

EUDAIMONIC ORIENTATION: THE PURSUIT OF THE BEST SELF

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EUDAIMONIC ORIENTATION: THE PURSUIT OF THE BEST SELF

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ABSTRACT

The purpose of this dissertation is to integrate the concept of eudaimonia into management literature to enhance our understanding of employees' optimal functioning in the workplace. A lack of a scientific measure that properly reflects the philosophical roots of eudaimonia, however, can be an obstacle to the research in this field. By drawing on literature on eudaimonia from both the philosophical and psychology disciplines, I developed and validated a higher-order construct of eudaimonic orientation which describes one's desire to develop the best in one's self and to express one's core self in the service of the greater good. In Study 1, I collected samples from 700 students and 194 dyads through online surveys. Results of Study 1 provided good support for the structural and psychometric properties of EOS. Building upon Study 1, I further developed a model of eudaimonic orientation at work and examined the effect of eudaimonic orientation on job attitudes and job performance. Samples of 690 professionals and 192 dyads were collected through online surveys. The results generally support the arguments that eudaimonic orientation is a motivational individual characteristic and that motivational states and self-regulatory strategies provide two vital sources for motivation.

CHAPTER ONE

INTRODUCTION

In the past decade, research in psychology has witnessed a positive psychology movement, a shift from an almost exclusive focus on human pathology to more involvement in understanding the development and maximization of people's strengths and psychological capabilities (Seligman, 1999; 2002). This advent of positive psychology paved a way for positive organizational scholarship (POS), which aims at studying especially positive outcomes, processes, and attributes of employees and organizations (Cameron, Dutton, & Quinn, 2003; Luthans, 2002). One of the shared domains of positive psychology research and POS is understanding the attributes, values, and functionalities involved in human flourishing. A relatively recent development of positive psychology research reinvigorates the ancient Greek philosophical idea of *eudaimonia* and uses it as an alternative lens to study human wellness in addition to the traditional hedonic lens, which mainly focuses on the subjective feelings of pleasure and happiness (Ryan & Deci, 2001; Waterman, 1993; Ryff, 1989; Ryan & Huta, 2009).

Concisely, a eudaimonic perspective of well-being focuses on "living well" by engaging one's best capacities and actively pursuing virtues and excellences (Deci & Ryan, 2008). Thus, this perspective emphasizes the process rather than subjective feelings (Ryan, Huta & Deci, 2008). Although the theoretical and empirical value of differentiating between hedonic and eudaimonia is an ongoing debate (e.g., Kashdan, Biswas-Diener, & King, 2008; Waterman, 2008; Ryan & Huta, 2009), studies generally support the view that eudaimonia serves unique functions in promoting human wellness

beyond hedonia's capabilities (Huta & Ryan, 2010; Steger, Kashdan & Oishi, 2008; Waterman, 1993).

Eudaimonia, as an illuminating concept in how to foster well-being, may have great potential in enhancing our understanding of employees' optimal functioning in the workplace. Nevertheless, a rigorous attempt to incorporate eudaimonia into organizational research is scant, although the concept of eudaimonia has been discussed in a few articles (Grant, 2008; Shamir & Eilam, 2005; Ilies, Morgeson, & Nahrgang, 2005). Thus, the overarching goal of this paper is to advance our understanding of the positive attributes and generative mechanisms in individuals by integrating the recent advancement of eudaimonia into management research. This is, nonetheless, no easy task – one of the major challenges in eudaimonic research is the conceptualization and measurement issue. The current eudaimonic literature is characterized by different definitions and operationalizations (e.g., Steger, Kashdan & Oishi, 2008; Waterman, 1993; Keyes, Shmotkin, & Ryff, 2002), but as Kashdan and coauthors put in their recent review —.none of [the current definitions and operational terms of eudaimonia] fully capture the philosophical roots of eudaimonia as described by Aristotle” (Kashdan, Biswas-Diener, & King, 2008, p.224).

To address this concern and to pave the way for the future research of eudaimonia, the first mission of this paper is to explore eudaimonia from an angle that not only embodies the essence of Aristotle's idea of eudaimonia but also is relevant to modern life. Building on an extensive review of the literature, I examine the concept of eudaimonia from an individual difference perspective and develop a trait-like higher-order construct called *eudaimonic orientation*, which describes one's desire to develop the best in one's

self and to express one's core self in the service of the greater good. It comprises three components: learning and growth orientation, self-expressive orientation, and prosocial orientation.

To date, the majority of the current eudaimonia studies focus on the direct influence of eudaimonia on well-being indicators such as life satisfaction and meaning (e.g., Huta & Ryan, 2010; Peterson, Park, & Seligman, 2005; Steger et al., 2008). Thus, the second goal of this paper is to extend the current literature by investigating eudaimonic orientation's impact on work attitudes and behaviors and by exploring the processes by which eudaimonic orientation influences the outcomes.

Eudaimonic orientation makes several contributions to the literature of eudaimonia in addition to the extant conceptualizations. First, it is close to the original meaning of eudaimonia. "Orientation" describes one's general behavioral tendencies (Frese & Fay, 2001) and thus reflects a way of living. Moreover, the multiple dimensions are able to capture the complexity of the essence of eudaimonia (Kashdan et al., 2008). Second, by conceptualizing eudaimonia from a perspective of individual characteristics, it is possible to distinguish eudaimonia from its outcomes and explore its impact, which has been a challenge for prior research (Warr, 2007; Huta & Ryan, 2010). Third, by arguing that eudaimonic orientation is the common core underlying the three dimensions, I offer a common lens to look at the three otherwise segregated fields. Some scholars have maintained that instead of creating new constructs without consideration of the existing constructs, our field will benefit more from identifying the commonalities among the existing constructs (e.g., Watson & Clark, 1984; Judge, Erez, Bono, & Thoresen,

2002). In particular, I argue that an individual's desire to learn, express him- or herself, and make a contribution all result from a broad and general desire to become a better self.

I believe eudaimonic orientation is also an important domain of inquiry to management literature. First, eudaimonic orientation may offer new insights for what factors contribute to build people's strengths and psychological capabilities over time (Cameron et al., 2003; Seligman, 2002). Some scholars have suggested that self-regulation, a process by which individuals guide goal-directed activities over time and across changing circumstances (Zimmerman, 2001; Karoly, 1993), is an important asset for personal effectiveness (Porath & Bateman, 2006). Although scholars have called for self-regulatory models that examine how dispositional variables affect performance, relatively few studies have done so (Barrick, Stewart, & Piotrowski, 2002; Kanfer & Heggestad, 1997; Mount & Barrick, 1995). Given that eudaimonic orientation represents a tendency to strive for personal excellence, it should represent a motivation-related individual characteristic. That is, eudaimonically oriented individuals should demonstrate greater volition in regulating themselves and, in the long run, maximize their personal effectiveness through expanded psychological capabilities and strengths.

Second, eudaimonic orientation may enhance our understanding of the dispositional antecedents of broader role performance. In the past decade, the criteria for performance evaluation have expanded from the exclusive in-role task performance to broader role performance (Welbourne, Johnson, & Erez, 1998; Staw & Boettger, 1990). Our knowledge of the dispositional factors that influence role performance, however, is still limited (Grant & Ashford, 2008). I suggest that eudaimonic orientation would contribute to broader performance criteria--such as adaptivity and proactivity--because of

its capability of constituting renewable individual resources and exercising self-regulation strategies (Roberts et al., 2005; Spreitzer et al., 2005).

In sum, this dissertation comprises two parts. The goal of the first part is to develop and validate a higher-order construct of eudaimonic orientation, and the goal of the second part is to build and test a model of eudaimonic orientation. In light of these two overarching goals, the paper is organized as following. First, in Chapter two, I review the literature on eudaimonia in both the philosophy and psychology disciplines by deriving several overlapping themes from the theoretical discussion of eudaimonia and summarizing the pro's and con's of the current conceptualizations and operationalizations of the construct of eudaimonia. Building upon this review, in Chapter three, I examine the concept of eudaimonia from an individual difference perspective and propose a higher-order construct called *eudaimonic orientation*. In Study 1, I develop a measure for eudaimonic orientation and empirically test the initial nomological network of eudaimonic orientation. In Chapter four, I lay out a model that proposes that eudaimonic orientation affects work outcomes by influencing the underlying motivational processes. Specifically, I argue that two sets of motivational processes-- motivational psychological states and adaptive self-regulatory strategies--mediate the relationships between eudaimonic orientation and work outcomes. I further contend that role ambiguity is likely to magnify the influence of eudaimonic orientation on work outcomes. In Study 2, I test the hypotheses with an employee sample. I then conclude the dissertation with a general discussion of this research.

CHAPTER TWO

LITERATURE REVIEW

In English, the Greek word *eudaimonia* is often translated to mean *happiness*, a term typically referring to the subjective feeling of joy or pleasure. Although this translation is not entirely inadequate – indeed *eudaimonia* (or *eudaimonism*) appears in books dealing with the history of happiness (e.g., White, 2006; McMahon, 2006)--the translation fails to fully capture the complex and rich contents of *eudaimonia* (Ryff, 1989; Waterman, 1993; Deci & Ryan, 2008). Essentially, *eudaimonia* is concerned with people living a good life by actualizing their human potentials and by bringing this excellence and virtue into action (Waterman, 1993; Deci & Ryan, 2008; Kashdan et al. 2008).

Eudaimonia as a concept has fascinated philosophers for thousands of year, ever since the term's debut in Aristotle's book *Nicomachean Ethics*. Recently the concept has caught the attention of psychologists who are interested in understanding the ingredients of a good life (Waterman, 1993; Ryff, 1989; Ryff & Singer, 2008; Ryan, Huta, and Deci, 2008). However, due to the complexity of the concept of *eudaimonia*, *eudaimonia* has been conceptualized and operationalized in various ways in behavioral science, including *eudaimonia* as personal expressiveness (Waterman, 1993), *eudaimonia* as strivings or psychological well-being (PWB; Ryff, 1989), *eudaimonia* as virtuous behaviors (Stegger, Kashdan, & Oishi, 2008), and *eudaimonia* as motives to pursue growth and excellence (Huta & Ryan, 2010).

Given the confusion and disagreement in the current literature of eudaimonia (Kashdan et al. 2008; Waterman, 2008), I think it is necessary to go back to the philosophical root of eudaimonia in order to make adequate assessments of the existing conceptualization of eudaimonia. Thus, in this section I first review the literature on eudaimonia from a philosophical perspective and then use the insights from the philosophical review as the standard of evaluation of an empirical conceptualization. Because eudaimonia and hedonia are often juxtaposed in the literature, a comparison and contrast of eudaimonia with hedonia can clarify the essence of eudaimonia. Thus, I also include research on hedonia in this chapter. As a caveat, the following summary of eudaimonia and hedonia from a philosophical point of view is by no means exhaustive. Ancient Greek philosophers along with more current ones have reflected on these subjects for such a long time that the philosophical history of happiness has books of its own (see McMahon, 2006; White, 2006). What I have tried to achieve here is a review of the key elements in those writings to lay a theoretical foundation for the focal construct of this paper – eudaimonic orientation.

Eudaimonia from a Philosophical Point of View

Ancient Hellenic discussion on eudaimonia had its roots in people's craving for happiness. Philosophers, including Plato, Epicurus, and Aurelias, all strived to understand happiness and to find a "perfect" measure for happiness and a good life. Although many schools of thought were developed during the heyday of the Greek empire (see White 2007, for a complete review), two main streams of thoughts dominated the debate: the hedonic and eudaimonic views on happiness.

In his book *A Brief History of Happiness*, White (2006) states that hedonism is the most widely accepted account of what happiness is. Hedonism argues that happiness is pleasure and therefore attaining happiness is to maximize pleasure and to minimize pain. For instance, Epicurus maintains that pleasure, conceived as the absence of pain and disturbance, is the only thing that human beings strive for from infancy (Devettere, 2002). Throughout history, however, the content of “pleasure” has evolved from a narrow perspective into a broader definition. Ancient Greek thinkers typically described pleasure as enjoyment associated with eating, drinking, sex, and other somatic sensations, whereas current hedonic theorists have broadened the range of “pleasure” to include mental enjoyment coming from altruistic action, intellectual engagement, or simply enjoyment of listening to a beautiful song (Diener, Sapyta, & Suh, 1998). The modern definition of hedonic enjoyment often refers to the positive affect associated with getting or having material objects and/or opportunities one wishes to possess or to experience (Kraut, 1979). In spite of the definition’s expanded scope, the essence of hedonism remains the same, that is: pleasure is the only gauge of happiness and the pursuit of happiness exclusively involves efforts to maintain positive feelings. It may well be due to this simple definition of happiness that numerous thinkers over time have favored hedonism..

Aristotle, however, proposed a different conceptualization of “happiness.” In an era when people typically equated a good life with a pleasant life, Aristotle’s idea that a good life should be distinguished from feeling pleased with one’s life was quite refreshing. He named this particular view about what should be pursued in a good life *eudaimonia*. In his view, a well-lived life is the one lived to its fullest potential and in

accordance with human virtue. According to Aristotle, the answer to the question, “what is the highest of all goods achievable by human action?” does not rest on gaining pleasure – pure pleasure can only turn people into slaves to our cupidity. The highest good, instead, comes from engaging in an activity that is an end itself (Aristotle, translated by Ross, 1925). Not only that, the activity should be in accordance with human virtue, and, if there is more than one virtue, in accordance with the highest virtue. In fact, the word “eudaimonia” itself delivers such a message. “*Daimon*” or “true self” refers to an ideal in which one is striving toward one’s perfection and excellence, which gives meaning and direction to one’s life. The efforts to function in accordance with one’s *daimon* give rise to a condition called “eudaimonia” (Waterman, 1993).

Among the handful of contemporary scholars who have attempted to distill Aristotle’s concept of eudaimonia, David Norton, in his book *Personal Destinies: A Philosophy of Ethical Individualism* (1976), gives one of the most thorough explications. To summarize, Norton argues that the idea of eudaimonia reflects two great Greek imperatives: know yourself and become what you are. Norton contends that it is every person’s primary responsibility to discover the *daimon* within him- or herself and thereafter to live in accordance with it. The self that we discover in the eudaimonic process is not the empirical self but the ideal of perfection, the “golden figurine” that we desire to become. The self-realization process describes the second imperative, a process in which people move from the empirical self to the ideal self. These two processes constitute the essence of eudaimonia. Norton also described why it is wrong to translate eudaimonia to “happiness” or “pleasure.” Happiness means “sum or balance of

pleasures,” and pleasure is —the feeling that attends the gratification of desire.” Neither of these measurements serve as a value-indicator, a key characteristic of eudaimonia.

Johnston (1997) also criticized the traditional translation of eudaimonia as happiness because —Aristotle means something much wider than the word happiness might suggest to us” (p. 8). In Johnston’s interpretation of Aristotle’s work, eudaimonia carries the proper condition of a well-lived life. It includes a sense of material, psychological, and physical well-being over time. It represents a number of goals desired for their own sake. We achieve eudaimonia by properly ordering those goals and by adopting an appropriate hierarchy for them. More importantly, we do not achieve eudaimonia by actively seeking it. Instead, we attain it by ordering our pursuit of our goals in the right manner. In this sense, happiness is something of a by-product of carrying out our pursuit of goals in the proper manner. And, finally, Johnston pointed out another important message of Aristotle, that is, humans are by nature social and political beings and thus eudaimonia must also take into account the essential social basis of human life.

issue of the *Journal of Happiness Studies* was devoted to the discussion of eudaimonia. In it, several scholars elaborated on the concept of eudaimonia and how it can be distinguished from hedonia. Ryff and Singer (2008) posited that eudaimonia, instead of describing the subjective states of feeling happy, represents an ethical doctrine that provides guidelines for how to live. Bauer and coauthors (2008) noted that eudaimonia, or living well, involves pleasure but also emphasizes meaningfulness and an integrative view on one’s growth as a whole. In a similar vein, Ryan and his coauthors (2008) argued that eudaimonic living requires one to live to his or her fullest potential by

actively pursuing virtues and excellences. They contended that such pursuits are different from the pursuit of power or wealth because the pursuit of excellence represents an intrinsically worthy endeavor, whereas power and wealth are ends without intrinsic values. Ryan et al. also pointed out the critical role of reflection and self-determination in eudaimonia by suggesting that our ability and willingness to see what is true and not be self-deceived and that the volition of strivings are all necessary conditions of eudaimonia.

To summarize, hedonism and eudaimonism represent two ways to approach or define happiness –hedonism equates happiness with pleasure, while eudaimonism views happiness as a process of self-actualization (eudaimonia). While the hedonist’s view has a virtue of being parsimonious and systematic, eudaimonism provides an ethical doctrine of discerning a worthwhile living from maximizing one’s pleasure. Eudaimonia is a much more complex concept than hedonia and includes several overlapping themes identified from the above review: (1) eudaimonic living focuses on the course of a well-lived life and on becoming the best one can be—not outcomes; (2) eudaimonia is about pursuing goals for their own sake, not for instrumental reasons; (3) our striving to achieve our best self is driven by our urge to express our unique character and thus is self-determined; (4) eudaimonia is being virtuous and being ethical; such ethical inquiry needs to take into account the social environment that one is embedded in; and (5) eudaimonic living requires self-reflection and reasoning.

Conceptualizations and Operationalizations of Hedonia and Eudaimonia in Psychology

In an effort to review the conceptualizations of eudaimonia, we can take either a general approach and consider all the conceptualizations under the umbrella of

eudaimonia-- the approach that Kashdan and coauthors (2008) adopted for their review-- or we can take a relatively narrower approach that examines measures specifically developed only to assess eudaimonia. Although the broader approach has the advantage of painting a more complete picture of the current status of the literature, it may suffer from the risk of confusing the core and outcomes of eudaimonia. For instance, one of the eudaimonic conceptualizations identified by Kashdan and coauthors (2008) is vitality or energetic feelings (Nix, Ryan, Manly, & Deci, 1999), which has been examined as one of the *consequences* of eudaimonia (Huta & Ryan, 2010), instead of as eudaimonia *per se*. Therefore, for the following review, I take a more restricted approach by considering only the constructs specifically developed to measure eudaimonia.

The earlier discussions of hedonia and eudaimonia in psychology often portray them as two theoretical approaches to well-being (Ryan & Deci, 2001). The hedonic well-being approach reflects the philosophical view that well-being consists of pleasure or positive feelings and thus people's perception of happiness constitute their level of well-being (Diener, 2000). Among various measures developed to measure people's hedonic well-being, subjective well-being (SWB; Deiner & Lucas, 1999) is the most widely used (Ryan & Deci, 2001). Subjective Well-Being researchers believe that well-being is an internal state that includes a person's subjective evaluations about his or her quality of life. SWB is a higher-order construct with three indicators: the frequency of positive emotions, the infrequency of negative emotions, and the general appraisal of life quality (Diener, 1984). While two components of SWB are concerned with emotional responses, the life satisfaction component reflects people's overall cognitive evaluation

of life quality. Thus, SWB is a broad construct that includes people's affective reactions and global judgments of life satisfaction (Diener, Suh, Lucas, & Smith, 1999, p. 277).

A central argument of the eudaimonic school of well-being is that reported positive emotions and satisfaction *cannot* be equated to psychological wellness; rather, psychological well-being concerns whether a person is fully functioning in various life domains and/or whether a person is engaging in activities that are consistent with his or her true self (Waterman, 1993). Built upon these theoretical arguments, eudaimonia has been conceived and operationalized as personal expressiveness (Waterman, 1993) and as psychological well-being (PWB; Ryff, 1989; Ryff & Singer, 1998). These two eudaimonia conceptualizations are often compared and contrasted with SWB, or similar feeling-focused measures in the literature, to illustrate the difference between the eudaimonic and hedonic approach (Keyes et al., 2002; Waterman, 1993).

Recent discussions of eudaimonia describe it as a way of living through which people develop the best in themselves (Ryan et al., 2008; Bauer et al., 2008); eudaimonia is often contrasted with the hedonic way of living, which focuses on the pursuit of fun, pleasure, and relaxation. In this line of research, eudaimonia has been conceptualized as virtuous behaviors (Steger et al., 2008), life orientation focusing on meaning (Peterson, Park, & Seligman, 2005), and motives to pursue personal excellence (Huta & Ryan, 2010). Thus, altogether, scholars have described five distinct, albeit similar, conceptualizations of eudaimonia. In the following, I will review these conceptualizations and discuss the advantages and disadvantages associated with each conceptualization.

Eudaimonia as personal expressiveness

Waterman's (1993) study of personal expressiveness was among the first to empirically test Aristotle's concept of eudaimonia. Based on the idea that eudaimonia requires people to live true to the self, Waterman (1993) maintains that when individuals express themselves through engaging activities, they will experience a condition called personal expressiveness, or eudaimonia. More specifically, personal expressiveness represents a psychological state characterized by (1) an unusually intense involvement; (2) a feeling of meshing with an activity, (3) a feeling of intensely being alive, and (4) a sense of fulfillment, completeness and being true to oneself. This operational definition of personal expressiveness renders a measure of the construct. Waterman (1993; 2005; 2008) argues that personal expressiveness involves different emotional feelings from hedonic happiness and thus eudaimonia and hedonia constitute ~~two~~ "two types of happiness." Moreover, an experience of eudaimonia is more strongly associated with activities targeted at realizing personal potential in the form of development and growth and/or in the form of the advancement of one's purposes of living, whereas hedonic enjoyment is more strongly associated with feeling relaxed, being content, and losing track of time. In this sense, eudaimonia is considered as an epiphenomenon or psychological response to certain activities.

