of observations was much larger because the observations were collected from participants over 3 months (N = 808), studies using larger data sets could enable the detection of smaller effect sizes, as well as more subtle patterns of effects. A final limitation of this study is that the sample consisted of senior undergraduates from the same Midwestern University. Although participants were in different majors and colleges, future research could benefit from examining the role of activated and deactivated affect among (long-term) unemployed individuals in search for reemployment, which are very emotionally-charged situations.

Implications for Practice

The results of this study have some practical implications for job seekers. Throughout the process, job seekers experience ups and downs, stressful and exciting moments, and have to invest a significant amount of intensity. Although it is difficult, if not impossible, for job seekers to completely control their emotions, it could be important for them to understand that not all emotions have the same influence in their job search. Indeed, I found that both excitement and anxiety were positively related to job search intensity, whereas contentment and sadness were negatively related to intensity. Thus,

job seekers need to recognize that, contrary to popular belief, not all positive emotions are beneficial, and that not all negative emotions are detrimental to their search. For example, although anxiety has traditionally been viewed as detrimental (e.g., Kaplan et al., 2009; McCarthy & Goffin, 2004), it could be important for job seekers to recognize that anxiety can also have a positive influence in their search for employment. As such, job seekers should learn how to use anxiety in their advantage. If job seekers get more anxious during the interview process, they could use this increased anxiety to exert more intensity preparing for these interviews. This more intense interview preparation could then result in less anxiety during the interview itself.

On a related note, it could also be important for job seekers to recognize that job search activities and outcomes might result in conflicting emotions. For example they could experience both anxiety and excitement in response to interview invitations. If job seekers get invited for interviews, they could use their increased anxiety to exert more intensity in interview preparation, and use their increased excitement during the interview itself, such that their excitement might spread to the interviewer and result in higher interview evaluations (e.g., Baron, 1987). Although some of these practical implications go beyond the scope of this study, they could help job seekers do a better job at understanding whether and how their progress could lead them to experience conflicting emotions, and how this progress and these conflicting emotions influence their intensity.

The results of this study also have implications for career centers and unemployment agencies. It is important for career centers to understand how they can help job seekers be better prepared to face the ups and downs of the job search. Indeed, career centers could help job seekers understand that job search activities can cause them

to experience conflicting emotions, such as excitement and anxiety, and that these emotions influence their job search intensity. For example, career centers could train job seekers to discern situations in which increased anxiety is beneficial (e.g., in applying for jobs), from situations in which increased anxiety is detrimental (e.g., during interviews). Along the same line, unemployment agencies that deal with chronically unemployed individuals could also help job seekers prepare better for various job search activities, such that they are more likely to experience emotions such as excitement rather than depression. For example, organizations could organize mock interviews, resume workshops, and/or salary negotiation workshops, such that these chronically unemployed individuals don't feel overwhelmed by conflicting emotions during their job search.

Conclusion

This study primarily draws upon self-regulatory frameworks (i.e., control theory and affect-as-information theory) to investigate the role of changes in perceived progress, activated and deactivated affect, and job search intensity during job search. Results indicated that changes in perceived progress are more consistent with a social cognitive approach, as perceived progress was found to be positively related to both intensity and positive affect. Findings further indicated that activated and deactivated affect can have very different theoretical and empirical implications, such that activated affect acts as *energizer* leading job seekers to exert more intensity. Finally, results shed light upon the important, though complex, role of approach and avoidance temperaments in job search. As such, the theoretical approaches, methodology, findings and contributions of this study might provide an important foundation for future research.

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APPENDIX I: INITIAL SURVEY

Note: The underlined scale names and citations were not displayed in the online survey.

Consent to participate in research

Thank you for your interest in participating in this very important study. Your participation is very important for two main reasons: (1) the main purpose of this study is to learn information that will help future graduating students search for and find jobs; and (2) this study is part of my dissertation work, and you would be helping a fellow student and job seeker.

In order to thank you for participating in this study, you will be entered in a drawing for one of five prizes of $200 each (total prize money of $1,000!). Specifically, you will receive one entry for each weekly survey you complete, in addition to 10 entries if you complete all of the weekly surveys (with accurate information).

This study is being conducted as part of the dissertation work of Serge Pires da Motta Veiga (tel. 573-882-7659), under the direction of Dr. Daniel Turban (tel. 573-882-0305) from the Department of Management at the University of Missouri-Columbia .

If you agree to participate, after completing the initial survey (15-20 minutes to complete), you will be asked to complete a few short surveys (5-10 minutes to complete) every week during the next 8 weeks. The initial survey will ask about your background and personality. The short surveys will ask about your affectivity, progress, and job search intensity and outcomes.

All information collected will be kept strictly confidential, although the results of this project may be published. When completing the surveys, you will be given an individual code number that will allow us to match your different surveys together. Your participation in this study is entirely voluntary. You may withdraw from the study at any time, for any reason. If you decide to withdraw, you will not be penalized in any way.

This project is not expected to involve risks greater than those ordinarily encountered in daily life. Although it is not possible to identify all potential risks in the study, all reasonable safeguards have been taken to minimize any potential risks.

If you have any questions, feel free to contact Serge Pires da Motta Veiga or Dr. Turban. If you have questions concerning human subject research please call the institutional review board at (573) 882-9585.

Please check below the box next to "I agree to participate" to indicate that you are at least 18 years old, and that you understand and give your consent to participate. Your consent to participate does not constitute a waiver of any legal rights.