Waterman's attempt to conceptualize eudaimonia as one type of happiness is similar to the English translation of eudaimonia – happiness. Waterman's conceptualization suggests that the difference between hedonic happiness and eudaimonic happiness rests on the ~~quality~~ "quality" and ~~form~~ "form" of the happiness. This claim, however, suffers from a couple of flaws. First of all, various scholars who have examined Aristotle's original work argue that by equating eudaimonia to happiness, the

core of eudaimonia is lost (Norton, 1976; Ryff, 1989; Ryff & Singer, 2008; Ryan et al., 2008; McMahon, 2004; Bauer, McAdams, & Pals, 2008). For instance, both Ryan et al. (2008) and Ryff (1989) argued that the essence of the eudaimonia is not concerned with the “feeling” *per se*, but the activities that *entail* the feeling. Indeed, Aristotle stated that, “happiness seem, however, even if it is not god-sent but comes as a result of virtue and some process of learning or training, to be among the most godlike things” (Ross, 1925, Chapter 9). Second, strong correlations (from .83 to .87) were identified between personal expressiveness and hedonic happiness in several studies (Waterman, 1993; 2008; Waterman et al., 2003). The substantial common variance shared by the two constructs raises the question of whether personal expressiveness and hedonia constitute qualitatively distinct types of happiness (Kashdan et al., 2008). The next four conceptualizations of eudaimonia shift away from this feeling/happiness focus.

Eudaimonia as psychological well-being

Ryff and Singer (2008) state that eudaimonia is “to strive to realize one’s potential” (p.18). In this school of thought, eudaimonic well-being is not a positive psychological state; instead, it consists of endeavors to actualize one’s inherent ability. In the context of developing a life span theory of human flourishing, Ryff (1989) proposed a multi-dimensional measure of psychological well-being (PWB) that consists of six aspects of optimal human functioning -- autonomy, personal growth, purpose in life, environmental mastery, self-acceptance, and positive relations with others. Autonomy refers to the level of discretion that a person has in determining his or her own actions. A person scoring high on this dimension is self-determined, independent and self-regulated. Personal growth refers to developing one’s potentialities and growing and

expanding as a person. Purpose in life considers a human's needs for a sense of direction and meaning. Environmental mastery is concerned with our ability to choose and craft the environments suitable for our mental condition. Self-acceptance, a central characteristic of mental health, refers to one's capability to accept personal strengths, as well as personal weaknesses, and still hold a positive attitude toward oneself. And finally, positive relations with others refers to creating and maintaining affectionate relationships with others in the form of love, friendship or identification. Collectively, these six sub-dimensions define PWB, or eudaimonia, both theoretically and operationally (Ryff & Singer, 1998).

Psychometrically, however, it seems that more than one latent factor underlies this holistic model of eudaimonia. For example, in the first study exploring the factor structure of PWB (Ryff, 1989), the six dimensions of PWB loaded on three factors: self-acceptance and environmental mastery loaded on factor one; purpose in life, positive relations, and personal growth on factor two; and autonomy on factor three. A more recent study juxtaposing SWB and PWB revealed a similar factor structure, except that self-acceptance cross-loaded on both factors one and two (Keyes et al., 2002). In another study aimed at understanding the factor structure of mental health measures (Compton et al., 1996), the six dimensions of PWB also appeared to load on two factors, although the dimensions on each factor were not specified in the study. Such evidence makes us wonder whether those six components are all structurally equivalent and whether they should all be considered as indicators of PWB. In other words, is it possible that some of the indicators are the precursors or outcomes, not the components, of eudaimonia?

A closer look suggests that this might be the case. For instance, some of the indicators are evaluations of behaviors (e.g., “Maintaining close relationships has been difficult and frustrating for me”; “I gave up trying to make big improvements or changes in my life a long time ago”), whereas other items assess consequences of well-being (e.g., “I find it satisfying to think about what I have accomplished in life”; “I feel good when I think of what I’ve done in the past and what I hope to do in the future”). Thus, although Ryff described eudaimonia mainly as “strivings” and “pursuits,” the measure of eudaimonia may confound the conditions or consequences with the contents of eudaimonia. Even so, Ryff’s work on PWB is important not only because it increased awareness of eudaimonia as an important aspect of a good life (Huta & Ryan, 2010) but also because the conceptualization of PWB expanded the scope of eudaimonia from a single dimension to a multi-dimensional construct.

Eudaimonia as virtuous behaviors

Steger and coauthors (2008) argued that engaging in certain activities can help people fulfill their potential and produce enduring well-being whereas other activities can only help people obtain simple and short-lived pleasure without affecting overall well-being. The well-being enhancing activities were labeled as “eudaimonic activities,” and the pleasure-inducing activities were labeled as “hedonic activities.” The authors created a eudaimonic behavior checklist, which includes seven “doing good” behaviors such as “volunteered my time” and “gave money to a person in need.” This list was contrasted with a list of seven hedonic behaviors including “got drunk” and “went to a big party.”

Operationalizing eudaimonia as virtuous behaviors has at least two advantages. First, it recognizes the importance of virtue and morality in a eudaimonic living style,

which is a missing element in the above two conceptualizations. Second, it goes beyond subjective feeling and perception and studies eudaimonia as a way of doing things, which appears to make eudaimonia more objective. Considering eudaimonia as behaviors, however, can be misleading because people may engage in the same behaviors for different reasons (Huta & Ryan, 2010). Self-determination theorists have argued that both the contents of our goals (the “what” of the goal) and the regulatory processes through which we pursue goals (the “why” of the goal) have independent effects on well-being (Deci & Ryan, 2000; Sheldon, Ryan, Deci, & Kasser, 2004). For instance, people may volunteer because they want to or because they are pressured by external forces. It is likely that volunteering for autonomous reasons is more conducive to personal growth, and thus more eudaimonic, than volunteering under pressure. Therefore, to conceptualize eudaimonia as virtuous behaviors without highlighting the underlying motives for such behaviors creates potential problems.

Eudaimonia as life orientation and as motives

Peterson, Park, and Seligman (2005) developed an *orientations to happiness* scale, which assesses people’s endorsement of three orientations – meaning, pleasure, and engagement. Among the three, the meaning orientation represents the index of eudaimonia (“I have a responsibility to make the world a better place” and “My life has a lasting meaning”) and the pleasure orientation represents the index of hedonia (“Life is too short to postpone the pleasures it can provide” and “I love to do things that excite my senses”).

Taking a slightly different approach, Huta and Ryan (2010) operationalized eudaimonia and hedonia as motives to engage in activities. Specifically, the eudaimonic

motive is to seek to —use or develop the best in oneself in congruence with one’s principles, whether or not these aims are achieved”; hedonic motive is to seek pleasure and comfort. The four items used to assess eudaimonic motive are —seeking to pursue excellence or a personal ideal,” “seeking to develop a skill, learn, or gain insight into something,” —seeking to use the best in yourself,” and —seeking to do what you believe in.”

These two approaches have several advantages over the previous conceptualizations. First, relatively speaking, these two are closer to Aristotle’s original idea of eudaimonia in the sense that they depict a more general picture of —a way of living.” Second, they overcome the potential issues associated with operationalizing eudaimonia as behaviors because instead of focusing solely on the behaviors, they tap into the general tendency and underlying intentions of the behaviors. In spite of their advantages, these two approaches are limited in terms of content. For one thing, these two conceptualizations conceive eudaimonia as a single dimension, a point that has been challenged by other scholars (Kashdan et al., 2008). Moreover, although Peterson et al. (2005) emphasized the importance of the capability to —develop what is best within themselves and then use these skills and talents in the service of greater goods” (p.26), the scale fails to take into account the self-actualization element. Likewise, the Huta and Ryan (2010) eudaimonic motive scale focuses on personal growth and does not consider the role of individuals in a broader context. Therefore, the content of both measures are somewhat deficient.

Summary

In sum, the existing conceptualizations of eudaimonia have advantages and disadvantages. The review lays out valuable guidelines to the current study of eudaimonic orientation. First, the essence of eudaimonia would be better captured by a multi-dimensional construct than a uni-dimensional construct. This point coincides with the previous review of eudaimonia from a philosophical perspective, that is, eudaimonia is a complex phenomenon characterized by a variety of facets. By conceptualizing eudaimonia as a single-dimensional construct we may lose information (Kashdan et al., 2008). Second, eudaimonia is not about subjective feelings but about the process of living well (Kashdan et al., 2008; Bauer et al., 2008; Ryan et al., 2008); thus, the orientation and motive approaches can better capture this fundamental characteristic of eudaimonia. Third, it is essential to differentiate between the content of eudaimonia and the conditions and/or outcomes of eudaimonia. Separating consequences and precursors from the contents of eudaimonia makes it possible for us to examine the eudaimonia's impact and the context that promotes eudaimonic living (Warr, 2007).

Building upon the existing studies of eudaimonia, I extend the orientation approach proposed by Peterson et al. (2005) by integrating the insights acquired from this review. Specifically, I propose a higher-order construct, *eudaimonic orientation*, which describes one's general tendency to pursue personal excellence in life. The eudaimonic orientation concept is also similar to the eudaimonic motive proposed by Huta and Ryan (2010). Motives have both personal and situational causes (McClelland, 1965; Cooper, Agocha, & Sheldon, 2000), suggesting that both stable individual characteristics and varied situations can determine whether people participate in activities for eudaimonic reasons. Eudaimonic orientation, as a relatively stable individual characteristic, may

predispose individuals to approach activities with more eudaimonic motives across situations.

In the next chapter, I illustrate the concept of eudaimonia orientation in more detail.

CHAPTER THREE

EUDAIMONIC ORIENTATION: CONSTRUCT DEVELOPMENT

Orientation describes one's general behavioral tendencies (Fay & Frese, 2001). Eudaimonic orientation refers to one's desire to develop the best in self and to express one's core self in the service of the greater good. It is a trait-like, or midrange, individual difference variable that captures people's general tendency in approaching activities across situations. By trait-like and midrange, I suggest that it can be influenced by more fundamental personality (e.g., the Big Five) characteristics and by powerful situational factors.

Structurally, based on the multi-facet nature of eudaimonia as illustrated by Aristotle and other scholars (Ryff, 1989; Kashdan et al., 2008), I conceive eudaimonic orientation as a higher-order construct comprising three dimensions that are derived from the overlapping themes obtained from the previous literature review. To recap, eudaimonia is to grow and develop as a person and become the best one can be; it involves expressing one's true self; it is about being a good "team player" whose values and excellence are gauged in a broader social environment. These three characteristics of eudaimonia then constitute the three components of eudaimonic orientation—learning and growth orientation, self-expressive orientation, and prosocial orientation.

Before I discuss each of the three components, I want to explain why I do not include self-reflectivity—an iterative theme in scholars' elaborating of eudaimonia (e.g., Ryan & Huta, 2009; Norton, 1976)—as a theoretical component of eudaimonia. I agree that eudaimonic living cannot be achieved without reflectivity. Indeed, psychologists and

organizational scholars who investigated mindfulness, a concept akin to self-reflectivity, have suggested that an individual's awareness of what is truly happening (Ryan et al., 2008) and active information processing (Langer, 1989) were associated with less discrepancy between the core self and goals, more intrinsic values on the individual level (Brown & Ryan, 2003), and more discriminating decisions in the face of group thinking (Fiol & O'Connor, 2003). These results imply that people's strivings for self-expression, and other goals with intrinsic values, entail a certain level of self-reflectivity. Stated differently, the pursuit of personal growth, of self-expression, and of contribution, cannot be achieved without a certain level of self-reflexive capability. Accordingly, the capability of reflectivity either is implied in the concept of eudaimonic orientation or would be more appropriately theorized as a necessary condition facilitating eudaimonia at work. Thus, I do not consider self-reflectivity an individual component of eudaimonic orientation.

In the following, I illustrate each of these three dimensions in more detail. One of the objects of the following paragraphs is to relate the three dimensions to other existing constructs in the literature. The existing eudaimonia literature is not clear regarding how each of the conceptualizations of eudaimonia fit into the bigger picture of psychological research (i.e., how the measures of eudaimonia are linked and distinguished from other related concepts in the literature). The lack of an established nomological network makes the eudaimonia research appear somewhat isolated from other psychological research, which limits the contribution of this field. On the basis of this observation, in the following discussion, I first seek to link each component of eudaimonic orientation with related concepts in psychology and management research, then explain why eudaimonic

orientation operates as the latent factor underlying the three components. Finally I differentiate the higher-order concept of eudaimonic orientation from other established constructs.

The Three Dimensions

Learning and growth orientation

The learning and growth orientation dimension refers to an individual's desire to learn, gain insight, and develop as a person. This dimension comes closest to Aristotle's idea of eudaimonia because it explicitly deals with self-actualization (Ryff & Singer, 2008). Eudaimonistic philosophy considers self-actualization as a supreme ethical goal, a way by which one can live well and achieve a state of eudaimonia (Norton, 1976). Similarly, psychologists suggest that eudaimonia occurs when people develop their ultimate potential or capabilities and bring this excellence into action (Kashdan et al., 2008; Waterman, 2008; Ryan et al., 2008; Vittersø, 2004). Growth and development are also the central concerns in Maslow's self-actualization theory (1954). Self-actualization, the top need in Maslow's need hierarchy, is the tendency to "become actualized in what he (the individual) is potentially" (p. 382). Rogers (1961), in discussion of fully functioning human beings, also suggested that a person's openness to experience, characterized by his or her continuous efforts to develop and become, is essential to an individual's full functioning.

More broadly, the learning and growth dimension of eudaimonic orientation is related to learning goal orientation (Dweck, 1986; Elliot, 1999), which has received wide attention in education, psychology, and organizational research (e.g., Grant & Dweck, 2003; Button, Mathieu, & Zajac, 1996; Janssen & Van Yperen, 2004). Although

different researchers have used various labels for this dimension (e.g., mastery goals, Ames, 1992; task involvement, Nicholls, 1984), the consensus is that individuals with a learning goal orientation tend to focus on the development of competence through learning and task mastery (Elliot & McGregor, 2001). Learning goal orientation, as measured in both psychology and management literature, is mainly concerned with learning materials and task-based skills (Elliot & Church, 1997; Button et al., 1996; Janssen & Van Yperen, 2004; Grant & Dweck, 2003). What the learning and growth subdimension of eudaimonic orientation adds is the equal emphasis on striving for psychological growth. In other words, eudaimonic orientation is not only concerned with the intention to learn skills or knowledge but also is concerned with the desire to gain insights about life in general in order to achieve psychological growth and development (Ryff & Singer, 1998). In this sense, the learning and growth dimension of eudaimonic orientation expands the base of learning for the existing learning goal orientation.

Self-expressive orientation

The self-expressive orientation refers to one's desire to seek congruence between behaviors and the core self, including one's traits, values, and competencies. Acting authentically to one's true nature is of the essence in Hellenic eudaimonism. Norton (1976) described eudaimonia as the condition of "living in harmony with one's daimon" (p. 216). *Daimon* in this context refers to the "true self" beneath one's appearance. Similarly, Johnston (1997) argued that the excellence of a human being is associated with growth towards some final realization of one's true nature. Humanistic psychologists also emphasized the importance of core-self integration in promoting well-being. Rogers (1961) argued that only authentic persons are able to engage entirely in the

process of becoming fully-functioning human beings. Similarly, Maslow (1954) depicted self-actualizers as people who constantly engage in behaviors that naturally reflect their personality, values and commitment. In discussing the stages of ego development, Loevinger (1976) describes the higher level of ego development as having more integrated organismic unity and autonomous functioning.

Self-expressive orientation suggests that eudaimonic-oriented individuals are autonomous and self-determined. Instead of being easily shaken in their perceived competence and sense of self, eudaimonic-oriented individuals have a clear picture of their sense of self and use this as a source of information to initiate and regulate their behaviors (Deci & Ryan, 1985). Alternatively speaking, eudaimonic-oriented individuals tend to perceive their behaviors as freely chosen so that they actively seek out opportunities that are consistent with their personal values and interests (Baard, Deci & Ryan, 2004). In this sense, people with a self-expressive orientation are more likely to search for ways to internalize external goals and to set self-concordant personal goals, goals that reflect their actual passions, interests and values and that are pursued for autonomous reasons (Sheldon & Elliot, 1999; Sheldon & House-Marko, 2001).

Although there has been ample evidence of the dysfunctional outcomes of being inauthentic at work (e.g., Hochschild, 1983; Rafaeli & Sutton, 1987; Grandey, 2003), the organizational literature has for a long time been relatively silent about the role of self-expression and authenticity in organizational life. This situation, however, is changing with the development of authentic leadership theory, in which the concordance between leaders' behaviors and leaders' deep-held values is one of the key characteristics of authentic leaders (Shamir & Eilam, 2005; Walumbwa, Avolio, Gardner, Wernsing,

Peterson, 2008; Avolio & Gardner, 2005; Ilies, Morgeson, & Nahrgang, 2005).

Interestingly, some scholars have linked authentic leadership to eudaimonia in their efforts to develop authentic leadership theory. For instance, Shamir and Eilam (2005) claimed that authentic leaders are eudaimonically motivated in that they fully engage in self-actualization and using their competence, skills, and talents. Ilies, Morgeson, and Nahrgang (2005) took this idea a step further and theoretically explored the processes by which authentic leadership influences both leader and follower eudaimonic well-being. These theoretical discussions suggest that self-expression or authenticity is indispensable to eudaimonic orientation.

Prosocial orientation

Prosocial orientation is reflected in the propensity to benefit the lives or work of others and to contribute to a broader context. One of the Aristotle's arguments, which was often ignored or not explicitly articulated in scholars' explanation of eudaimonia, was that humans' excellence should be examined in the social environment they are embedded in. Aristotle claimed that human beings are, first and foremost, social and political beings (Ross, 1925). We are enclosed in an environment that shapes our purposes and values in relation to other members of the community and to overall unity. What enables someone to contribute to the environment and to be recognized as an excellent contributor is a measure of the person's worth or excellence (Johnston, 1997). Contemporary self-theorists (Gecas, 1982; Baumeister, 1991; Crocker & Wolfe, 2001; Shamir, 1991) also place emphasis on our pursuit of morality by contending that self-worth, a sense of virtue and moral worth concerning personal and interpersonal conduct, is an important source of our self-evaluation. Thus, eudaimonically oriented individuals

are not only interested in being all they can be but also care about making a difference through their endeavors, what I label the prosocial orientation.

The prosocial orientation is related to, but different from, prosocial motivation. In the literature, prosocial motivation typically has been conceptualized in both trait-like and state-like terms. As a relatively enduring personal characteristic, prosocial motivation represents the values of concern for others (Meglino & Korsgaard, 2004) and the traits of empathy and helpfulness (Penner, Fritzsche, Craiger, & Freifeld, 1995). As a less stable psychological state, prosocial motivation is reflected in the goals of benefiting and helping others, which has been conceptualized as a temporary state that can be prompted through contacts with beneficiaries (Grant, 2007). In this sense, prosocial motivation represents a broader concept than prosocial orientation. Furthermore, prosocial orientation is not completely equivalent to prosocial motivation because a person's prosocial orientation is not only concerned with helping others but also with being a part of a bigger entity than oneself.

Prosocial orientation is also different from another widely researched construct, task significance (Hackman & Oldham, 1975; Morgeson & Humphrey, 2006). Task significance refers to the degree to which the job has a substantial impact on the lives of other people, either in the immediate organization or in the external social environment. Therefore, unlike the trait-like prosocial orientation, task significance describes people's perception of the job characteristic in terms of social significance.

To summarize, eudaimonic orientation is concerned with the desire to pursue personal excellence through developing one's potential and expressing one's true values and talents in the service of contributing to a bigger scheme of things. Altogether, the

three components portray a picture of a lifestyle in which individuals actively seek to actualize their potential by not only pursuing these three virtuous goals but also by constantly infusing these goals into their motives for daily roles and tasks.

Eudaimonic Orientation as a Higher-Order Construct

Essentially, the three dimensions of eudaimonic orientation are not entirely new. Related concepts have been studied in psychological and management literature, but they have been studied largely in isolation from each other. In this section, I propose that eudaimonia is the latent factor underlying these three components; that is, the desire to improve oneself, to express oneself, and to make a contribution all result from a broad and general desire to achieve personal excellence.

First, conceptually, all three dimensions have the concept of core self as a motivational basis and they are all rooted in an individual's quest for excellence. The learning and growth orientation enhances our competence by taking a learning approach; we use self-expressive orientation to obtain a sense of authenticity about ourselves by aligning behaviors with our core self; and prosocial orientation enhances our social worthiness by benefiting others and making a difference on a broader context. Indeed, identity theorists have suggested that competence, authenticity, and social-worthiness are all cornerstones for a person's positive identity (Kreiner & Sheep, 2009; Ashforth & Kreiner, 1999; Roberts et al., 2005).

Second, indirect empirical evidence suggests that the three dimensions are connected. The connection between personal growth and self-expression was suggested by Sheldon et al. (2001). Sheldon and coauthors found that people with more self-

concordant goals were more likely to take advantage of learning opportunities. Given that autonomous individuals are more likely to have self-determined motivation (Lam & Gurland, 2008), the tendency to learn should be positively related to autonomous orientation. An autonomous orientation has also been linked to prosocial concerns. For instance, Gagné (2003) found that autonomously oriented individuals were more likely to engage in prosocial behaviors, suggesting a positive relationship between our tendency to help and our tendency to express ourselves. In the context of work, learning orientation was positively associated with perceived responsibilities toward extra-role behaviors (Parker & Collins, 2010), suggesting that learning oriented individuals may be more prosocial in nature. Therefore, the empirical evidence seems to indicate a positive relationship among the three dimensions of eudaimonic orientation.

Third, empirical evidence also suggests that the three dimensions share similar patterns with some criterion variables. For example, a learning goal orientation has been linked to a wide range of task performance (e.g., Button et al., 1996; Farr, Hofmann, & Ringenbach, 1993; Phillips & Gully, 1997; Van Yper & Janssen, 2002), sustained motivation (Grant & Dweck, 2003), and job satisfaction (Janssen & Van Yperen, 2004). Similarly, autonomous orientation leads to more self-determined motivation (Lam & Gurland, 2008), which in turn predicts job satisfaction and sustainable effort in goal attainment, performance, and job satisfaction (Lam & Gurland, 2008; Judge et al., 2005; Bono & Judge, 2003; Sheldon & Elliot, 1999; Baard et al., 2004). Finally, research indicates that prosocial motivation was linked to job satisfaction, persistence, and better work performance (Grant, Campbell, Chen, Cottone, Lapedis, & Lee, 2006; Grant, 2008). This evidence put together discloses similar patterns of the three dimensions with a group

of criterion variables, suggesting that the three dimensions share at least a partial overlap in their nomological network, which further indicates the value of considering the higher-order construct (Judge et al., 2002; Block, 1995).

To sum, both conceptual and empirical evidence point to a certain level of redundancy among the three dimensions of eudaimonia, suggesting the value of examining their shared commonality. This shared commonality is eudaimonic orientation, an individual's general aspiration to strive for personal growth and excellence.

Distinguishing Eudaimonic Orientation from Related Constructs

As part of the conceptual development of eudaimonic orientation, I distinguish it from related constructs of intrinsic aspiration, growth need strength, self-actualization, and hedonic orientation.

First, despite the fact that both eudaimonic orientation and intrinsic aspiration are based on humanistic theories of human development (Rogers, 1961; Maslow, 1954), they can be distinguished from each other conceptually and structurally. Intrinsic aspiration refers to four goals that are inherently satisfying to the individual – self-acceptance, quality relationships, communal feelings, and physical health (Kasser & Ryan, 1996). Conceptually, unlike eudaimonic orientation, intrinsic aspiration is not conceptualized as a trait-like variable but rather as four specific targets or goals. The level of a person's aspiration is posited as a function of his or her environment and the person's stable tendencies (Elliot & Fryer, 2008). As far as the specific contents are concerned, although eudaimonic orientation and intrinsic aspiration share one common component of benefiting others, quality relationships with family and friends and physical health are not

components of eudaimonic orientation, and self-expressiveness is not captured in intrinsic aspiration. Meanwhile, intrinsic aspiration emphasizes the psychological state of self-acceptance – whether we are in control of our own lives and accept who we are, whereas eudaimonic orientation focuses on the behavior (e.g., learning, gaining insights into something) that leads to personal growth.

Second, eudaimonic orientation and growth need strength are similar in that they both evaluate people's needs for developing themselves beyond where they are now. Growth need orientation (GNS, Hackman & Oldham, 1975), however, is mainly focused on people's orientation toward job characteristics. As a result, GNS evaluates growth orientation from a job characteristic point of view, based on the assumption that individuals who prefer challenging work, an autonomous working environment, and a sense of accomplishment from work have a stronger growth orientation (Hackman & Oldham, 1980). Eudaimonic orientation, in contrast, evaluates people's growth orientation in all life settings, not only in the context of work. In this sense, eudaimonic orientation represents a broader construct..

Third, although the conceptualization of eudaimonic orientation draws heavily on Maslow's self-actualization, the two theories differ in fundamental assumptions. According to Maslow (1954), self-actualization-- the need to reach one's full potential-- occurs only when all the lower level needs (e.g., safety, esteem) are satisfied. As such, self-actualization is a phenomenon that occurs in only 2% of the population (Maslow, 1968). In contrast, I deem that eudaimonic orientation is a much more common individual characteristic. Moreover, people can still take on a eudaimonic living style even when their lower needs (e.g., physiological) are not satisfied (imprisoned Nelson

Mandela is an excellent example). With respect to the specific measure for self-actualization, Jones and Crandall's short index of self-actualization (1986) has been widely used in psychological studies (e.g., Kasser & Ryan, 1993; 1996; Ryan & Fredrick, 1997; Sheldon & Kasser, 1995). Although Maslow's original idea of self-actualization touched upon many different concepts and topics, Jones and Crandall's measure of self-actualization mainly focuses on the discovery of the real self and self-acceptance. Eudaimonic orientation, in contrast, puts equal emphases on learning, expressing oneself, and making a difference. In this sense, eudaimonic orientation is a much broader construct than self-actualization.

Fourth, eudaimonic orientation can also be distinguished from hedonic orientation, which refers to people's emphasis on pleasure, comfort and enjoyment in life. As mentioned in the previous literature review, eudaimonia was often compared and contrasted with hedonia in philosophical discussions of happiness. Among psychologists today, the debate regarding the hedonic-eudaimonic distinction is still ongoing (e.g., Kashdan, Biswas-Diener, & King, 2008; Ryan et al., 2008; Ryan & Huta, 2009; Waterman, 2008; Keyes et al., 2002; Waterman, Schwartz, & Conti, 2008; Peterson, Park & Seligman, 2005). Huta and Ryan (2010) argued that the confusion surrounding the hedonic-eudaimonic distinction is due to unparallel and imprecise conceptualizations and operationalizations of the two constructs in the literature. When they operationalized eudaimonia and hedonia as two types of motives for activities – seeking personal excellence and seeking pleasure or comfort -- Huta and Ryan (2010) found that eudaimonia and hedonia are not only different structurally but also serve different

functions in promoting psychological wellness. Building upon their study, I expect a similar differential pattern for hedonic and eudaimonic orientation.

Study 1

The overarching goal of Study 1 is to develop and validate a measure for eudaimonic orientation. In the first part of Study 1, I developed a measure called eudaimonic orientation scale (EOS); in the second part of the study, I examined the psychometric characteristics of this scale by evaluating its factorial structure, its relationship with other variables in the nomological network, and its power in explaining additional variance in the criterion variables.

Method

Participants and Procedures

Netemeyer et al. (2003) argued that for pilot testing and initial psychometric property assessment, convenience samples such as college students may suffice. Therefore, for the pilot study and the initial scale validation, I collected data from a sample of students enrolled at a large Midwestern university. The data were collected from two sources: undergraduate students enrolled in an introductory management course and their friends enrolled at the same campus. Participants were asked to first complete an online survey and then to forward a survey link to their friends who knew them well. Participants who completed the online survey received extra course credit, regardless of whether they forwarded the survey to their friends. In order to allow matching of self- and peer reports, focal participants were asked to enter their names on the first page of

the survey and the peer participants were asked to enter the name of the person who sent them the link. The peer surveys were completed online. Thus, participants did not have access to the survey completed by their peer. The measures included in the online survey are listed in the next section.

Seven hundred individuals completed the focal person survey, and 194 peer surveys were returned. The response rate was 80% for the focal person survey and 28% for the peer survey. For the focal person survey, participant ages ranged from 18 to 44 years ($M = 20.68$, $SD = 2.88$); 55.7% were male students. In terms of ethnicity, 86.6% were Caucasians, 5.7% were African Americans, 4.7% were Asians, 1.1% were Hispanics, and 1.8% were others. In order to compare the participants with and without the peer survey, I conducted an independent t-test on 17 variables; 4 differences were significant at the level of $p < .05$. The results indicated that the participants with a returned peer survey were more eudaimonically oriented ($p = .04$), more conscientious ($p = .03$), had greater growth-need strength ($p = .02$) and a more internal locus-of-control ($p = .05$). I also calculated the effect size to check whether the differences were substantive. The effect sizes ranged from .07 to .09, suggesting small differences.

Measures

All the following measures are listed in Appendix II. Unless otherwise stated, the following measures were included only in the focal person survey.

Eudaimonic Orientation Scale (EOS) EOS was measured with the items developed for this study (discussed in detail below). The EOS scale was included in both the focal person and peer surveys. The initial item pool for EOS is listed in Appendix I.

Variables in the nomological net

Locus of control Locus of control was measured with the Internality subscale of Levenson's (1981) Internal, Powerful others, and Chance (IPC) Scale. Sample items include "my life is determined by my own actions" and "whether or not I get into a car accident depends mostly on how good a driver I am." Responses were based on a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). The Cronbach's alpha for the 8-item scale was .71.

Self-esteem Rosenberg's (1965) 10-item Self-Esteem Scale was used. Sample items include "I feel that I have a number of good qualities" and "I feel that I am a person of worth, at least on an equal basis with others." Responses were evaluated on a 5-point scale ranging from 1 = strongly disagree to 5 = strongly agree. The Cronbach's alpha was .88.

Big Five personality The Big Five personality traits was measured with the International Personality Item Pool (IPIP) <http://ipip.ori.org/newQform50b5.htm> (Goldberg, 1999). This scale contains 50 items, with 10 items for each of the Big Five personality traits. Items were measured on a 5-point scale, with 1 = very inaccurate and 5 = very accurate. Sample items include "I feel comfortable around people" (extraversion), "I sympathize with others' feelings" (agreeableness), "I am exacting in my work" (conscientiousness), "I get stressed out easily" (emotional stability), and "I have a vivid imagination" (open-mindedness). The Cronbach's alphas ranged from .81 to .92.

Demographic variables include age, gender (1 = male; 2 = female), and ethnicity.

Contrasting variables

Intrinsic Aspiration Kasser and Ryan's intrinsic aspiration index (Kasser & Ryan, 1993; 1996) assessed two aspects of intrinsic aspirations: the importance of each

aspiration and the likelihood of achieving it. Their studies calculated separate scores for each type of aspiration and examined analyses of both importance and likelihood. , Because the likelihood dimension measures the degree to which the external environment allows the subjects to pursue those goals, however, it is not meaningful to compare it to EOS. In contrast, the importance dimension, which *is* concerned with internal causes, is more parallel to EOS. Therefore, for comparison. I focused on the importance dimension of the intrinsic aspiration index. Responses for the importance dimension were on a 5-point scale: 1 = not at all, 5 = very important. Sample items include “you will be the one in charge of your life” (self-acceptance); “you will share your life with someone you love” (affiliation); and “you will help others improve their lives” (communal feelings). The Cronbach’s alpha for the 18-item scale was .88.

Growth need strength Hackman and Oldham’s 6-item scale was used to measure growth need strength (Hackman & Oldham, 1980). Participants responded on a 7-point Likert-type scale (1 = strongly disagree; 7 = strongly agree). Two sample items are: “I would like to have the opportunities to be creative and imaginative in my work” and “I would like to have a sense of worthwhile accomplishment in my work.” The Cronbach’s alpha for the 6-item scale was .86.

Hedonic orientation The three items for hedonic orientation were adapted from Huta & Ryan’s hedonic motive subscale. The items include “I seek enjoyment in my life” and “I seek to have fun in my life.” Participants responded on a 7-point Likert-type scale (1 = strongly disagree; 7 = strongly agree). The Cronbach’s alpha for the 3-item scale was .86.

Criterion variables

Life satisfaction was assessed using the 5-item *Satisfaction With Life Scale* (Diener, Emmons, Larsen, & Griffin, 1985). Two sample items are: “I am satisfied with my life” and “in most ways my life is close to ideal.” The Cronbach’s alpha was .87.

Meaning in life The Presence subscale of the Meaning in Life Questionnaire (MLQ; Steger, Frazier, Oishi, & Kaler, 2006) assessed the degree to which participants feel that their lives are meaningful in general. Items are rated on a 7-point Likert scale from 1 (absolutely untrue) to 7 (absolutely true). The MLQ has shown good psychometric properties (e.g., Steger & Frazier, 2005). The sample items include “my life has a clear sense of purpose” and “I have a good sense of what makes my life meaningful.” The Cronbach’s alpha for the 5-item scale was .91.

Positive affect Positive affect was assessed with 10 items from the Positive Affect and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). Instructions asked participants to rate their general feelings in terms of 10 adjectives on a 5-point Likert scale from 1 (very slightly or not at all) to 5 (extremely). The Cronbach’s alpha was .86.

Academic performance was assessed with the self-reported GPA. *Socializing* was measured with self-reported daily hours spent on socializing with friends.

The following three scales were all rated on a 5-point Likert type scale from 1 (strongly disagree) to 5 (strongly agree) and were included in both the focal person and peer surveys. For these scales, the focal respondents indicated the extent to which they engaged in the behaviors, whereas peers indicated the extent to which the focal person engaged in the behaviors.

Interpersonal helping Helping was assessed with 4 items adapted from Moorman and Blakely's interpersonal helping scale (1995). The sample items include "goes out of his/her way to help others with problems" and "voluntarily helps others who have needs." The Cronbach's alphas for the focal person and peer respondents were .82 and .88, respectively.

Voice The 3-item measure for voice was adapted from the voice measure by Van Dyne and LePine (1998). A sample item is "speaks up and encourages other students to get involved in issues that affect our lives as students." The Cronbach's alphas were .86 and .83 for the focal person and peer respondents, respectively.

Taking Charge Taking charge was evaluated with a 7-item scale adapted from Morrison and Phelps (1999). Two sample items are "tries to bring about improved procedures" and "tries to implement solutions to pressing problems." The Cronbach's alphas were .93 and .89 for the focal person and peer respondents, respectively.

EOS Development, Data Analysis, and Results

Stage 1: Generating and judging measurement items

A separate scale measured each of the three dimensions of eudaimonic orientation; the initial pool of items was either created or adapted from previous research (See Appendix I). The learning and growth orientation subscale was partly based on the following scales: mastery orientation (Van Yperen & Janssen, 2002), learning goal orientation scale (Button et al., 1996), learning goal (Elliot & Church, 1997), Hedonic and Eudaimonic Motives for Activities (HEMA; Huta & Ryan, 2010), and personal growth subdimension of psychological well-being (Ryff, 1989). The self-expressive

orientation was partly drawn from a subscale of the Authenticity Inventory, Version 3 (AI-3; Kernis & Goldman, 2005) and from a self-role fit scale (Farmer & Van Dyne, 2008). The prosocial orientation subscale is partly adapted from the prosocial motivation (Grant, 2008; Grant & Sumanth, 2009), task significance scales (Morgeson & Humphrey, 2006), and communal feeling subscale from Kasser and Ryan's intrinsic aspiration index (Kasser & Ryan, 1993; 1996). The initial EOS contains 33 items in total, with 12 items for the learning orientation subscale, 11 items for the self-expressiveness subscale, and 10 items for the prosocial orientation subscale.

After the initial pool was generated, I established the content and face validity of the item pool. To do this, I asked nine doctoral students in the field of organizational behavior to categorize the items into three groups based on the definitions provided. The learning orientation was defined as "one's desire to learn, to gain insights into something, and to develop as a person"; the self-expressive orientation was defined as "one's desire to seek congruence between behaviors and the self, including one's traits, values, and competencies"; and the prosocial orientation was defined as "one's desire to benefit the lives or work of others and to make a difference through one's actions." The judges also were provided with a "Not sure" category for the items they had trouble categorizing. The initial pool demonstrated good content and face validity. Twenty-nine items that were correctly categorized by at least seven of the nine judges (78%) were retained, and the four items that failed to meet such a criterion were examined and re-worded. Moreover, three more items were added to the item pool. This step generated a 36-item EOS that was included in the online survey.

Stage 2: Structural Properties and Evidence of a General Factor

The purpose of this stage of study was to examine conditions necessary to establish the construct validity of EOS. Specifically, I examined the factor structure of the items and the reliability of the subscales.

Exploratory factor analysis

To examine the factor structure of the items, I randomly selected half of the sample ($n = 350$) and used it for the following exploratory factor analysis (EFA) and reliability test. Although the implicit assumption underlying the use of EFA is that the researcher has a limited idea regarding the dimensionality of the constructs, EFA can help the researcher to gain insights regarding the potential dimensionality of items and scales (Netemeyer et al., 2003). Meanwhile, EFA can also provide guidance in trimming the number of items in a scale so that the remaining items maximize the variance in the scale (Netemeyer et al., 2003).

A principal component analysis (PCA) was conducted on the 36 items of the initial EOS. Because the latent factors are theorized to be correlated, I used the oblique rotation (promax). Eight factors had eigenvalues over Kaiser's criterion of 1 and in combination explained 64% of the variance. Although Kaiser's criterion to extract factors based on eigenvalues is used commonly in the literature, some authors have argued that this method tends to overestimate the number of factors to retain (Nunnally & Bernstein, 1994). Therefore, I relied on the underlying theory and the scree plot to determine the extracted factors to retain.

Specifically, since I theorized that the items comprised three related factors-- learning orientation, self-expressive orientation, and prosocial orientation-- I expected that only three factors should be extracted from the EFA. Although the scree plot is a bit

ambiguous, the inflexion point on the plot justified retaining three factors. Therefore, I re-ran the EFA, specifying three factors to be extracted.

A pattern matrix and a structural matrix are generated when an oblique rotation is conducted. The pattern matrix contains the factor loadings and is comparable to the factor matrix in the orthogonal rotation. The structure matrix indicates the correlation between items and factors. Since I was interested in refining the EOS scale based on factor loadings, it was more appropriate to interpret the pattern matrix. Table 1 presents the factor loading after the promax rotation from the pattern matrix. The rotated solution provides strong support for the presence of three underlying factors, with all items loading substantially on only one factor. Except for two items, the interpretation of the three factors was consistent with the three-factor structure proposed - all prosocial orientation items loaded strongly on Factor 1, most learning orientation items loaded strongly on Factor 2, and most self-expressiveness items loaded strongly on Factor 3. These three factors explained 45% of the total variance in the items.

Items LO13 and SE6 had factor loadings less than .45. To determine whether to retain those items, I examined the coefficient alphas for those subscales with and without those items. The results showed that the subscale reliability improved when the two items with low factor loadings were removed from the scale. Based on this evidence and the EFA results, I deleted these two items from the scale. As a result, the Cronbach's alphas for each subscale were .88 for learning orientation (12 items), .78 for self-expressiveness (11 items), and .93 for prosocial orientation (11 items).

Confirmatory factor analysis

The exploratory factor analysis provided good support for the hypothesized measurement model, and thus I proceeded to test it using confirmatory factor analysis on the second half of the sample (N = 350). Researchers have argued that fitting a measurement model with too many items is an overly constructed approach that may yield poor fit (e.g., Kishton & Widaman, 1994; Quintana & Maxwell, 1999). Therefore, I formed three parcels for each of three sub-dimensions to represent the indicators of the latent constructs. The parcels were formed in an ordinal manner. For instance, the 1st parcel of learning orientation was formed by averaging the scores of items LO1- LO4, the 2nd parcel was formed by averaging the scores of items LO5 - LO8, and the 3rd parcel of learning orientation was formed by averaging the scores of the rest of the learning orientation items (LO9 - LO12). A similar procedure was applied to construct the 3 parcels for the prosocial orientation. For the self-expressive orientation, I grouped the four reverse-coded items (SE9 - SE12) to create a parcel and the rest of the 8 items to create another 2 parcels.

Table 1
Exploratory Factor Analysis: Rotated Factor Loadings

Scale Item		Factor		
		1	2	3
PS6	It is important for me to do good for others.	.81		
PS7	I would like to benefit others through my endeavors.	.80		
PS10	I'll work for the betterment of society.	.80		
PS4	It is important to me to have the opportunity to use my abilities to benefit others.	.79		
PS11	Being able to make a difference through my endeavors is important to me.	.78		
PS3	I do my best when I feel that I'm contributing to the well-being of others.	.78		
PS9	I'll work to make the world a better place.	.76		
PS8	Being able to contributing to the broader scheme of things is important to me.	.74		
PS2	I get energized by working on tasks that have the potential to benefit others.	.68		
PS5	I hope to have positive impact on others inside and outside the organization I am working at.	.68		
PS1	I want to have positive impact on others.	.53		
LO3	The opportunity to learn new things is important to me.		.75	
LO2	I like to acquire new knowledge and to develop new skills.		.73	
LO10	I always seek to develop a skill, learn, or gain insight into something.		.71	
LO4	I prefer to work on the tasks that force me to learn new things.		.69	
LO7	I am interested in extending the range of my abilities.		.68	
LO5	The opportunity to do challenging work excites me.		.66	
LO11	I am interested in activities that will expand my horizons.		.61	
LO1	I always pursue excellence to get the maximum out of myself.		.58	
LO8	It's important for me to have new experiences that challenge how I think about myself and the world.		.58	
LO9	I believe life is a continuous process of learning, changing, and growth.		.54	
LO6	I seek to perform to my potential.		.54	
LO12	When I engage in something, I always try to get the best out of myself.		.50	
LO13	No matter what the outcome of a project, I am satisfied if I feel I gained a new experience.		-	

Table 1
Exploratory Factor Analysis: Rotated Factor Loadings
(Continued)

	Scale Item	Factor		
		1	2	3
SE11	I've often done things that I don't want to do merely to gain approval from others.		.61	
SE7	I would not change my opinion (or the way I do things) in order to please someone else or win their favor.		.58	
SE12	I pursue goals that are unimportant to me in order to please others.		.57	
SE2	I am willing to endure negative consequences by expressing my true beliefs about things.		.54	
SE10	I am willing to change my actions if the rewards are desirable enough.		.52	
SE4	Being able to express my beliefs and values is important to me.		.52	
SE3	The opportunity to exhibit my true self is important to me.		.51	
SE1	I try to act in a manner that is consistent with my personally held values, even if others criticize or reject me for doing so.		.48	
SE8	I speak my mind freely even when there might be negative results.		.47	
SE5	I seek work opportunities that allow me to be who I really am.		.45	
SE9	I find it easy to pretend to be something other than my true self.		.45	
SE6	I don't like engaging in activities that don't fit who I am as a person.		-	

To create a second-order measurement model, I first allowed the three parcels of each subscale to load on their own latent factors (i.e., learning orientation, self-expressive orientation, and prosocial orientation) and then allowed these latent factors to load on an additional single factor, eudaimonic orientation. To examine alternative factor structures, I compared the above second-order factor model to several competing models: (1) a first-order one-factor model, (2) a three-factor model, and (3) multiple two-factor models. The first-order one-factor model was created with the nine parcel indicators loading on one latent variable; the three-factor model was created with nine parcel indicators loading on three uncorrelated latent variables; and the multiple two-factor models were created by combining the item parcels of any of the two facets to form one latent factor and allow the rest of item parcels to load on another latent factor. Three two-factor models were constructed. For the first two-factor model, Model A, I combined the six parcels of learning orientation and self-expressive orientation to form one latent factor with the prosocial parcels loading on the other factor. For Model B, I allowed the six prosocial and self-expressiveness orientation parcels to load on one factor and the learning orientation parcels to load on the other factor. For Model C, I combined the indicators of learning orientation and prosocial orientation and allowed the rest of self-expressiveness indicators to load on the other factor.