As part of this study, we are interested in the role of your background and personality in the job search. Please rate the extent, on the following scale, to which you agree with the following items:

1. *Strongly disagree*
2. *Disagree*
3. *Neither agree nor disagree*
4. *Agree*
5. *Strongly Agree*

(Revised Life Orientation Test - RLOT; Scheier, Carver, & Bridges, Journal of Personality and Social Psychology, 67, 1994, p. 1073)

1. In uncertain times, I usually expect the best.
2. If something can go wrong for me, it will.
3. I'm always optimistic about my future.
4. I hardly ever expect things to go my way.
5. I rarely count on good things happening to me.
6. Overall, I expect more good things to happen to me than bad.

(Approach-Avoidance Temperament Questionnaire; Elliot & Thrash, Journal of Personality, 78, 2010, p. 906)

7. By nature, I am a very nervous person.
8. Thinking about the things I want really energizes me.
9. It doesn't take much to make me worry.
10. When I see an opportunity for something I like, I immediately get excited.
11. It doesn't take a lot to get me excited and motivated.
12. I feel anxiety and fear very deeply.
13. I react very strongly to bad experiences.
14. I'm always on the lookout for positive opportunities and experiences.
15. When it looks like something bad could happen, I have a strong urge to escape.
16. When good things happen to me, it affects me very strongly.
17. When I want something, I feel a strong desire to go after it.
18. It is easy for me to imagine bad things that may happen to me.

Background information

19. Please provide us your first name, last name, and email address for the drawing of the prizes at the end of the study:

First name: _____
Last name: _____
Email address: _____

20. Which stage of your job search would you say you are currently at?

__ Early stage (i.e., you have recently started to approach the job search process)
__ Middle stage (i.e., you have been searching for a job for some time and will continue to do so)

__ Late stage (i.e., you are getting very close to finding a full-time job).

21. What is your age? _____

22. What is your gender?
__ Female
__ Male

23. What is your race?
__ White/Caucasian
__ African American
__ Hispanic
__ Asian
__ Native American
__ Pacific Islander
__ Other

24. Please fill in the following information:
College _____
Major _____
Degree _____
GPA _____
Full-time work experience (in months) _____

25. Have you had previous internship experience?
__ Yes
__ No

26. If you had previous internship experience, which company did you have it with?
_____

27. Do you expect to receive a full-time offer from the company you had your internship with?
__ Yes
__ No

28. When do you expect to graduate?
__ 12/2012
__ 05/2013
__ 08/2013

APPENDIX II: WEEKLY SURVEY

Note: The underlined scale names and citations were not displayed in the online survey.

Thank you for your interest in this research project. As mentioned in the initial survey, this study will help us learn information that will benefit future job seekers, as well as the dissertation work of a fellow student and job seeker!

As you move forward with your job search process, you evaluate how your job search is going. As such, please rate the extent, on the following scale, to which you agree with the following items. During the last week:

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly Agree

(Perceived Job Search Progress; Wanberg, Zhu, & Van Hooft, Academy of Management Journal, 53, 2010, p. 794)

1. I had a productive week in relation to my job search.
2. I made good progress on my job search.
3. I moved forward with my job search.
4. Things did not go well with my job search.
5. I got a lot less done with my job search than I had hoped.
6. I hardly made any progress in looking for a job.

This scale consists of a number of words that describe different feelings and emotions. Rate the extent to which it has made you have felt the following emotions as you searched for a job in the last week. Use the following scale to record your answers:

1. Very slightly or not at all
2. A little
3. Moderately
4. Quite a bit
5. Very frequently

(Activated and Deactivated Positive and Negative Affect; Russell, Psychological Review, 110, 2003, p. 148)

7. Enthusiastic
8. Energetic
9. Excited
10. Cheerful
11. Relaxed
12. Contented
13. Relieved

14. Calm
15. Nervous
16. Anxious
17. Distressed
18. Angry
19. Sad
20. Gloomy
21. Depressed
22. Miserable

Job seekers use different tactics to find out about potential job openings. For each of the tactics listed below, please indicate the extent to which you have used it to find out about job openings in the last week:

(Job Search Intensity – JSI; Saks & Ashforth, Journal of Applied Psychology, 87, 2002, p.649)

23. Prepared/revised your resume.
24. Listed yourself as a job applicant online or through a professional association (e.g. career services).
25. Spoke with others (friends, relatives, faculty, previous employers, etc.) about possible job leads.
26. Checked college placement/career services listings (software) to generate potential job leads.
27. Used the internet to locate job openings.

VITA

Serge P. da Motta Veiga was born and raised in Brussels, Belgium and traveled around the world for business and pleasure before moving to Columbia, Missouri in 2009 to pursue a doctorate in Business Administration. He earned his doctorate in Business Administration with an emphasis on Organizational Behavior and Human Resource Management in May 2013 from the University of Missouri, and his license in Economics in June 2003 from the Université Libre de Bruxelles in Belgium. His research interests include job search, recruitment, emotions, motivation, and humor at work. He has published his work in Personnel Psychology and in the Oxford Handbook of Job Search and Job Loss, and has presented at national and international conferences. Serge has received numerous awards, scholarships, and fellowships, including the 2012 SHRM Foundation Dissertation Grant. Before his doctorate, Serge worked for six years in the Banking and Consulting industries in London, Paris, and Brussels. Serge joined the Department of Management at Lehigh University in August 2013.