Table 2 presents the model fit results on the following statistics: chi-square (χ^2) with corresponding degree of freedom, Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), and Root-Mean-Square Error of Approximation (RMSEA). The chi-square of the second-order one-factor model is 53.83 with 24 degrees of freedom ($\chi^2/df = 2.24$). The other fit statistics were: AGFI = .97; GFI

= .98; CFI = .99; and RMSEA = .04. All the fit statistics represented a very good fit of the hypothesized model to the data. In order to test whether the hypothesized second-order one-factor model represents a superior model to the alternative models, I conducted a series of chi-square tests. The differences in chi-square tests showed that the hypothesized model represented a better fit than the alternative models. Therefore, the overall result indicated that it is appropriate to view eudaimonic orientation as a higher-order construct of three orientations.

Table 2
Fit Statistics from Confirmatory Factor Analysis of Single Dimensional Structure of Eudaimonic Orientation

Model	CMIN	DF	$\Delta\chi^2$	AGFI	GFI	CFI	RMSEA
Second-order one-factor model	53.83	24	-	.97	.98	.99	.04
First-order one-factor model ^(a)	973.49	27	919.66**	.55	.73	.67	.22
Three-factor model ^(b)	376.69	27	322.86**	.97	.98	.99	.14
Two-factor model ^(c)							
Model A	281.99	26	228.16**	.85	.91	.91	.12
Model B	288.3	26	234.47**	.85	.91	.91	.12
Model C	781.83	26	728.00**	.60	.77	.74	.20

Note: $n = 350$ ** $p < .01$.

^(a) In this model, nine parcel indicators were loaded on one latent variable.

^(b) In this model, nine parcel indicators were loaded on three uncorrelated latent variables.

^(c) Each model was created by combining the indicators of any of the two facets to form one latent factor and allowing the rest of item to load on another latent factor.

Reliability

Because the confirmatory factor analysis supported the higher-order factor structure, it was appropriate to examine the reliability of the whole scale. Internal

consistency was used as a criterion for reliability. The Cronbach's alpha for EOS was .91 (N = 700).

For the next step, I examined the inter-rater reliability of EOS. This procedure is to examine the consistency or homogeneity of the scores from two sources: the focal person and the peer. One hundred and ninety-four participants from the peer survey were used in this procedure. Intra-class correlation (ICC) was used to measure the inter-rater reliability. The ICC value showed an acceptable inter-rater reliability (ICC = .39). This value is close to the average self-peer ICC reported by Costa and McCrae (1992) for the NEO PI-R (ICC = .43) and by Judge et al. (2003) for the Core Self-Evaluation Scale (ICC = .43). Together, these results demonstrated that EOS is a reliable measure, which meets one necessary condition for construct validity.

Nomological validity

One way of assessing construct validity is to determine the extent to which the measure operates within a set of theoretical constructs and their respective measures (Nunnally & Bernstein, 1994). In this stage of the study, I examined the nomological network of the EOS and investigated the extent to which the pattern of correlations adhered to theoretical expectations. In principle, a comprehensive nomological network should have hundreds of empirical relationships. As this cannot be achieved in a single study, I chose to include in the nomological network these three groups of variables: (1) theoretical related constructs (i.e., intrinsic aspiration, GNS, hedonic orientation, self-esteem, and internal locus of control); (2) the Big Five personality traits (Costa & McCrae, 1992); and (3) demographic variables.

Based on the literature (Button et al., 1996; Grant & Dweck, 2003; Elliot & Harackiewicz, 1996; Huta & Ryan, 2010; Steger et al., 2008; Carlo et al., 2005), I expect the EOS to be (a) weakly and positively related to age; (b) moderately and positively related to positive affect and meaning; and (c) strongly and positively related to locus of control and self-esteem. Research on the relationships between the Big Five personality traits and the three dimensions of EOS suggested that EOS as a broad construct encompassing the three components would be related to all five traits (Payne, Youngcourt, & Beaubien, 2007; Carlo et al., 2005). Specifically, I expected the EOS to be weakly and negatively related to neuroticism, moderately and positively related to conscientiousness, agreeableness, and extroversion, and strongly and positively related to openness to experience. By weak correlation, I referred to correlations lower than .20; by moderate correlation, I referred to correlations within the range from .20 to .45; by strong correlation, I referred to correlations greater than .45. Meanwhile, to assess the influence of social desirable responding, I also examined the correlation between EOS and social desirability scale (Reynolds, 1982; Crowne & Marlowe, 1960) and expected no relationship between them. I also hypothesized no relationship between EOS and two demographic variables: ethnicity and gender. Zero-order correlational analyses were used to test the nomological net.

Table 3 presents the correlations of the EOS and other variables. I expected the EOS to be moderately correlated with related constructs. The table shows that the EOS was moderately correlated with growth need strength ($r = .46$), hedonic orientation ($r = .33$), self-esteem ($r = .33$), and internal locus of control ($r = .23$). The EOS was strongly correlated with intrinsic aspiration ($r = .65$). Given that the prosocial orientation

of the EOS and the communal feeling of intrinsic aspiration shared similar definitions and two common items, the high correlation between the EOS and intrinsic aspiration may be driven by the two overlapping dimensions in these two scales. To further explore the nature of this correlation, I examined the correlations on the subscale level. Indeed, the communal feeling dimension of intrinsic aspiration was strongly correlated with the prosocial orientation dimension of EOS ($r = .69$), while the other dimensions were only moderately correlated, ranging from .22 to .39.

In terms of the Big Five, I expected the EOS to be weakly and negatively correlated with neuroticism, strongly correlated with openness to experience, and moderately correlated with the other three traits. The results indicated that the EOS was weakly correlated with neuroticism ($r = -.16$), moderately correlated with extroversion ($r = .29$), conscientiousness ($r = .25$), openness to experience ($r = .37$), and moderately to strongly correlated with agreeableness ($r = .47$).

In terms of demographic variables, the EOS was not correlated with age but was weakly correlated with gender ($r = .16$), such that females were slightly more eudaimonically oriented than male students. Meanwhile, the EOS was weakly but negatively correlated with social desirability ($r = -.18$), suggesting that eudaimonically oriented individuals had a lower need to obtain approval by responding in a culturally desirable manner. Overall, the correlations between the EOS and the variables in the nomological net are consistent with theoretical prediction. However, because of the moderate to strong correlations between the EOS and growth need strength, intrinsic aspiration, and hedonic orientation, it is important to examine the incremental validity of the EOS over these variables. In the following, I first examined the ability of the EOS in

predicting criterion variables and then investigated the incremental ability of the EOS in explaining some of the criterion variables above and beyond the existing theoretically related measures.

Criterion Validity

An important step in validating a new construct is to demonstrate whether the measure for the new construct predicts criterion variables. Three groups of criteria were selected for this procedure. The first group includes criteria considered as important outcomes of eudaimonic living (Steger, Kashdan & Oishi, 2008; Ryan et al., 2008; Huta & Ryan, 2010), which includes meaning in life, life satisfaction, and positive affect. I expected the EOS to be moderately correlated with these three criterion variables. The second group includes student's academic performance and time spent on socializing. Academic performance and socializing were selected because they are two of the important facets of an undergraduate student's life. GPA was used as the indicator of academic performance. As eudaimonic orientation may contribute to deeper learning and interest development, but not necessary a higher GPA, I expected EOS not to be correlated with GPA. I also expected socializing to be a behavior mainly driven by hedonic orientation and hence, not correlated with eudaimonic orientation. The third group includes three extra-role behaviors: interpersonal helping, voice, and taking charge. I expected moderate and positive correlations between the EOS and the extra-role behaviors because eudaimonia-oriented individuals may deem those proactive behaviors as opportunities for personal growth and development. To decrease the common method bias, I collected the extra-role behavior data from both the focal persons and their peers.

Table 3
Correlations of Eudaimonic Orientation Scale (EOS) and Other Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
1. EOS	.91																						
2. Intrinsic aspiration	.65	.88																					
3. GNS	.46	.41	.86																				
4. Hedonic orientation	.33	.40	.25	.86																			
5. Self-esteem	.33	.22	.22	.38	.88																		
6. Locus of control	.23	.18	.16	.21	.29	.71																	
7. Neuroticism	-.16	-.09	-.10	-.22	-.51	-.24	.88																
8. Extroversion	.29	.26	.21	.35	.27	.27	-.20	.92															
9. Conscientiousness	.25	.11	.11	.09	.29	.23	-.12	.03	.87														
10. Agreeableness	.47	.51	.23	.30	.21	.06	-.11	.19	.18	.85													
11. Openness	.37	.23	.27	.23	.18	.15	-.15	.27	.12	.28	.81												
12. Life meaning	.35	.27	.19	.12	.39	.35	-.22	.19	.22	.24	.09	.91											
13. Life satisfaction	.29	.28	.21	.28	.57	.39	-.35	.29	.26	.17	.10	.59	.87										
14. Positive affect	.48	.33	.30	.29	.51	.37	-.32	.33	.32	.34	.35	.33	.43	.86									
15. GPA	.04	.06	.03	-.03	.09	-.01	.02	-.07	.17	.05	.09	.05	.13	.12	-								
16. Socializing	.12	.10	.01	.14	.05	.07	.01	.22	-.02	.16	.11	-.01	-.01	.16	-.08	-							
17. Helping	.51	.47	.24	.22	.13	.16	-.06	.25	.15	.55	.29	.22	.19	.32	.11	.11	.82						
18. Voice	.38	.27	.24	.08	.12	.24	-.13	.30	.15	.18	.19	.32	.25	.33	.04	.12	.41	.86					
19. Taking charge	.38	.19	.26	.22	.20	.23	-.21	.26	.21	.17	.31	.16	.18	.39	.06	.04	.32	.41	.93				
20. Help (peer) ^(a)	.13	.07	.06	.12	.05	.01	-.04	.13	.19	.26	.19	.03	.02	.11	.05	.00	.16	.05	.00	.88			
21. Voice (peer) ^(a)	.24	.19	.22	.06	.03	.15	-.09	.27	.09	.17	.32	.07	.07	.16	.11	.17	.17	.27	.09	.49	.83		
22. Taking charge (peer) ^(a)	.20	.17	.26	.13	.09	.21	-.22	.17	.26	.20	.29	.12	.08	.19	.21	.04	.08	.15	.15	.50	.58	.89	

Note: 1. $n = 700$ except for rows with ^(a) $n = 194$.

2. For $n = 700$, a correlation of .07 is significant at .05 and of .10 is significant at .01; for $n = 194$, a correlation of .15 is significant at .05 and of .19 is significant at .01.

3. Coefficient alpha is on the diagonal in the boldface. 4. GNS = Growth Need Strength;

5. Group 1 - Theoretically related constructs; Group 2 – Big Five; Group 3 – Criterion variables; Group 4 – Extra-role behaviors.

Table 3 showed that, as expected, the EOS was moderately correlated with life meaning ($r = .35$), life satisfaction ($r = .29$), and positive affect ($r = .48$). Also as expected, the EOS was not correlated with GPA, although it was weakly correlated with socializing ($r = .12$). As far as the extra-role behaviors are concerned, the EOS was positively correlated not only with all three self-reported extra-role behaviors ($r = .51, .38$, and $.38$), but also with peer-reported extra-role behaviors ($r = .13, .24$, and $.20$). All together, these results suggested that the EOS had criterion validity.

Not only does a new construct need to have criterion validity; it also needs to demonstrate incremental validity in predicting criteria beyond the existing measures. Therefore, in the following section, I examined the incremental validity of EOS in predicting life meaning, life satisfaction and positive affect beyond the existing measures.

Incremental Validity

I used hierarchical regression analyses to examine whether the EOS explains additional variance in criteria beyond the contrasting measures of intrinsic aspiration (Kesser & Ryan, 1993; 1996), growth need strength (Hackman & Oldham, 1980), and hedonic orientation (Huta & Ryan, 2010). The criteria used were life meaning, life satisfaction, and positive affect. I expected the EOS to contribute unique variance to the three criteria in addition to the contrasting measures.

In this analysis, after the control variables (i.e., gender, age, and ethnicity) were entered into the equation, each of the three contrasting measures was entered to predict the criterion variables. The EOS was then added to each equation to determine the increase in explained variance. The results were contrasted with the reverse situation, in which the EOS was entered into the equation before each of the contrasting variables. As

shown in Table 4, EOS added unique variance to all the criteria beyond the contribution of the three contrasting measures, whereas all three contrasting measures failed to add unique variance in meaning beyond EOS. Moreover, intrinsic aspiration did not significantly improve the multiple correlations in positive affect when it was entered after the EOS.

To further examine the incremental validity, I conducted a more conservative analysis by adding all three contrasting variables into the equation at the same time before the EOS. The results at the bottom of Table 4 show that the EOS also added unique variance to all the criteria beyond the contribution of the packet of three contrasting measures. Altogether, these results demonstrated the incremental validity of the EOS in predicting life meaning, life satisfaction, and positive affect.

Table 4
*Analyses of EOS Compared to Growth Need Strength (GNS), Intrinsic Values,
and Hedonic Orientation*

			Meaning	Life satisfaction	Positive affect
Model 1a	<i>Step 1</i>	GNS	.04	.04	.09
	<i>Step 2</i>	EOS	.08	.04	.15
Model 1b	<i>Step 1</i>	EOS	.11	.07	.23
	<i>Step 2</i>	GNS	-	.01	.01
Model 2a	<i>Step 1</i>	Intrinsic aspiration	.06	.06	.11
	<i>Step 2</i>	EOS	.05	.02	.12
Model 2b	<i>Step 1</i>	EOS	.11	.07	.23
	<i>Step 2</i>	Intrinsic aspiration	-	.02	-
Model 3a	<i>Step 1</i>	Hedonic orientation	.01	.06	.08
	<i>Step 2</i>	EOS	.10	.04	.17
Model 3b	<i>Step 1</i>	EOS	.11	.07	.23
	<i>Step 2</i>	Hedonic orientation	-	.03	.02
Model 4a	<i>Step 1</i>	GNS, intrinsic values, and hedonic orientation	.07	.09	.16
	<i>Step 2</i>	EOS	.11	.01	.09
Model 4b	<i>Step 1</i>	EOS	.11	.07	.23
	<i>Step 2</i>	GNS, intrinsic values, and hedonic orientation	.07	.03	.01

Note: 1. Three control variables (gender, ethnicity, age) were entered first in each equation.
2. All shown changes of R-square were significant at $p < .05$.

Study 1 Discussion

As aforementioned, one of the major challenges in eudaimonic research is conceptualization and measurement. Building upon eudaimonia literature and current measures of eudaimonia, I proposed a higher-order concept of eudaimonic orientation, which describes the individual's tendency to develop the best in self and to seek self-expression in the service of greater good. The goal of Study 1 was to develop and validate a eudaimonic orientation scale (EOS) to assess individual-level eudaimonic orientation.

I first generated an initial pool of items based on existing related measures and then asked experts from the organizational behavior and management fields to evaluate the face and content validity of the item pool. The final 34-item scale, along with other measures, was included in the online survey. I collected data from college students and their peers who know them well. In the process of assessing the psychometric attributes of the scale, I conducted an EFA to examine the structure of the subscales and a CFA to test the hypothesized higher-order one-factor model. Internal consistency and inter-rater reliability were used to assess the scale reliability of EOS. I then evaluated three types of validity of EOS - its relationship with other variables in the nomological network, its ability to predict the criterion variables, and its power in explaining additional variance in the criteria beyond the existing measures.

In general, results from the student sample and their peers suggested that EOS is a useful means to assess eudaimonic orientation. It demonstrated good face and content validity. EFA confirmed the three facets of eudaimonic orientation and the CFA results suggested that a one-factor model offered a superior fit to the data than the other

competitive measurement models, providing evidence of a general underlying factor. Moreover, the 34-item scale displayed good internal-consistency (.91) and acceptable inter-rater reliability (.39).

In addition to the scale structure and reliability, results also provided evidence to support different types of validity. First, the significant and positive relationship among EOS and other scales assessing theoretical related constructs (e.g., intrinsic aspiration, GNS, hedonic orientation, etc.) provided evidence of convergent validity. Second, the EOS measure displayed criterion validity, as evidenced by its positive correlation with three focal criteria in the personal growth literature - meaning of life, life satisfaction, and positive affect. I further expanded the nomological net of eudaimonia by assessing the relationship between EOS and voluntary extra-role behaviors. Results supported the criterion validity in the expanded nomological network as EOS was positively correlated with three self-rated extra-role behaviors: helping, voice, and taking charge. EOS was also positively correlated with peer-rated extra-role behavior, providing further evidence on criterion validity. Third, EOS displayed incremental validity in predicting meaning, life satisfaction, and positive affect above and beyond each of the three existing measures for personal growth. In a more rigorous test, when the three personal growth measures were controlled at the same time, EOS still contributed unique variance in predicting criterion variables. Overall, the results of Study 1 suggested that EOS has acceptable reliability and validity and is a useful measure for assessing eudaimonic orientation.

Results of Study one also helped to shed light on the ongoing debate regarding the two traditions of happiness research. One of the major focuses of debate is whether eudaimonia and hedonia are two distinctive concepts (Kashdan et al., 2008; Keyes &

Annas, 2009; Biswas-Diener, Kashdan, & King, 2009). Huta and Ryan argued that this debate might be due to the fact that eudaimonia and hedonia are often conceptualized as unparallel scales in the research. When they are conceptualized as parallel notions, they can be differentiated theoretically and empirically (Huta & Ryan, 2010). Study 1 renders some support to this argument. When hedonia and eudaimonia were construed as “a way of living,” not only were they just moderately correlated ($r = .33$) but also each had additional power in explaining the variance in well-being indicators.

By linking eudaimonia to voluntary extra-role behaviors, Study 1 made two contributions. First, it added behavioral criteria to the existing nomological network of eudaimonia, which has mainly focused on the well-being indicators. The results suggested that a eudaimonically oriented student not only enjoys heightened life satisfaction and positive emotions but also tends to step up to engage in helping and improvement-oriented actions. Second, as Grant and Ashford (2008) pointed out, knowledge of the dispositional factors that influence role performance is still limited. The connection between eudaimonic orientation and extra-role behavior helps to advance our understanding of the dispositional antecedents of broader role behaviors beyond the proactive personality. It shows that eudaimonic orientation, as a tendency to strive for personal excellence, represents an individual characteristic that could promote more proactive and socially responsible behaviors.

Building upon Study 1, in the following chapters I explore whether and how the concept of eudaimonic orientation may contribute to attitudes and behaviors in the work context.

CHAPTER FOUR

A MODEL OF EUDAIMONIC ORIENTATION

In this chapter, I lay out a model that proposes: eudaimonic orientation affects work outcomes by influencing underlying motivational processes, and perceived role ambiguity moderates the relationships between eudaimonic orientation and outcomes (see Figure 1). Specifically, I linked eudaimonic orientation with two widely researched work criteria, job attitudes and performance, and argued that two sets of motivational processes, motivational psychological states and adaptive self-regulatory strategies, mediate the eudaimonic orientation-outcomes relationships. This mediated model parallels the theoretical model outlined by Kanfer and Heggstad (1997), which suggests that personality or motivational traits affect behaviors through their influence on goals, intentions, or self-regulatory patterns. This model is also consistent with Bandura's social-cognitive theory (1991), which proposes that humans are reflective and self-regulating agents capable of exercising control over their thoughts, feelings, and motivation.

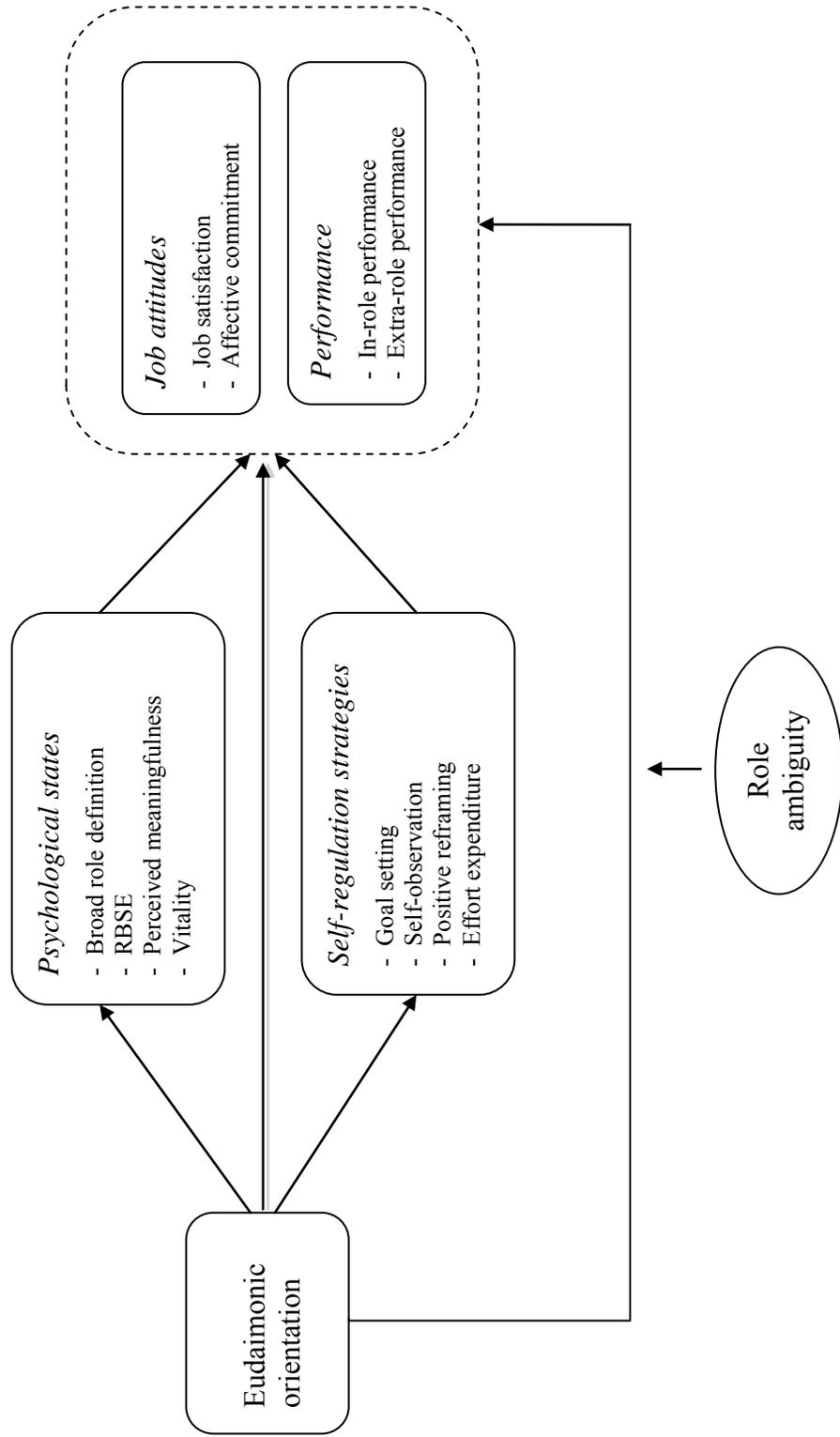
The proposed mediating model highlights eudaimonic orientation as a motivational individual characteristic. At its root, eudaimonic orientation is a desire for personal excellence and growth. Eudaimonia-oriented individuals thus seek to integrate and fulfill this general goal in their daily behaviors. In work contexts, the desire for growth and excellence will translate into greater motivation to learn, excel, and contribute.

Because of this general underlying work motivation, eudaimonia-oriented individuals will use more self-management strategies to help them to achieve their goals.

Furthermore, because eudaimonia-oriented individuals act more autonomously, they are likely to have more control in their own pursuits, which will produce more positive psychological states and favorable cognitions toward work. In the following, I first discuss the direct link between eudaimonic orientation and work outcomes and then examine the mediating role of motivational states and self-regulation strategies.

Figure 1

A Model of Eudaimonic Orientation at Work



Eudaimonic Orientation, Job Attitudes, and Performance

Generally speaking, I hypothesize that eudaimonic orientation will be positively associated with positive job attitudes and better performance as reflected in both in-role and extra-role behaviors.

Two types of job attitudes are examined in this study: job satisfaction and affective commitment. Job satisfaction is a "pleasurable emotional state resulting from the appraisal of one's job" (Locke, 1969). Based on this definition, job satisfaction is both a cognitive assessment ("appraisal of one's job") and an affective response ("emotional state") (Hulin, 1991; Judge & Ilies, 2004). Empirical evidence suggests that job satisfaction has a dispositional element, that is, employees with certain dispositions are more inclined to feel satisfied or dissatisfied with their jobs, depending on how they perceive the tasks and the environment (Staw & Ross, 1985; Staw, Bell & Clausen, 1986; Judge, Bono, & Locke, 2000). Affective commitment refers to employees' emotional attachment to, identification with, and involvement in the organization (Meyer & Allen, 1984). Similar to job satisfaction, affective commitment can also be influenced by personal characteristics (Allen & Meyer, 1990).

Eudaimonic orientation will generate more positive job attitudes because it predisposes individuals to perceive more control over the environment and their own actions. Since eudaimonia-oriented individuals focus on the pursuit of personal excellence, they tend to center their energies on self-development rather than on less controllable criteria such as meeting competitive external standards (Button et al., 1996; Elliot, 1999). This sense of control is further strengthened by an individual's volitional engagement in actions and the aspiration to influence other people through his or her

work. Perceived control over one's own actions and the surrounding environment reduces the negative influence of work stress and endows the individual with a more positive work attitude (Karasek, 1990; Van Yperen & Janssen, 2002).

Hypothesis 1a: Eudaimonic orientation will be positively related to job satisfaction.

Hypothesis 1b: Eudaimonic orientation will be positively related to affective commitment.

Given that eudaimonia-oriented individuals strive to achieve personal excellence, I expect eudaimonic orientation to contribute positively to work performance as well, as assessed by both in-role and extra-role performance. In-role task performance refers to the mandated, appraised, and rewarded work behaviors that are specified and required by job descriptions (Motowidlo & Van Scotter, 1994; Johnson, 2003). The major source of variation in task performance comes from the proficiency with which a person carries out task activities (Borman & Motowidlo, 1993). Due to their tendency to develop competencies through task mastery (Elliot & McGreor, 2001), employees with eudaimonic orientation are likely to demonstrate greater task proficiency in conveying work results over time (e.g., having related knowledge, skills, and abilities).

Hypothesis 2a: Eudaimonia orientation will be positively related to in-role task performance.

Extra-role behaviors refer to the discretionary work behaviors that are not specified by job descriptions and not recognized by formal reward systems (Van Dyne & LePine, 1998). Organizational literature has suggested that extra-role behaviors on the individual level contribute to effectiveness on the organizational level (e.g., Johnson,

2003; Borman & Motowidlo, 1993; Griffin et al., 2007). In the typology developed by Van Dyne and colleagues (1995), proactive and prohibitive extra-role behaviors are contrasted in terms of whether the behavior is promotive and proactive or preventative and prohibitive. In this study, I am interested in understanding the connection between EOS and proactive extra-role behaviors. Proactive behaviors describe the self-initiating and future-oriented behaviors that may affect the employees themselves and/or their environment (Crant, 2001; Grant & Ashford, 2008). I argue that eudaimonia-oriented individuals are likely to demonstrate more proactivity because of their preference for challenging goals, their tendency to learn, and their future temporal orientation.

In terms of proactivity, individuals who engage in proactive behaviors typically are more prosocial, prefer challenging goals, and consider future versus immediate consequences (Parker & Collins, 2009; Janssen & Van Yperen, 2004; Grant & Mayer, 2009). Eudaimonia-oriented individuals are prosocial because they care about making a difference through their work; they prefer challenging goals because such goals provide more development opportunities; and they tend to be future-oriented because eudaimonic pursuits do not always bring instant satisfaction (Huta & Ryan, 2010; Grant, 2008). Thus, I expect eudaimonia orientation to contribute positively to proactivity.

Hypothesis 2b: Eudaimonia orientation will be positively related to extra-role performance.

Mediating Roles of Motivational States and Self-Regulation Strategies

Based on the review of existing literature on eudaimonia and on constructs related to three components of eudaimonic orientation, I identified two motivational processes

that are likely to be associated with eudaimonic orientation and argue that the performance and attitudinal advantage of eudaimonia-oriented individuals are due to these two motivational processes.

First, eudaimonic orientation is likely to be associated with positive psychological states and cognitions, which may benefit work behaviors and attitudes (Steger et al., 2008; Peterson et al., 2005; Huta & Ryan, 2010; Phillips & Gully, 1997). Some scholars have labeled these motivational states as “renewable individual resources” because of their function in helping individuals to achieve valuable goals (Spreitzer et al., 2005; Roberts et al., 2005). Second, eudaimonic orientation is likely to be associated with an adaptive response pattern such that when facing challenging situations eudaimonia-oriented individuals will be more likely to use effective self-regulatory tactics to guide them toward achieving the challenging goals (VandeWalle et al., 1999; Grant & Dweck, 2003; Porath & Bateman, 2006). In the following, I illustrate the mediated model in more detail.

The Mediating Role of Motivational States

Motivational psychological states may function as individual resources because they comprise psychological assets that allow individuals to perform their best, withstand setbacks, and reach their goals (Feldman, 2004; Roberts et al., 2005). Resources refer to objects, personal characteristics, conditions, or energies that serve as a means for attainment of personally valued ends (Hobfoll, 2002). Note, however, that the individual resources of motivational psychological states, unlike other resources which are typically static and non-renewable, can be generated and regenerated in the performance of work (Spreitzer et al., 2005) and thus can provide motivational forces over time. In this section, I propose that three psychological states and cognitions may function as such individual

resources - agentic resources, positive meaning, and subjective vitality. *Agentic resources* refer to the cognition and motivation that facilitate personal actions and stimulate one's intention to shape the environment (Roberts et al., 2005); *positive meaning* refers to the perceived purpose and significance embedded in the work (Renn & Vandenberg, 1995); and *subjective vitality* refers to the experienced energy and aliveness accompanied with the eudaimonic pursuits (Ryan & Frederick, 1997).

Social-cognitive theory proposes that humans are self-regulating agents who are not only products but also producers of their environment (Bandura, 1982; 1989). While traditional organizational theories typically see employees as reactive recipients of task characteristics and social information, recent literature is beginning to portray employees as active job crafters who constantly engage to create situations, revise job boundaries, and shape the environment (Staw & Boettger, 1990; Wrzesniewski & Dutton, 2001; Crant, 2001; Fay & Frese, 2001). Agentic resources are concerned with the cognition and motivation that fuel such personal agency (Roberts et al., 2005). Specifically, eudaimonic orientation helps to enable and create two kinds of agentic resources – a *broader role definition* and *role breadth self-efficacy*. A broader role definition is concerned with how widely one defines his or her work roles and role breadth self-efficacy (RBSE) is concerned with one's confidence in performing a range of roles (Parker, Wall, & Jackson, 1997; Hofmann et al., 2003; Axtell & Parker, 2003). Individuals with a broader role definition define their roles broadly and feel ownership of goals and problems beyond their required task assignments (Parker et al., 1997). Individuals with greater RBSE are the ones who believe in their capability of performing a wide range of work roles (Parker, 1998).

Wrzesniewski & Dutton (2001) contend that employees can craft their jobs by changing cognitive, task, and/or relational boundaries at work. When job crafting involves changing the job's boundaries, employees cognitively or behaviorally alter the number, scope, or type of job tasks done at work. Eudaimonia-oriented individuals are likely to be such job crafters who alter their task boundaries and "re-design" their tasks by cognitively broadening their tasks to include more work roles than prescribed in the formal job. First, because they seek opportunities to learn and grow, they are more likely to view work as a window to these opportunities instead of just as an obligation to fulfill task requirements. As such, the boundaries between the in-roles and the extra-roles become blurred so they are more likely to go beyond their normal job boundaries (Hofmann, Morgeson, & Gerras, 2003). Second, because eudaimonic-oriented individuals typically organize their behaviors based on personal goals and interests rather than external constraints, they are more inclined to voluntarily seek the opportunities to express themselves via various work roles. Similarly, when facing the extra roles, they are more likely to internalize those extra roles and see them as affirmations of their competence instead of as external controls (Deci & Ryan, 1985). A greater level of identification and self-determination with work roles beyond the normal task boundaries fosters a broader role definition (Parker, 1998).

With respect to role breadth self-efficacy, a eudaimonic orientation can enhance individuals' confidence in their capability to perform broad roles over time. First, since eudaimonic-oriented individuals experience a sense of choice in conducting various work roles, they feel more confident in their capabilities to excel in those tasks (Ryan & Deci, 2000). Second, the learning and growth orientation of eudaimonia-oriented individuals

helps them to accumulate more knowledge about how to perform various roles at work, which over time enhances their confidence in taking on a wide range of roles. As such, because of their learning tendency, they are also more likely to interpret a past experience, even if it is a failure, as something positive from which they can learn (Kanfer, 1990; Phillips & Gully, 1997), which also builds more self-efficacy over time. Thus,

Hypothesis 3: Eudaimonic orientation will be positively associated with a broad role definition.

Hypothesis 4: Eudaimonic orientation will be positively associated with RBSE.

Employees with a broader role definition and self-efficacy for performing a wide range of goals seek to not only finish their individual prescribed tasks but also to help fulfill responsibilities assigned to the team or the organizations (Davis & Wacker, 1987). Previous literature has suggested that a broader role definition and greater role breadth self-efficacy lead to more positive job attitudes (Judge & Bono, 2001; Judge, Locke, & Durham, 1997), in-role performance (Stajkovic & Luthans, 1998), and proactive behaviors (Parker & Collin, 2010; McAllister, Kamdar, Morrison, & Turban, 2007; Parker et al., 2006). Consistent with the literature, I propose that these two agentic resources will contribute positively to job satisfaction as well as in-role and extra-role performance.

Hypothesis 5a: A broad role definition will be positively related to job satisfaction.

Hypothesis 5b: A broad role definition will be positively related to affective commitment.

Hypothesis 5c: A broad role definition will be positively related to in-role performance.

Hypothesis 5d: A broad role definition will be positively related to extra-role performance.

Hypothesis 6a: RBSE will be positively related to job satisfaction.

Hypothesis 6b: RBSE will be positively related to affective commitment.

Hypothesis 6c: RBSE will be positively related to in-role performance.

Hypothesis 6d: RBSE will be positively related to extra-role performance.

Work meaning is the employees' understanding of what they do at work, why they do the work, and the significance of what they do (Wrzesniewski, Dutton, & Debebe, 2003). Positive meaning refers to the purpose and significance embedded in work as experienced by the individual (Renn & Vandenberg, 1995; Spreitzer et al., 2005). In the organizational literature, perceived meaningfulness is often conceived as a motivational psychological state that is linked to heightened intrinsic motivation, effort, and job satisfaction (Hackman & Oldham, 1976; Sparks & Schenk, 2001; May, Gilson, & Harter, 2004; Michaelson, 2005). Psychological research of eudaimonia often discusses positive meaning as an important outcome of eudaimonia, regardless of the operationalization of eudaimonia (Steger et al., 2008; Huta & Ryan, 2010; Ryan et al., 2008). In the current study, where I conceptualize eudaimonia as an individual difference variable, I also expect it to instill a sense of meaning and purpose into a eudaimonia-oriented individual's work life.

Research on meaningful work has identified several sources for perceived meaningfulness at work (Kahn, 1990; Wrzesniewski, McCauley, Rozin, & Schwartz, 1997; Hackman & Oldham, 1976; Shamir, House & Arthur, 1993), one of which is job characteristics (Hackman & Oldham, 1975; Grant, 2007). This stream of research argues

that experienced meaningfulness at work is a psychological condition resulting from an enriched job. However, job characteristics typically are not measured as a job's objective property but rather as the subjective perceptions of employees (Staw & Ross, 1985; Staw, Bell & Clausen, 1986; Judge, Bono, & Locke, 2000). I theorize that eudaimonic orientation may generate more meaning at work through its effect on favorable perception of work characteristics. That is, in comparison to less eudaimonia-oriented individuals, high eudaimonia-oriented individuals will experience a greater sense of meaning at work as they are more likely to perceive work imbued with opportunities to learn and grow, to express their own values and interests, and to contribute to the bigger entity.

Hypothesis 7: Eudaimonic orientation will be positively related to perceived meaningfulness at work.

When people consider their work meaningful, they exhibit more job satisfaction (Hackman & Oldham, 1976), work engagement (May et al., 2004), and better performance (Sparks & Schenk, 2001). Therefore, perceived meaningfulness will contribute positively to job satisfaction and in-role task performance. Similarly, when people find their job as meaningful, they will feel empowered and be more likely to stretch beyond the required job responsibilities to engage in proactive behaviors to voluntarily help coworkers and the organization. Although the connection between meaningfulness and adaptivity is rare in management research, numerous psychological studies have found that people use positive meaning to help them to overcome adversities in life (see Bonanno & Kaltman, 1999, for a review), which suggests that positive

meaning can enhance people's adaptive functioning. Thus, perceived meaningfulness will contribute positively to extra-role performance as well.

Hypothesis 8a: Perceived meaningfulness at work will be positively related to job satisfaction.

Hypothesis 8b: Perceived meaningfulness at work will be positively related to affective commitment.

Hypothesis 8c: Perceived meaningfulness at work will be positively related to in-role performance.

Hypothesis 8d: Perceived meaningfulness at work will be positively related to extra-role performance.

Subjective vitality refers to the activated state in which an individual, both physically and psychologically, feels alive, energized, and enthusiastic (Nix, Ryan, Manly, & Deci, 1999). Different from activated positive affect (Watson & Tellegen, 1985), vitality concerns the energy available to an individual rather than the activation *per se* (Ryan & Deci, 2008). Research on vitality and other positive energy constructs depicts a sense of energy and aliveness as a motivational force that helps people to be more productive and active and to cope better with stressors and challenges (Nix et al., 1999; Ryan & Frederick, 1997). In the management literature, energy at the organizational level is considered an important force for organizational effectiveness and success (Bruch & Ghoshal, 2003; Linder, Cross, & Parker, 2006).

Ryan and Frederick (1997) argued that subjective vitality is often the offshoot of the intensive application of one's abilities, especially when the efforts involve autonomous self-expression. Indeed, they found that vitality was positively correlated

with self-actualization and self-determination. Similarly, Smilor (1997) noted that when engaging in worthy and challenging pursuits, entrepreneurs are more likely to experience a sense of enthusiasm, joy, and zeal. Given that eudaimonia-oriented individuals have the tendency to stretch their ordinary limits for personal excellence and to have an internal sense of control during the course of their pursuits, their intense focus on eudaimonic pursuits will activate the energy within them, generating a state of subjective vitality. Thus,

Hypothesis 9: Eudaimonic orientation will be positively related to subjective vitality.

Vitality has been positively associated with various well-being indicators in the literature (Ryan & Frederick, 1997; Nix et al., 1999). Accordingly, I expect it to have a similar pattern with job satisfaction. In addition, because individuals with greater vitality are more active and productive (Penninx et al., 2000), vitality should contribute positively to in-role performance. Although no direct link between vitality and extra-role behaviors has been established, in light of the link between positive affect and helping behaviors (Erez & Isen, 2002; Isen & Baron, 1991; George, 1991), I expect subjective vitality to also contribute to extra-role proactive performance. Moreover, more positive energy can act as an important buffer for an individual in the face of stressful job demand; thus, I expect subjective vitality to enhance adaptive performance as well.

Hypothesis 10a: Subjective vitality will be positively related to job satisfaction.

Hypothesis 10b: Subjective vitality will be positively related to affective commitment.

Hypothesis 10c: Subjective vitality will be positively related to in-role performance.

Hypothesis 10d: Subjective vitality will be positively related to extra-role performance.

To this point, I have proposed that eudaimonic orientation influences motivational states, which in turn influence attitude and performance outcomes. In other words, one of the mechanisms through which eudaimonic orientation affects job attitudes and work performance is through its effect on motivational psychological states. However, because there are other routes through which eudaimonic orientation can influence outcomes, I propose that the motivational states will only partially mediate the relationship between eudaimonic orientation and work outcomes.

Hypothesis 11a: The four motivational states will partially mediate the relationship between eudaimonic orientation and job satisfaction.

Hypothesis 11b: The four motivational states will partially mediate the relationship between eudaimonic orientation and affective commitment.

Hypothesis 11c: The four motivational states will partially mediate the relationship between eudaimonic orientation and in-role performance.

Hypothesis 11d: The four motivational states will partially mediate the relationship between eudaimonic orientation and extra-role performance.

In the above, I delineated the mediating role of motivational psychological states in the relationship of eudaimonic orientation and work outcomes. Specifically, I argue that one of the reasons that eudaimonia-oriented individuals will enjoy more job satisfaction and better work performance is because they view their work as a source of

identity, efficacy, meaning, and energy rather than a source of pain or drudgery. I now discuss the relationship of eudaimonic orientation with self-regulatory strategies that influence job satisfaction and work performance, followed by a discussion of the mediating effects of such strategies.

The Mediating Role of Self-Regulatory Strategies

The second mechanism that enables eudaimonia-oriented individuals to enjoy attitudinal and performance advantages is their ability to apply self-regulatory strategies. Self-regulation refers to the process that individuals use to guide their goal-directed activities over time and across changing circumstances (Kanfer, 1990; Kuhl, 1985). More specifically, self-regulatory strategies are the set of tactics that promote the establishment, maintenance, and attainment of personally valued goals (Kuhl, 1985). Considerable evidence suggests that some people are more predisposed to exercise self-control than others, which suggests that individual differences play a role in determining the tendency to use self-regulatory strategies (Kanfer & Ackerman, 1996; Tsui & Ashford, 1994; VandeWalle, Brown, Cron, & Slocum, 1999; Porath & Bateman, 2006). The ability to exercise control over thoughts, feelings, motivation, and actions is an essential asset that enables individuals to adapt to change and helps them to achieve personal goals (Porath & Bateman, 2006; Bandura, 1991; Tsui & Ashford, 1994).

Since self-regulation represents a cognitive process that determines the transformation of motivational force into behavior and performance (Kanfer, 1990), we can expect eudaimonia-oriented individuals, who have an overarching motivation to achieve personal excellence, to engage in more self-regulation activities to transform their goal for personal excellence into tangible behaviors.

Given the abundance of self-regulation literature, it is a bit surprising that no systematic typology for self-regulation strategies has been developed. For the current study, I followed the control-process model of self-regulation (Carver & Scheier, 1981) and the components/phases theory of self-regulation (Karoly, 1993) as the theoretical foundations for self-regulation strategy development. One of the main arguments of control-process theory is that self-regulation is a negative feedback control process through which the discrepancy between standards and current self-presentation is managed (Hoyle, 2006). Specifically, the goal of self-regulation is to minimize the discrepancy between the behavioral standards and the current self. Similarly, Karoly discussed several strategies that are essential to negative feedback control self-regulation processes, including goal setting, discrepancy detection and discrepancy reduction.

In light of the above theoretical arguments, I focus on four types of self-regulatory behaviors – goal setting, self-observation, effort expenditure, and positive reframing. In this context, goal setting is the tendency to self-set challenging goals; self-observation is the examination of the progress toward goal accomplishment and the detection of a discrepancy between the goal and the progress (Manz & Sims, 1981; Manz & Neck, 1999); effort expenditure is concerned with the amount of effort spent on obtaining the goals, especially in the face of difficulties and setbacks; and positive reframing refers to construing a stressful event in positive terms or reframing threats into opportunities (Carver, Scheier, & Weintraub, 1989; Kreiner & Sheep, 2009). To summarize, goal setting establishes the standard for self-regulation; self-observation serves as a discrepancy-detection tactic; and effort expenditure and positive reframing represent two

tactics that navigate people during difficulties and help to minimize the discrepancy between present status and desirable standard.

Goal Setting

Since individuals with a eudaimonic orientation have a primary goal of developing their skills and ability, they are more likely to develop challenging goals and to see them as the opportunity to learn and grow (Dweck, 1999). Accordingly, they are more likely to self-set challenging goals and to endorse assigned difficult goals. Studies with students and sales representatives found that individuals with mastery approach to goals have a preference for challenging tasks (VandeWalle et al., 1999; Grant & Dweck, 2003). Moreover, the desire to use the best of oneself and to make a difference further strengthens the preference of eudaimonic-oriented individuals for challenging goals because performing such challenging goals can enhance one's perception for contribution and develop one's potential by stretching his or her normal ability boundaries. Thus,

Hypothesis 12: Eudaimonic orientation will be positively related to challenging goal setting.

Self-Observation

Self-observation strategy involves examining our own behaviors to increase our awareness of when and why we engage in certain behaviors (Houghton & Neck, 2002). This type of self-assessment helps individuals detect discrepancies between the goal and current progress and to identify behaviors that should be changed, enhanced, or eliminated (Manz & Sims, 1981; Manz & Neck, 1999; Neck & Manz, 1996; Bandura, 1991). Ryan et al. (2008) contend that eudaimonia necessitates the exercise of self-reflective capacities. Because eudaimonia-oriented individuals consciously seek

continuous personal growth, I expect that they are motivated to improve upon past standards of performance. They attain this goal by a frequent self-diagnostic process: eudaimonia oriented individuals evaluate their current progress and identify the activities they must do to achieve the goal. Therefore, I expect eudaimonia-oriented individuals to engage in more conscious self-observation behaviors.

Hypothesis 13: Eudaimonic orientation will be positively related to self-observation.

Effort Expenditure

To use the push-pull metaphor by Berlew (1986), eudaimonic orientation's positive impact on effort expenditure can be explained from both the "pull" and the "push" perspectives. First, individuals with eudaimonic orientation put greater value on high effort so that they derive more enjoyment from a higher level of effort (Dweck, 1986; Ames, 1992; Elliot & Harackiewicz, 1996). Such intrinsic motivation "pulls" the individual to spend more effort (Kehr, 2004). Second, for eudaimonia-oriented individuals, the standards for personal excellence also involve making a valuable contribution through work endeavors. Thus, they do not purely "enjoy" making an effort but also value identifying with the goal to benefit others through the work effort. Such prosocial motivation "pushes" them to exert extra effort at work (Grant, 2008; Grant et al., 2006). Therefore, in both cases, eudaimonic orientation will be associated with higher levels of effort expenditure.

Hypothesis 14: Eudaimonic orientation will be positively related to effort expenditure.

Positive Reframing

In contrast to the above two behavior-focused tactics, positive reframing represents a tactic aiming at managing emotions and cognitions. However, unlike emotional control strategy, which focuses only on coping with or bridling disruptive negative emotions (Kanfer & Heggstad, 1997), positive reframing strategy goes a step further and aims to generate more positive emotions by construing a stressful situation as a positive opportunity (Carver et al., 1989). Individuals who hold a learning and growth approach toward life in general are less likely to attribute failure and setbacks to a lack of ability (Elliot & Dweck, 1988) but are more likely to examine the difficulties from a perspective of growth and to reframe threats as opportunities that facilitate personal and professional development.

An alternative route that eudaimonic orientation affects positive framing is through its future temporal focus. Individuals with eudaimonia orientation are in general more forward-thinking and future-oriented (Huta & Ryan, 2010). Because of this, they are less likely to dwell on a present failure and thus can access more internal resources that enable them to reframe the failure in a more generative and positive way.

Hypothesis 15: Eudaimonic orientation will be positively related to the use of positive reframing.

Self-Regulation Strategies and Performance

I further propose that the four self-regulatory strategies positively predict in-role and extra-role performance. Given the robust findings of a relationship between goal level and task performance, I expect challenging goals to be positively related to task performance (Locke & Latham, 1990). In addition, evidence suggests that effort expenditure is related to performance in both academic and work settings (Sheldon &

Elliot, 1999; Grant, 2008). Self-leadership skills, which involve self-observation, have been found to contribute positively to performance as well (Prussia & Anderson, & Manz, 1998). Finally, positive framing can enhance performance by minimizing the harm of negative jolts, transforming the meaning of stimulants, and preserving self-esteem and positive self-identity (Kreiner & Sheep, 2009). In sum, I expect the four self-regulation strategies to contribute to task performance.

Hypothesis 16a: Goal setting will positively predict in-role performance.

Hypothesis 16b: Self-observation will positively predict in-role performance.

Hypothesis 16c: Effort expenditure will positively predict in-role performance.

Hypothesis 16d: Positive reframing will positively predict in-role performance.

Self-regulatory strategies are also conducive to extra-role performance as they may help individuals to cope with changes and uncertainties effectively. Proactive behaviors may involve initiating changes in the environment (Griffin et al., 2007). In some studies, the change-initiating proactive behaviors are labeled *challenging* behaviors (McAllister et al., 2007; Van Dyne & LePine, 1998), which indicates that such proactive behaviors may challenge the status quo and damage interpersonal relationships (Van Dyne et al., 1995; Janssen, 2003). In such situations, an individual's ability and willingness to handle difficult times becomes essential to his or her success of proactive performance. Given that self-regulatory strategies help people tailor their perceptions and behaviors to fit the demand of the new environment (Tsui & Ashford, 1994), I expect such strategies to influence extra-role performance.

Hypothesis 17a: Goal setting will positively predict extra-role performance.

Hypothesis 17b: Self-observation will positively predict extra-role performance.

Hypothesis 17c: Effort expenditure will positively predict extra-role performance.

Hypothesis 17d: Positive reframing will positively predict extra-role performance.

Finally, I propose that the four self-regulatory strategies will partially mediate the relationship between eudaimonic orientation and performance. That is, in addition to experienced motivational states, another mechanism through which eudaimonia-oriented individuals have better in-role and extra-role performance is through the effectual application of self-regulation strategies.

Hypothesis 18a: The four self-regulatory strategies will partially mediate the relationship between eudaimonic orientation and in-role performance.

Hypothesis 18b: The four self-regulatory strategies will partially mediate the relationship between eudaimonic orientation and extra-role performance.

The relationship between motivational states and self-regulation strategies

In the above, I discussed the two sets of mediating variables separately. This approach, however, does not preclude the possibility that motivational states and self-regulation strategies may influence each other. Self-regulation psychologists have argued that psychological states and cognition may help to boost the self-regulation strength and restore people's capacity for self-control under the circumstance of depletion (Schmeichel & Baumeister, 2004; Carver, 2004). There is also some initial empirical evidence suggesting that effective self-regulation may generate more motivational states so that people feel more efficacious and energetic after they succeed in obtaining goals from effective application of self-regulation tactics (Prussia, Anderson, & Manz, 1998). Since the in-depth discussion of these relationships diverts the attention from the focal

construct of eudaimonic orientation, I will leave further exploration and testing for a future study.

The Moderating Role of Role Ambiguity

Above, I proposed that eudaimonic orientation has a generally positive relationship with job attitudes and performance across situations. In this section, I consider role ambiguity as a contingent variable that may strengthen or attenuate such a positive relationship. Role ambiguity is defined as an absence of necessary information available to a given position within the organization (Rizzo, House, & Lirtzman, 1970; Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). From a cognitive perspective, role ambiguity may lead to impaired performance and job dissatisfaction because of the lack of knowledge and information; from a motivational perspective, role ambiguity may also lead to lower levels of performance because of the unclear link between effort and performance (Netemeyer, Johnston, & Burton, 1990). Indeed, an array of research evidence suggests that role ambiguity is associated with negative affect (e.g., Terry, Nielsen, & Perchard, 1993) and lower levels of performance (e.g., Williams, Podsakoff, & Huber, 1992) among employees.

While high role ambiguity may cause stress and lower performance among employees (Karasek & Theorell, 1990; Xie, 1996), it may provide an opportunity for eudaimonically oriented individuals to prosper. When role ambiguity is high, performance goals and expectations may be vaguely defined and articulated. Such situations create room for eudaimonically oriented individuals to self-set challenging goals, to broadly define their work roles, and to regulate and monitor the self-set goals.

Thus, I argue that the positive relationships between eudaimonic orientation and work outcomes will be stronger when there is a lack of clear definition of role expectations.

Situational strength theory (Mischel, 1977; Snyder & Ickes, 1985; Weiss & Adler, 1984) is a useful theoretical framework in explaining the moderating effect of role ambiguity. According to Mischel (1977), strong situations are marked by features in which goals are clear, rules of conducts are well-recognized, and the behavior-rewards relationship is lucid. Weak situations, in contrast, are those in which appropriate behaviors are unclear, skill requirements may be absent, and assessments of the work environment may vary. Unlike strong situations in which inter-individual variability is low, in weak situations, variations in performance mostly reflect the variation in individual motivation (Shamir, 1991).

Based on this view, the underlying assumption that role ambiguity amplifies the eudaimonic orientation – outcomes relationships is that role ambiguity creates a weak situation that allows for inter-individual variability. In other words, role ambiguity creates an opportunity for the learning-oriented, self-expressive, and prosocial employees to strive for personal excellence, while role ambiguity may not present as a growth opportunity for less eudaimonically oriented employees. As a result, the difference in behavioral responses between eudaimonically oriented individuals and less eudaimonically oriented individuals is enlarged under the circumstance of role ambiguity.

Hypothesis 19a: Role ambiguity will moderate the relationship between eudaimonic orientation and job attitudes such that the relationship will be stronger when there is a greater level of role ambiguity.

Hypothesis 19b: Role ambiguity will moderate the relationship between eudaimonic orientation and in-role performance such that the relationship will be stronger when there is a greater level of role ambiguity.

Hypothesis 19c: Role ambiguity will moderate the relationship between eudaimonic orientation and extra-role performance such that the relationship will be stronger when there is a greater level of role ambiguity.

Study 2

The goal of Study 2 was to test the above hypotheses and to further examine the structural property of EOS.

Method

Sample

Since the goal was to understand the role of eudaimonic orientation in the workplace, an employee sample was used to test the hypotheses. The data were collected with an online survey methodology from three sources: 1) a high-tech company on the West Coast, 2) employees from a large Midwestern university, and 3) business school alumni, graduated between 1996 and 2005, of a large Midwestern university. The focal participants were invited to complete an online survey including independent variables, mediators, and job attitude variables. At the end of the survey, respondents were informed of the second part of the study, that is, to forward an email survey invitation and a survey link to their coworkers who are familiar with their work behaviors. The online peer survey contained measures of the focal person's work performance. These two

online surveys were administered independently so that the participants did not have access to the survey completed by their peers.

The response rate for the focal person survey and the peer survey was 30% and 28%, respectively. Participants who reported “unemployed” and “student” as occupational status were removed from the dataset. As such, responses with more than 30% of missing data were also removed. As a result, the final dataset had 690 focal persons and 192 matched focal-peer pairs. According to Cohen’s multipurpose power tables (Cohen, 1992), to achieve a power level of .80 for multiple regression analysis, a sample size of 547 and 76 is needed for a small effect size (.02) and a medium effect size (.15), respectively. Based on this calculation, the collected sample has enough power to detect small-medium effect size relationship.

For the focal person survey, participant ages ranged from 23 to 64 years old (Mean = 33; SD = 7.1) and 45.7% were female respondents. The tenure within the current organization ranged from 1 month to 30.3 years (M = 3 years; SD = 4.4 years). In terms of ethnicity, 89% were Caucasians, 4.2% were Asians, 3.6% were African-Americans, and 3.2% were others. In terms of education background, 52.3% of the respondents reported holding a graduate degree, 45.7% reported a four-year college degree, and 2.4% reported a degree lower than four-year college.

As mentioned above, 192 cases had matched peer ratings, which left 498 unmatched focal participants. In order to compare the participants with and without the peer survey, I conducted an independent t-test on 18 variables and found 3 differences were significant at the level of $p < .05$. The results indicated that on average, participants with a returned peer survey had higher scores on eudaimonic orientation ($d = .09$), self-

observation ($d = .05$), and positive framing ($d = .03$). The three small-sized differences, ranging from .03 to .09, suggest that the differences were not substantive.

Measures

All the following measures are listed in Appendix III. Except for in-role performance and extra-role performance measures, all the other measures were included in the focal person survey.

Independent variable

Eudaimonic orientation I used the final version of the Eudaimonic Orientation Scale (EOS) derived from Study 1 to assess eudaimonic orientation. Participants responded on a 5-point Likert-type scale (1 = strongly disagree; 5 = strongly agree).

Since EOS is a new scale, before examining its reliability, I first conducted a second-order confirmatory factor analysis to demonstrate that the latent model provides a good/reasonable fit for the data. Similar to the procedure I used in Study 1, I first created 3 item parcels for each dimension by aggregating scale items, loaded the item parcels on the three dimensions, and then loaded the three dimensions on a single eudaimonic orientation factor. The goodness-of-fit statistics for this second-order factor model suggested a reasonable fit ($\chi^2 = 100.3$, $df = 23$, $CMN/DF = 4.4$, $CFI = .97$, $AGFI = .94$, $IFI = .97$, $RMSEA = .07$). Based on these results, I deemed it appropriate to calculate EOS mean by averaging the scores of the thirty-four items. The Cronbach's alpha was .90.

I also examined the relationship of EOS with gender, age, and job tenure. Similar to the result in Study 1, females were slightly more eudaimonically oriented than males (r

= -.14). In addition, in the Study 2 sample, EOS was correlated with age ($r = .17$) such that older people tend to be slightly more eudaimonically oriented. There was no association between EOS and job tenure.

Outcome variables

Job satisfaction Job satisfaction was measured with the three-item overall job satisfaction scale by Cammann, Fichman, Jenkins, and Klesh (1983). The three items are “all in all, I am satisfied with my job,” “in general, I don’t like my job,” and “in general, I like working at my job.” The scale was rated on a 5-point Likert-type scale (1 = strongly disagree; 5 = strongly agree). The Cronbach’s alpha for the 34-item scale was .88.

Affective commitment Affective commitment was measured with the 8-item affective commitment scale by Meyer and Allen (1984). The items include “I would be very happy to spend the rest of my career with this organization” and “I really feel as if this organization’s problems are my own.” The scale was rated on a 5-point Likert-type scale (1 = strongly disagree; 5 = strongly agree). The Cronbach’s alpha for the 8-item scale was .90.

In-role and extra-role performance Job performance was measured with the 15-item scale developed by Bono and Judge (2003), which includes both task performance and broader aspects of performance – innovation, personal initiative and self-direction. Following Bono and Judge (2003), I used a 5-point response scale (1 = needs much improvement; 5= excellent). A sample of an in-role performance item is “overall performance in the tasks associated with his/her job.” Sample items of extra-role performance include “Changing something in his/her work in order to improve it” and “Coming up with new, original ideas for handling work.”

Bono and Judge's in-role and extra-role performance items were originally adapted from several scales. In-role task performance items were adapted from the Role-Based Performance Scale (Welbourne, Johnson, & Erez, 1998) and extra-role performance items were adapted from a scale developed by Stewart, Carson, and Cardy (1996), a qualitative measure by Frese, Kring, Soose, & Zempel (1996), and the Role-Based Performance Scale. Because the psychometric properties of this measure were less established compared to the other scales used in this study, I examined the factorial structure of the scale before evaluating its reliability.

As described in the prior chapter, I am interested in examining the influence of eudaimonic orientation on two types of work performance: in-role task performance and extra-role performance. Therefore, it is important to demonstrate that the two-factor structure fits the data. To do this, I tested a two-factor model such that the three items of in-role performance scale were used as indicators for the in-role performance factor. For the extra-role performance scale, I created three-item parcels for each subdimension by aggregating the items in each sub-scale. I allowed the in-role and extra-role performance factors to be correlated with each other. The goodness-of-fit statistics of this two-factor measurement model indicated a very good fit to the data ($\chi^2 = 11.5$, $df = 8$, AGFI = .95, CFI = 1.0, RMSEA = .05). Thus, the subsequent analyses were conducted using in-role performance and extra-role performance as two factors of performance. The Cronbach's alphas for in-role and extra-role performance were .87 and .94, respectively. In-role performance was the average of the task performance items and extra-role performance was the average of the items for innovation, personal initiative, and self-direction.

Mediating variables

Unless otherwise stated, all the following scales used a 5-point Likert-type scale (1 = strongly disagree; 5 = strongly agree).

Role breadth The 12 items used to assess extra-role job performance were modified to measure role breadth such that all items start with the stem “it is part of my job to...” For each facet of role definition, respondents were directed to appraise whether extra-role items were seen as part of the job. For instance, one sample item is “it is part of my job to bring about improved procedures to work,” and focal respondents indicated their level of agreement with this statement on a 5-point Likert-type scale (1 = strongly disagree; 5 = strongly agree). A similar approach to measuring role definition has been used in other studies (Morrison, 1994; McAllister et al., 2007; Kamdar, McAllister, & Turban, 2006). The Cronbach’s alpha for the 12-item scale was .93.

Role breadth self-efficacy (RBSE) To assess RBSE, I used the four highest loading items from Parker (1998). The same measure was used in Parker and Collins (2010). Following Parker (1998) and Gist (1987), I constructed the RBSE score by aggregating and averaging the scores across the role activity items. The Cronbach’s alpha for the 4-item scale was .83.

Perceived meaningfulness at work Meaningful work was assessed with a 3-item scale adapted from May, Gilson, and Harter (2004). A sample item is “the work I do on this job is meaningful to me.” The Cronbach’s alpha for the 3-item scale was .88.

Vitality The 7-item scale for vitality was drawn from two prior scales: the vigor subscale by Salanova, Agut, and Peiró (2005) and the subjective vitality scale by Ryan and Frederick (1997). A sample item is “in my job, I feel strong and vigorous.” The Cronbach’s alpha for the 7-item scale was .94.

Goal setting Goal setting was assessed by adapting the goal setting measure developed by Erez and Judge (2001). The three items are “over the past year, I have set some difficult goals for myself,” “the goals that I have set for myself are hard to achieve,” and “the goals that I have set for myself are easily attainable” (reverse-scored). The Cronbach’s alpha for the 3-item scale was .84.

Self-observation Self-observation was assessed with the self-observation subscale of the self-leadership questionnaire developed by Houghton and Neck (2002). A sample item is “I pay attention to how well I am doing in my work.” The Cronbach’s alpha for the 4-item scale was .77.

Effort expenditure Following an approach similar to that taken by VandeWalle et al. (1999), I assessed effort expenditure with three items that asked the participants to rate how much time, work intensity, and overall effort they put into their work compared to coworkers. The item used a 5-point response scale that ranged from 1 (much less than average) to 5 (much more than average). The Cronbach’s alpha for the 3-item scale was .87.

Positive reframing Positive reframing was evaluated by the positive reframing and growth subscale of COPE scale developed by Carver et al. (1989). The scale includes four items, and a sample item is “I look for something good in what is happening.” The Cronbach’s alpha for the 4-item scale was .78.

Moderating variable

Role ambiguity Role ambiguity was measured with the 6-item scale developed by Rizzo, House, and Lirtzman (1970). A sample item is “I have clear, planned goals and objectives for my job.” Consistent with other research, six items were all reverse-coded

so that the higher the score, the higher the level of role ambiguity. The Cronbach's alpha for the 6-item scale was .81.

Control variables

The zero-order correlations suggested that gender and organizational tenure were significantly related to both EOS and outcome variables. For instance, the correlations between gender and EOS was -.11 and -.08 between gender and job attitudes. Therefore, I controlled gender (0=female 1=male) and organizational tenure in the data analyses.

Analyses and Results

A list of hypotheses and test results are presented in Table 5. Overall, I examined three types of relationships among variables— direct relationships, mediation effects, and moderation effects. To test the direct relationships between variables, I examined pairwise zero-order correlations and conducted regression analyses controlling for the effects of gender and organizational tenure; to test the mediating hypotheses, I first took the product-of-coefficient approach to test the indirect effects of EOS on outcome variables through mediators and then used structural equation modeling (SEM) to evaluate the overall fit of the mediating model; to test the moderating hypotheses, I conducted a multiple regression analysis to test the significance of the product of EOS and role ambiguity. In the following, I provide more details about the analytic procedure and organize the results by the type of relationships tested, starting with direct relationships.

Table 5
A List of Hypotheses and Results

Hypothesis		Results
Hypothesis 1a	Eudaimonic orientation will be positively related to job satisfaction.	Supported
Hypothesis 1b	Eudaimonic orientation will be positively related to affective commitment.	Supported
Hypothesis 2a	Eudaimonia orientation will be positively related to in-role task performance.	Not Supported
Hypothesis 2b	Eudaimonia orientation will be positively related to extra-role performance.	Not Supported
Hypothesis 3	Eudaimonic orientation will be positively associated with a broad role definition.	Supported
Hypothesis 4	Eudaimonic orientation will be positively associated with RBSE.	Supported
Hypothesis 5a	A broad role definition will be positively related to job satisfaction.	Supported
Hypothesis 5b	A broad role definition will be positively related to affective commitment.	Supported
Hypothesis 5c	A broad role definition will be positively related to in-role performance.	Not Supported
Hypothesis 5d	A broad role definition will be positively related to extra-role performance.	Supported
Hypothesis 6a	RBSE will be positively related to job satisfaction.	Supported
Hypothesis 6b	RBSE will be positively related to affective commitment.	Supported
Hypothesis 6c	RBSE will be positively related to in-role performance.	Not Supported
Hypothesis 6d	RBSE will be positively related to extra-role performance.	Supported
Hypothesis 7	Eudaimonic orientation will be positively related to perceived meaningfulness at work.	Supported
Hypothesis 8a	Perceived meaningfulness at work will be positively related to job satisfaction.	Supported
Hypothesis 8b	Perceived meaningfulness at work will be positively related to affective commitment.	Supported
Hypothesis 8c	Perceived meaningfulness at work will be positively related to in-role performance.	Not Supported
Hypothesis 8d	Perceived meaningfulness at work will be positively related to extra-role performance.	Supported
Hypothesis 9	Eudaimonic orientation will be positively related to subjective vitality.	Supported
Hypothesis 10a	Subjective vitality will be positively related to job satisfaction.	Supported
Hypothesis 10b	Subjective vitality will be positively related to affective commitment.	Supported
Hypothesis 10c	Subjective vitality will be positively related to in-role performance.	Supported
Hypothesis 10d	Subjective vitality will be positively related to extra-role performance.	Supported

Hypothesis (continued)		Results
Hypothesis 11a	The four motivational states will mediate the relationship between eudaimonic orientation and job satisfaction.	Supported
Hypothesis 11b	The four motivational states will mediate the relationship between eudaimonic orientation and affective commitment.	Supported
Hypothesis 11c	The four motivational states will mediate the relationship between eudaimonic orientation and in-role performance.	Not Supported
Hypothesis 11d	The four motivational states will mediate the relationship between eudaimonic orientation and extra-role performance.	Partially Supported
Hypothesis 12	Eudaimonic orientation will be positively related to challenging goal setting.	Supported
Hypothesis 13	Eudaimonic orientation will be positively related to self-observation.	Supported
Hypothesis 14	Eudaimonic orientation will be positively related to effort expenditure.	Supported
Hypothesis 15	Eudaimonic orientation will be positively related to the use of positive reframing.	Supported
Hypothesis 16a	Goal setting will positively predict in-role performance.	Not Supported
Hypothesis 16b	Self-observation will positively predict in-role performance.	Not Supported
Hypothesis 16c	Effort expenditure will positively predict in-role performance.	Not Supported
Hypothesis 16d	Positive reframing will positively predict in-role performance.	Not Supported
Hypothesis 17a	Goal setting will positively predict extra-role performance.	Not Supported
Hypothesis 17b	Self-observation will positively predict extra-role performance.	Not Supported
Hypothesis 17c	Effort expenditure will positively predict extra-role performance.	Not Supported
Hypothesis 17d	Positive reframing will positively predict extra-role performance.	Supported
Hypothesis 18a	The four self-regulatory strategies will partially mediate the relationship between eudaimonic orientation and in-role performance.	Not Supported
Hypothesis 18b	The four self-regulatory strategies will partially mediate the relationship between eudaimonic orientation and extra-role performance.	Not Supported
Hypothesis 19a	Role ambiguity will moderate the relationship between eudaimonic orientation and job attitudes such that the relationship will be stronger when the uncertainty is high.	Not Supported
Hypothesis 19b	Role ambiguity will moderate the relationship between eudaimonic orientation and in-role performance such that the relationship will be stronger when the uncertainty is high.	Not Supported
Hypothesis 19c	Role ambiguity will moderate the relationship between eudaimonic orientation and extra-role performance such that the relationship will be stronger when the uncertainty is high.	Not Supported

Direct Relationship Testing

Table 6 presents means, standard deviations, reliability coefficients, and correlations among the variables. As expected, EOS was positively correlated with both job satisfaction and organizational commitment. No association was found, however, between EOS and in-role or extra-role performance. EOS also had moderate and positive correlations with the four motivational psychological states of role breadth, RBSE, perceived meaningfulness at work, and vitality, and with the four self-regulatory strategies of goal setting, self-observation, effort expenditure, and positive reframing. In-role performance was related to extra-role performance and to the psychological states of meaningfulness and vitality but was not related to any of the self-regulatory strategies. Extra-role performance was related to all four psychological states—role breadth, role-based self-esteem, vitality, and work meaningfulness—and to the self-regulatory strategy of positive reframing. Finally, the moderator, role ambiguity, was negatively associated with EOS, job attitudes, and peer-rated in-role and extra-role performance.

Although the correlation matrix provided some evidence about the relationships among variables, I used regression analyses, controlling for gender and organizational tenure, to test the direct relationship hypotheses. The first set of analyses examined the effects of EOS on the outcomes and the mediating variables. The second set of variables examined the effects of mediators on the outcomes.

Table 6

Means, Standard Deviations, and Correlations among Study 2 Variables

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	EOS	4.13	0.36	.90												
2	Job satisfaction	3.93	0.84	.18	.88											
3	Affective commitment	3.44	0.82	.19	.69	.90										
4	In-role ^(a)	4.64	0.49	.07	.25	.27	.87									
5	Extra-role ^(a)	4.33	0.54	.08	.39	.30	.66	.94								
6	Role breadth	4.04	0.68	.27	.35	.40	.03	.18	.93							
7	RBSE	4.27	0.59	.32	.30	.26	.08	.26	.46	.83						
8	Vitality	3.55	0.79	.34	.74	.68	.16	.29	.44	.38	.94					
9	Work meaningfulness	3.97	0.79	.27	.66	.62	.21	.23	.42	.33	.72	.88				
10	Goal setting	3.63	0.84	.19	.17	.25	-.04	.01	.26	.26	.26	.28	.84			
11	Self-observation	4.03	0.54	.25	.18	.16	.08	.08	.20	.32	.22	.23	.25	.77		
12	Positive reframing	4.06	0.54	.40	.18	.19	.07	.19	.21	.30	.25	.21	.17	.23	.78	
13	Effort expenditure	3.87	0.67	.29	.12	.14	.12	.14	.19	.25	.29	.24	.28	.18	.12	.87
14	Role ambiguity ^(b)	2.23	0.67	-.21	-.51	-.48	-.21	-.27	-.29	-.32	-.54	-.47	-.13	-.16	-.12	.81

Note: 1. $n = 690$ except for rows with ^(a), ^(b) $n = 192$.

2. For $n = 690$, a correlation of .08 is significant at .05 and of .10 is significant at .01; for $n = 192$, a correlation of .15 is significant at .05 and of .19 is significant at .01.

3. Coefficient alpha is on the diagonal in the boldface.

Relationships among EOS and other variables

Results of the analyses regressing EOS and other variables were presented in Table 7a (outcomes), 7b (psychological states), and 7c (self-regulatory strategies). Hypotheses 1a and 1b proposed a positive association between EOS and job satisfaction and affective commitment, respectively. Hypotheses 2a and 2b stated that EOS would be positively associated with in-role and extra-role performance. Results in Table 7a indicate that EOS was positively related to job satisfaction and affective commitment but was not related to in-role and extra-role performance. Thus, hypotheses 1a and 1b were supported but not hypotheses 2a and 2b. R^2 change for job satisfaction and affective commitment model was .02 and .03, respectively.

Table 7b shows the effect of EOS on the four psychological states and thus provides results for hypotheses 3, 4, 7, and 9. After controlled for gender and organizational tenure, EOS was positively related to all four psychological states, supporting Hypothesis 3 (EOS – role breadth), Hypothesis 4 (EOS – RBSE), Hypothesis 7 (EOS – perceived meaningfulness at work), and Hypothesis 9 (EOS – vitality). R^2 change ranged from .05 to .08.

Hypotheses 12, 13, 14, and 15 proposed that EOS will be positively related to the four self-regulatory strategies of goal setting, self-observation, effort expenditure, and positive reframing. Table 7c indicates that EOS was indeed positively associated with all four self-regulatory strategies, supporting Hypothesis 12 (EOS – goal setting), Hypothesis 13 (EOS – self observation), Hypothesis 14 (EOS – effort expenditure), and Hypothesis 15 (EOS – positive reframing). R^2 change ranged from .05 to .14.

In general, the hypotheses regarding the relationships between EOS and other variables in the model were largely supported. Specifically, as hypothesized, EOS was positively associated with job satisfaction and affective commitment, with the four positive psychological states, and with the four self-regulatory strategies. But contrary to the hypotheses, no association between EOS and performance was identified.

Table 7a

Effect of EOS on Job Satisfaction, Affective Commitment, In-Role Performance, and Extra-Role Performance

	Job Satisfaction (Hypothesis 1a)	Affective Commitment (Hypothesis 1b)	In-role Performance ^(b) (Hypothesis 2a)	Extra-Role Performance ^(b) (Hypothesis 2b)
Gender (β)	-.04	-.03	-.02	-.06
Tenure (β)	.13**	.18**	.25**	.01
EOS (β)	.12**	.16**	-.05	-.03
R ² Change ^(a)	.02**	.03**	.00	.00

Notes: ** $p < .01$ * $p < .05$; $n=517$; ^(b) $n=153$;

^(a)This represents the R² change contributed by EOS.

Table 7b

Effect of EOS on Role Breadth, RBSE, Meaningfulness, and Vitality

	Role Breadth (Hypothesis 3)	RBSE (Hypothesis 4)	Meaningfulness (Hypothesis 7)	Vitality (Hypothesis 9)
Gender (β)	.02	.12**	.01	.02
Tenure (β)	.13**	.09*	.16**	.09*
EOS (β)	.24**	.28**	.23**	.29**
R ² Change ^(a)	.06**	.08**	.05**	.08**

Notes: ** $p < .01$ * $p < .05$; $n=517$;

^(a)This represents the R² change contributed by EOS.

Table 7c

Effect of EOS on Goal Setting, Self-Observation, Effort Spending, and Positive Reframing

	Goal Setting (Hypothesis 12)	Self - Observation (Hypothesis 13)	Effort Spending (Hypothesis 14)	Positive Reframing (Hypothesis 15)
Gender (β)	.08	.06	-.01	-.01
Tenure (β)	.03	-.01	.02**	-.04
EOS (β)	.22**	.28**	.29**	.38**
R ² Change ^(a)	.05**	.08**	.09**	.14**

Notes: ** $p < .01$ * $p < .05$; $n=517$;

^(a)This represents the R² change contributed by EOS.

Relationships between mediators and outcomes

Regression analyses results regarding the relationships between the psychological states and outcomes are presented in Table 8a-8d. Table 8a examines the effect of role breadth on four outcomes. Hypothesis 5a, 5b, 5c, and 5d stated that role breadth would be positively related to four outcomes. Results show that after controlling for gender and organizational tenure, role breadth was positively related to job satisfaction and affective commitment but not to in-role or extra-role performance. Thus, Hypothesis 7a (role breadth - job satisfaction) and Hypothesis 7b (role breadth – affective commitment) were supported but not Hypothesis 7c (role breadth – in-role performance) or Hypothesis 7d (role breadth – extra-role performance).

Table 8b presents results regarding the effect of RBSE on job attitudes and performance. Hypothesis 6a, 6b, 6c, and 6d proposed a positive relationship between RBSE and the four outcomes. Table 8b indicates that RBSE was related to job satisfaction, affective commitment, and extra-role performance, but not to in-role performance. These results support hypotheses 6a (RBSE – job satisfaction), 6b (RBSE – affective commitment), and 6d (RBSE – extra-role performance), but not Hypothesis 6c (RBSE – in-role performance).

Table 8c examines the effect of perceived work meaningfulness on job attitudes and performance. The correlation table (Table 6) suggests that perceived work meaningfulness was positively associated with all outcome variables. In regression analyses, meaningfulness was still positively related to job satisfaction, affective commitment, and extra-role performance but was not related to in-role performance beyond gender and tenure. Therefore, hypotheses 8a (meaningfulness – job satisfaction),

8b (meaningfulness - affective commitment), and 8d (meaningfulness – extra-role performance) were supported, but not Hypothesis 8c (meaningfulness – in-role performance).

Table 8d presents the results for vitality. Like meaningfulness, vitality was positively associated with all outcome variables in the correlation analysis. After controlling for gender and tenure, vitality still had a positive effect on job attitudes and extra-role performance but was no longer associated with in-role performance. Therefore, hypotheses 10a (vitality – job satisfaction), 10b (vitality – affective commitment), and hypothesis 10d (vitality – extra-role performance) were supported, but not Hypothesis 10c (vitality – in-role performance).

As far as the relationships among psychological states mediators and job outcomes, they were all positively related to job attitudes, but not to in-role performance. Except for role breadth, the other three psychological states were positively related to extra-role performance as well.

Table 8a
Effect of Role Breadth on Job Satisfaction, Affective Commitment, In-Role Performance, and Extra-Role Performance

	Job Satisfaction ^(a) (Hypothesis 5a)	Affective Commitment ^(a) (Hypothesis 5b)	In-Role Performance ^(b) (Hypothesis 5c)	Extra-Role Performance ^(b) (Hypothesis 5d)
Gender (β)	-.05	-.04	.00	-.06
Tenure (β)	.08*	.14**	.26**	0
Role Breadth (β)	.34**	.37**	.10	.08
R ² Change ^(d)	.12**	.13**	.02	.01

Notes: ** $p < .01$ * $p < .05$; ^(a) $n=517$ ^(b) $n=153$;

^(d)This row represents the R² change contributed by role breadth.

Table 8b
Effect of RBSE on Job Satisfaction, Affective Commitment, In-Role Performance, and Extra-Role Performance

	Job Satisfaction ^(a) (Hypothesis 6a)	Affective Commitment ^(a) (Hypothesis 6b)	In-Role Performance (Hypothesis 6c)	Extra-Role Performance ^(b) (Hypothesis 6d)
Gender (β)	-.08	-.06	-.02	-.09
Tenure (β)	.11*	.17**	.25**	-.02
RBSE (β)	.27**	.20**	.03	.25**
R ² Change ^(c)	.07**	.04**	.00	.06**

Notes: ** $p < .01$ * $p < .05$; ^(a) $n=517$ ^(b) $n=153$;
^(c) This row represents the R² change contributed by RBSE.

Table 8c
Effect of Meaningfulness on Job Satisfaction, Affective Commitment, In-Role Performance, and Extra-Role Performance

	Job Satisfaction ^(a) (Hypothesis 8a)	Affective Commitment ^(a) (Hypothesis 8b)	In-Role Performance ^(b) (Hypothesis 8c)	Extra-Role Performance ^(b) (Hypothesis 8d)
Gender (β)	-.05	-.03	-.02	-.07
Tenure (β)	.03	.09*	-.24**	-.02
Meaningfulness(β)	.63**	.61**	.13	.21**
R ² Change ^(c)	.39**	.37**	.02	.04**

Notes: ** $p < .01$ * $p < .05$; ^(a) $n=517$ ^(b) $n=153$;
^(c) This row represents the R² change contributed by meaningfulness.

Table 8d
Effect of Vitality on Job Satisfaction, Affective Commitment, In-Role Performance, and Extra-Role Performance

	Job Satisfaction ^(a) (Hypothesis 10a)	Affective Commitment ^(a) (Hypothesis 10b)	In-Role Performance ^(b) (Hypothesis 10c)	Extra-Role Performance ^(b) (Hypothesis 10d)
Gender (β)	-.05	-.04	-.01	-.05
Tenure (β)	.06	.12*	-.25**	0
Vitality (β)	.70**	.65**	.10	.25**
R ² Change ^(c)	.49**	.41**	.01	.07**

Notes: ** $p < .01$ * $p < .05$; ^(a) $n=517$ ^(b) $n=153$;
^(c) This row represents the R² change contributed by vitality.

The next set of regression analyses is concerned with the relationships between four self-regulatory strategies and performance. Results are summarized in Table 9a-9d. Please note that I did not propose relationships of self-regulatory strategies with job satisfaction or affective commitment. None of the four self-regulatory strategies had an effect on in-role performance, and only positive reframing had a positive effect on extra-role performance. Therefore, in terms of the hypotheses regarding the relationships between four self-regulatory strategies and performance, only Hypothesis 17d (positive reframing – extra-role performance) was supported.

Summary of testing results for direct relationships. All in all, hypotheses regarding the relationships among EOS and other variables were largely supported -- EOS had a positive effect on two job attitudes but not on two performances; EOS also contributed positively to all four psychological states and self-regulatory strategies. Hypotheses regarding the relationships between psychological states and outcomes also received good support-- all four psychological states were positively related to job attitudes, and three were positively related to extra-role performance. However, there was little support for the hypotheses regarding the relationships between self-regulatory strategies and performance--only one had a positive effect on extra-role performance.

Table 9a
Effect of Goal Setting on In-Role and Extra-Role Performance

	In-Role Performance	Extra-Role Performance
	(Hypothesis 16a)	(Hypothesis 17a)
Gender (β)	-.01	-.06
Tenure (β)	.25**	-.01
Goal Setting (β)	-.04	.10
R ² Change ^(a)	.00	.01

Notes: ** $p < .01$ * $p < .05$; $n=153$;
^(a) This row represents the R² change contributed by goal setting.

Table 9b
Effect of Self-Observation on In-Role and Extra-Role Performance

	In-Role Performance	Extra-Role Performance
	(Hypothesis 16b)	(Hypothesis 17b)
Gender (β)	-.02	-.06
Tenure (β)	.25**	.00
Self-Observation	.04	.05
R ² Change ^(a)	.00	.00

Notes: ** $p < .01$ * $p < .05$; $n=153$;
^(a) This row represents the R² change contributed by self-observation.

Table 9c
Effect of Effort Spending on In-Role and Extra-Role Performance

	In-Role Performance	Extra-Role Performance
	(Hypothesis 16c)	(Hypothesis 17c)
Gender (β)	-.02	-.06
Tenure (β)	.25**	.00
Effort Spending	.05	.14
R ² Change ^(a)	.00	.02

Notes: ** $p < .01$ * $p < .05$; $n=153$;
^(a) This row represents the R² change contributed by effort spending.

Table 9d
Effect of Positive Reframing on In-Role and Extra-Role Performance

	In-Role Performance	Extra-Role Performance
	(Hypothesis 16d)	(Hypothesis 17d)
Gender (β)	.00	-.03
Tenure (β)	.25**	-.01
Positive Reframing	.06	.17**
R ² Change ^(a)	.00	.03

Notes: ** $p < .01$ * $p < .05$; $n=153$;

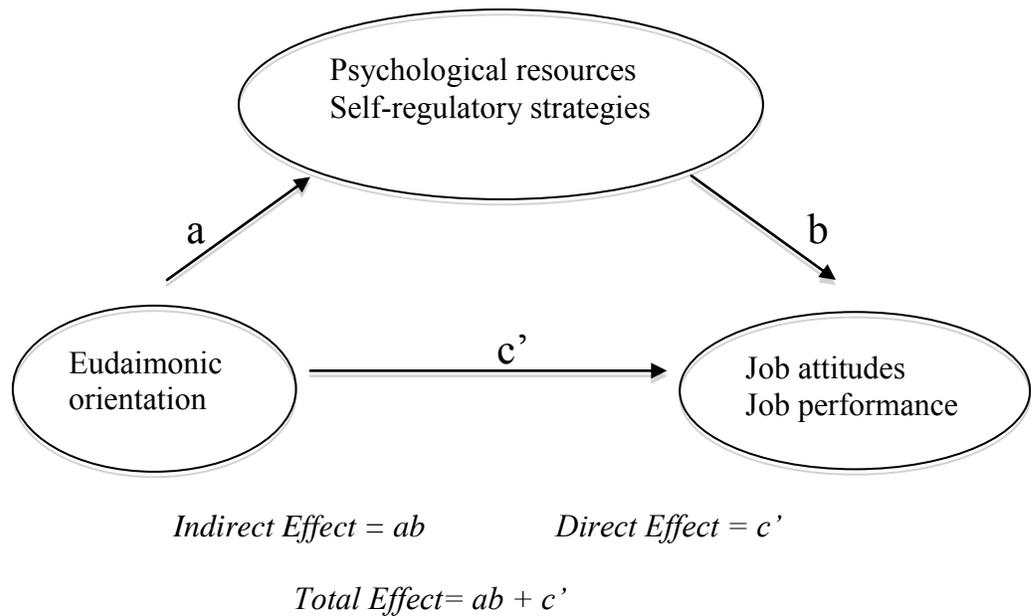
^(a) This row represents the R² change contributed by positive reframing.

Mediation Analysis

The next step is to test the mediating effects. Figure two presents the hypothesized mediation model.. Generally speaking, I hypothesized that two groups of mediators--psychological resources and self-regulatory strategies--mediated the relationship among EOS and the outcomes of job attitudes and job performance. Statistically speaking, the hypothesized mediation model suggests that the total effect of EOS on outcomes is the sum of two effects: a direct effect (c') and an indirect effect through mediators (ab).

Figure 2

Hypothesized Mediation Model



Among the various methods used to test mediation, Baron and Kenny's causal steps strategy (Baron & Kenny, 1986) has been the most influential and the most commonly used approach. Recently, however, many scholars (e.g., Shrout & Bolger, 2002; MacKinnon, Krull, & Lockwood, 2000;) have argued that a significant total effect of X on Y is not a necessary condition for mediation analysis, especially when there is *a priori* belief that the effect size is small or that suppression is a possibility (Shrout & Bolger, 2002). The alternative product-of-coefficients strategy does not require a significant total effect and instead focuses on testing the significance of *indirect effect* of independent variables on dependent variables via mediators. In Figure 2, the product of Path a and Path b represents the indirect effect of EOS on dependent variables. When

mediation has occurred, the indirect effect, ab , is expected to be nonzero. In assessing the significance of indirect effect, many scholars have recommended the bootstrap framework under the following situations: 1) when sample size is small to moderate; 2) when the normality assumption of mediation effect is violated, and/or 3) when multiple mediators are considered simultaneously in the model (Holmbeck, 1997; Shrout & Bolger, 2002; Preacher & Hayes, 2008; Cheung & Lau, 2008). A third strategy that has often been used for mediation analysis is structural equation modeling (SEM) (Cheung & Lau, 2008). One of the advantages of SEM is that it takes into account measurement error when the variables are not directly observable. It also offers a comparison between the hypothesized mediating model and alternative models.

In light of the above review and recommendations, I used the following strategies to test the mediation model. First, I used the coefficient-of-product approach to test the indirect effect of mediators on 1,000 bootstrapped samples. In this step, I assessed the total indirect effect of the set of mediators by including multiple mediators simultaneously. Subsequently, I used structural equation modeling to take into account measurement errors, to assess the overall fit of the mediation model, and to compare the fit of the mediation model with other alternative models.

Indirect effect testing

The estimate of the indirect effect is the product of the regression coefficient describing the relationship between EOS and psychological states (Path α) and the regression coefficient of the relationship between psychological states and outcome (Path β); or $a \times b$. To facilitate the estimation and to generate bootstrapping confidence intervals, I used the SPSS macro developed by Preacher and Hayes (2004), which has

been used in articles published in journals such as *Journal of Applied Psychology* and *Journal of Counseling Psychology* (e.g., Cole, Walter, & Bruch, 2008; Friedlander et al., 2008). Using resampling technique with replacement, this macro generated 1,000 bootstrap samples of the entire data set, which allowed the calculation of 1,000 estimates of coefficient a and coefficient b . Multiplying 1,000 estimates of a and 1,000 estimates of b created 1,000 estimates of $a \times b$, which allowed the calculation of the mean and the standard error of the estimated ab . To calculate the bootstrap confidence interval (CI), the 1,000 values of ab were sorted from low to high and the values defining the lower and upper $100(\alpha/2)\%$ of the distribution of ab were then identified to form the lower and upper limits of $100(1 - \alpha)\%$ CI. Because I used an alpha of .05, this process resulted in 95% confidence intervals. These analyses were conducted on all four mediators simultaneously. Results are summarized in six tables. Tables 10a-10d present the indirect effect of EOS through four psychological states on four outcomes; Tables 10e and 10f present the indirect effect of EOS through four self-regulatory strategies on in-role performance and extra-role performance.

The results for the outcome of job satisfaction are summarized in Table 10a. When entered as a group, the total indirect effect of four mediators was .54 with a 95% confidence interval from .36 to .72. Such results indicate that EOS had a statistically significant indirect effect on job satisfaction through four psychological states. The specific indirect effects ranged from .01 to .36. Further examination of the specific indirect effect via each mediator suggests that perceived meaningfulness and vitality were two significant mediators in the EOS – job satisfaction relationship.

Table 10b presents the results of indirect effects of EOS on affective commitment through four psychological states. The estimated total indirect effect was .48 with a 95% confidence interval from .30 to .62, suggesting that, when taken as a set, the indirect effect of EOS on affective commitment through four psychological states was nonzero. The specific indirect effect was .07 (through *role breadth*), -.05 (through *RBSE*), .16 (through *meaningfulness*), and .30 (through *vitality*). Meaningfulness and vitality were two important mediators in the EOS – affective commitment relationship.

Tables 10c and 10d present the results of testing the indirect effect of EOS on in-role and extra-role performance. The estimated total indirect effect of EOS on in-role performance was .01 with a 95% confidence interval of -.12 to .09. Since the confidence interval contained zero, the indirect effect on in-role performance was not significant.

In terms of effect on extra-role performance, the estimated total indirect effect was .11 with a confidence interval from .02 to .24, suggesting EOS had a significant indirect effect on extra-role performance through four psychological states. Results indicated that EOS had an indirect effect on extra-role performance only through *RBSE*, suggesting that *RBSE* is an important mediator in the relationship between EOS and extra-role performance.

Table 10a
Indirect Effect of EOS on Job Satisfaction through Role Breadth, RBSE, Meaningfulness, and Vitality

Mediator(s)	Estimate	SE	Bootstrapping 95% CI	
			Lower	Upper
Role breadth	.03	.02	-.02	.08
RBSE	.01	.02	-.05	.07
Meaningfulness	.14**	.04	.08	.23
Vitality	.36**	.07	.24	.52
TOTAL	.54**	.09	.36	.72

Notes: 1. Control variables: gender and organizational tenure;
2. Estimates based on 1,000 bootstrapping sample.

Table 10b
Indirect Effect of EOS on Affective Commitment Through Role Breadth, RBSE, Meaningfulness, and Vitality

Mediator(s)	Estimate	SE	Bootstrapping 95% CI	
			Lower	Upper
Role breadth	.07	.03	.02	.12
RBSE	-.05	.02	-.11	.00
Meaningfulness	.16**	.04	.09	.24
Vitality	.30**	.06	.19	.41
TOTAL	.48**	.08	.30	.62

Notes: 1. Control variables: gender and organizational tenure;
2. Estimates based on 1,000 bootstrapping sample.

Table 10c
Indirect Effect of EOS on In-Role Performance Through Role Breadth, RBSE, Meaningfulness, and Vitality

Mediator(s)	Estimate	SE	Bootstrapping 95% CI	
			Lower	Upper
Role breadth	-.06	.05	-.22	.00
RBSE	.03	.05	-.03	.15
Meaningfulness	.02	.03	-.02	.12
Vitality	.02	.04	-.04	.14
TOTAL	.01	.05	-.12	.09

Notes: 1. Control variables: gender and organizational tenure;
2. Estimates based on 1,000 bootstrapping sample.

Table 10d
Indirect Effect of EOS on Extra-Role Performance Through Role Breadth, RBSE, Meaningfulness, and Vitality

Mediator(s)	Estimate	SE	Bootstrapping 95% CI	
			Lower	Upper
Role breadth	-.04	.04	-.14	.00
RBSE	.09**	.05	.03	.22
Meaningfulness	.01	.02	-.02	.09
Vitality	.05	.05	-.01	.18
TOTAL	.11	.06	.02	.24

Notes: 1. Control variables: gender and organizational tenure;
2. Estimates based on 1,000 bootstrapping sample.

Table 10e
Indirect Effect of EOS on In-Role Performance Through Goal Setting, Self-Observation, Positive Reframing, and Effort Expenditure

Mediator(s)	Estimate	SE	Bootstrapping 95% CI	
			Lower	Upper
Goal setting	-.01	.02	-.06	.01
Self-observation	.02	.03	-.04	.08
Positive reframing	.02	.05	-.06	.12
Effort expenditure	.03	.03	-.01	.11
TOTAL	.05	.06	-.04	.19

Notes: 1. Control variables: gender and organizational tenure;
2. Estimates based on 1,000 bootstrapping sample.

Table 10f
Indirect Effect of EOS on Extra-Role Performance Through Goal Setting, Self-Observation, Positive Reframing, and Effort Expenditure

Mediator(s)	Estimate	SE	Bootstrapping 95% CI	
			Lower	Upper
Goal setting	-.01	.02	-.07	.01
Self observation	.00	.03	-.06	.06
Positive reframing	.11**	.06	.01	.24
Effort expenditure	.05	.03	.00	.12
TOTAL	.15**	.06	.03	.28

Notes: 1. Control variables: gender and organizational tenure;
2. Estimates based on 1,000 bootstrapping sample.

Tables 10e and 10f present the test results of mediating indirect effects on in-role and extra-role performance through four self-regulatory strategies as a set. As shown in Table 10e, the indirect effect of EOS on in-role performance was .05 with a 95% confidence interval from -.04 to .19. Because zero was included in the confidence interval, the total indirect effect on in-role performance was insignificant. For extra-role performance, the indirect effect mediated by four self-regulatory strategies was .15 with a confidence interval from .03 to .28, suggesting that there was a significant indirect effect. Within the four mediators, only the indirect effect through positive reframing was significant (indirect effect = .11).

In testing the indirect effect of EOS, I examined two sets of mediators: the set of psychological states and the set of self-regulatory strategies. Results showed that EOS had significant indirect effects on job satisfaction, affective commitment, and extra-role performance through the four psychological states as a set; however, I identified no significant indirect effect on in-role performance. For the self-regulatory strategies, I found a significant indirect effect on extra-role performance but not on in-role

performance. In the next section, I used the structural equation modeling to further test the partial mediation hypotheses. Since EOS did not have a significant indirect effect on in-role performance, I tested only the mediation models with job satisfaction, affective commitment, and extra-role performance as outcome variables.

Testing mediation using SEM

To test the partial mediating hypotheses, I first examined the fit of the hypothesized partial mediation model and then compared it against two alternative models: a non-mediated model and a fully mediated model. In the hypothesized partial mediation model, EOS and outcome variables were connected through two paths: the direct path from EOS to outcomes and the indirect paths via mediators. In the non-mediated model, the path from EOS to mediators was not estimated. In the full mediation model, the direct path from EOS to outcomes was not estimated. A chi-square difference test was used to compare the hypothesized model and alternative models. Consistent with the previous analyses, I included gender and organizational tenure as control variables in the model by adding them as observable predictors to the outcome variables.

Each variable in the model was treated as a latent variable with three indicators. To set up the structural models, I created three indicators for each variable. The three indicators of EOS were created by averaging the scores for the three underlying dimensions – learning, self-expressiveness, and prosocial orientation. A similar approach was taken to create the indicators for extra-role performance – items were aggregated within each dimension to build the indicators. Since the job satisfaction measure has only three items, each item was used as an indicator to the latent variable of job

satisfaction. For affective commitment and mediating variables, items were averaged ordinarily to create three indicators for each latent variable.

Table 11 summarizes the fit indices and chi-square difference test results for the outcomes of job satisfaction, affective commitment and extra-role performance. The first three models were mediated by four psychological states and the last model was mediated by four self-regulatory strategies. For the EOS – job satisfaction model, the hypothesized partial mediation model provided a satisfactory fit for the the data ($\chi^2 = 530.32$; $df = 160$; CFI = .94; GFI = .91, RMSEA = .06). Chi-square difference test indicated that the hypothesized partial mediation model provided superior fit to the data than the alternative full mediation and no mediation models. Therefore, Hypothesis 11a, which states that four psychological states partially mediate the relationship between EOS and job satisfaction, was supported.

For the EOS – affective commitment model, the hypothesized partial mediation model also provided satisfactory fit for the the data ($\chi^2 = 574.18$; $df = 160$; CFI = .93; GFI = .90, RMSEA = .07). Chi-square difference tests suggested that the hypothesized partial mediation model had superior fit than the non-mediation model but did *not* fit the data better than the full mediation model. Since full mediation provides a more parsimonious model to the data, I concluded that four psychological states fully mediated, rather than partially mediated, the relationship between EOS and affective commitment. Therefore, Hypothesis 11b, which suggested a partial mediation, was not supported.

For the EOS – extra-role performance models, when the relationship was mediated by the psychological states (Hypothesis 11d), the hypothesized partial mediation model showed superior fit than the non-mediation model but did *not* provide

better fit to the data than the full-mediation model (χ^2 - difference = 2, $df = 1$). Hypothesis 11d, which suggested a partial mediation, was not supported.

Similarly, when four self-regulatory strategies were considered mediators in the relationship between EOS and extra-role performance, chi-square difference tests showed that the hypothesized partial mediation model provided a better fit than the non-mediation model but did not fit the data better than the full mediation model (χ^2 - difference = 1.44, $df = 1$). Thus, there is a full mediation, rather than partial mediation, via four self-regulatory strategies in the relationship between EOS and extra-role performance. Hypothesis 18b was not supported.

In this section, I used the structural equation modeling to further test the partial mediation hypotheses. Consistent with the previous significant indirect effects of EOS via mediators, mediation models provided superior fit for the data than the non-mediation models across scenarios. Four psychological states, as a set, indeed partially mediated the relationship between EOS and job satisfaction. It appears, however, that psychological states fully mediated, instead of partially mediated, the relationship between EOS and affective commitment and between EOS and extra-role performance. Similarly, four self-regulatory strategies fully mediated the relationship between EOS and extra-role performance.

Moderation Analysis

The final group of hypotheses is concerned with the moderating effect of role ambiguity on the relationships between EOS and the outcomes. Before testing the interaction of EOS and role ambiguity, I mean-centered both role ambiguity and EOS to reduce the collinearity (Aiken & West, 1991) before calculating the interaction term. To

conduct the hierarchical regression analyses, in Step 1 I regressed the dependent variables on the control variables, in Step 2 I entered EOS and role ambiguity into the equations, and in Step 3 I entered the EOS-role ambiguity interaction term. Although EOS and role ambiguity both have main effects in predicting the job attitudes, the interaction term was not significant for either job satisfaction or affective commitment. Similarly, role ambiguity had main effects in predicting in-role and extra-role performance, but no interaction was found between EOS and role ambiguity. Thus, the moderation hypotheses were not supported.

Table 11
Fit Indices for Hypothesized Mediating Models and Alternative Models

Model	χ^2	<i>df</i>	χ^2 – diff.	CFI	GFI	RMSEA
DV: Job satisfaction ^{(a) (c)} (Hypothesis 11a)						
Hypothesized model	530.32	160	-	.94	.91	.06
No mediation	752.42	164	222.1**	.90	.86	.08
Full mediation	547.62	161	17.3**	.94	.90	.07
DV: Affective commitment ^{(a) (c)} (Hypothesis 11b)						
Hypothesized model	574.18	160	-	.93	.90	.07
No mediation	795.43	164	221.25**	.89	.86	.109
Full mediation	576.05	161	1.87	.93	.90	.07
DV: Extra-role performance ^{(a) (d)} (Hypothesis 11d)						
Hypothesized model	316.62	160	-	.90	.85	.08
No mediation	379.91	164	63.29**	.86	.81	.09
Full mediation	318.62	161	2.0	.90	.84	.08
DV: Extra-role performance ^{(b) (d)} (Hypothesis 18b)						
Hypothesized model	268.11	160	-	.91	.85	.07
No mediation	317.95	164	49.84**	.90	.84	.08
Full mediation	269.55	161	1.44	.91	.85	.07

- Notes: 1. ^(a) Four mediators are role breadth, RBSE, meaningfulness, and vitality;
^(b) Four mediators are goal setting, self-observation, positive reframing, and effort spending;
^(c) *n* = 517; ^(d) *n* = 153, ** *p* < .01;
2. Control variables: gender and organizational tenure.

Study 2 Discussion

In Study 2, I tested a model of eudaimonic orientation at work by examining its implications on job attitudes and job performance. I also tested whether two sets of variables--motivational states and self-regulatory strategies--mediated the relationships between eudaimonic orientation and organizational outcomes. Finally, I explored the effect of role ambiguity in moderating the EOS-outcome relationships. The model received mixed supports, but the results generally support the arguments that eudaimonic orientation is a motivational individual characteristic and that motivational states and self-regulatory strategies provide two vital sources for motivation.

First, the results indicated that eudaimonically oriented individuals reported higher satisfaction with their work and greater emotional attachment to their organization. They also reported more positive experience and cognition toward their work, indicating that eudaimonically oriented individuals are more likely to broadly define their work roles, have confidence in performing those broad roles, consider their work as more meaningful, and experience vitality and energy at work. Individuals with greater eudaimonic orientation also reported using more self-management strategies including: setting challenging goals, spending more efforts at work, keeping mindful of their work progress, and reinterpreting frustrating situations in a more positive light. These findings highlight the motivational essence of the concept of eudaimonic orientation, that is, that eudaimonically oriented individuals seek to integrate their general life goal of pursuing personal excellence and growth in the work context, as reflected by their usage of more self-management strategies and development of more favorable cognitions toward work.

Second, results indicated that eudaimonic orientation had an indirect effect on extra-role performance through a set of self-regulatory strategies. This result renders support for Kanfer and Heggestad's proposition that motivational traits affect behaviors through their influence on goals, intentions, or self-regulatory patterns (Kanfer & Heggestad, 1997; 1999). Among the four strategies, positive reframing appears to be the most important one mediating the effect of EOS on extra-role behaviors (Table 10f). This is an interesting result because it underlines the fact that extra-role behaviors may involve actions challenging the status quo (McAllister et al., 2007). Under such circumstances, one's capability and willingness to handle difficult times through positive reframing may be an essential individual asset to the success of proactive extra-role actions.

Third, the four motivational states as a set mediated the relationships between eudaimonic orientation and job attitudes, which suggests that one of the reasons that eudaimonically oriented individuals enjoy better work attitudes is that they view their work as a source of identity, efficacy, meaning, and energy. EOS also had an indirect effect on extra-role performance via psychological states, among which role-breadth self-efficacy had the biggest mediation effect. This result suggests that the confidence in performing tasks outside of their regular work roles facilitates eudaimonically oriented individuals to engage in actions above and beyond their prescribed roles.

CHAPTER FIVE

GENERAL DISCUSSION

Eudaimonia is a concept that has interested and puzzled scholars for hundreds of years. In the past decade, there has been a surge of revisits of this concept in the fields of social psychology and management due to the passion for understanding its role in facilitating human wellness. I started this study by arguing that a lack of a scientific measure that fails to properly reflect the philosophical roots of eudaimonia can be an obstacle to the research in this field. By drawing on literature on eudaimonia from both philosophy and psychology disciplines, I developed a trait-like construct of eudaimonic orientation which describes one's desire to develop the best in self and to express one's core self in the service of the greater good. This higher-order construct comprises the three components of growth orientation, self-expressive orientation, and prosocial orientation.

Results of Study 1 provided good support for the validity and reliability of EOS as a measure of eudaimonic orientation. Built upon the results from Study 1, Study 2 tested a model of eudaimonic orientation in the organizational context and examined its influence on an employee's job attitude, positive cognition of work, self-management strategies, and performance. Despite the mixed support to the hypothesized model, results of Study 2 demonstrated that eudaimonic orientation has important implications in understanding an employee's well-being and behaviors in the organizational life.

Summary of Results and Contribution

This research makes several contributions to the field. First, this research represents one of the few efforts that incorporate happiness research into the management literature. Happiness research in psychology has made great progress in the past decade due to the growing interest in the topic of “well-being” and “fully functioning.” With the increasing attention given to positive dynamics and phenomenon in the management literature (Cameron, Dutton, & Quinn, 2003), more integration of the two disciplines seems to be in order. This research answers this call by empirically studying the concept of eudaimonia and its impact in the organizational context. By joining happiness research and management literature, this research also helps to extend the nomological networks of eudaimonia to include organizational phenomena and outcomes. In both studies, I found positive and moderate relationships between eudaimonic orientation and perceived meaningfulness, both in life in general and at work. There were also positive relationships between life satisfaction and job satisfaction. As such, in both studies, eudaimonic orientation contributed to experienced positive affect and vitality at work. These findings not only provide further evidence on eudaimonia’s role in fostering human well-being in life in general but also suggest that eudaimonia serves as an equally potent factor in promoting psychological well-being at work, as reflected in heightened job satisfaction and affective organizational commitment, experienced work meaningfulness, and felt vitality.

Next, this paper also helps to clarify the processes underlying the relationship between eudaimonia and satisfaction. In explaining a lack of connection between eudaimonia and satisfaction in the short-term, Huta and Ryan (2010) speculated that this may be due to the delayed or cumulative effect of EOS on satisfaction; that is, perhaps

eudaimonia produces more satisfaction when its goals are finally achieved or after the person has undergone an elevating and inspiring experience. This paper is the first to provide some support for this argument. I found that a set of psychological states mediated the relationships between eudaimonia and job attitudes. Post-hoc analysis revealed that self-management strategies also mediated the associations between eudaimonia and job attitudes. These findings demonstrated that experience of motivational states and engagement in capacity-enhancing behaviors are two important resources that help eudaimonically oriented individuals to achieve greater satisfaction in the long-run and on the global level.

Last, this research is one of the first studies that directly examines the link between eudaimonia and “virtuous” behaviors. Previous research has indirectly suggested that people high in eudaimonia are more likely to be socially responsible and to engage in worthwhile goals (Brown & Kasser, 2005; Sheldon & McGregor, 2000). In the first study, I found that students with higher eudaimonic orientation are more likely to voluntarily initiate the behaviors that intend to bring improved procedures and/or are beneficial to the community. This was true even when such behaviors were reported from a third-party source. The positive relationship, however, was not found with the employee sample in Study 2. In Study 2, I asked focal persons to forward the performance evaluation survey link to either their coworkers or their supervisors. Perhaps many focal persons felt more comfortable forwarding the survey link to their coworkers; unfortunately coworkers may not be able to directly observe performance information such as “submitting suggestions to improve work” or “approaching supervisor with suggestions.” Alternatively, it is possible that eudaimonic orientation

only affects extra-role behaviors in a relatively constraint-free environment such as a university campus. The work setting, compared to the campus setting, is more likely to be “uncontrolled” in many ways so that it may interfere with the relationship between eudaimonic orientation and extra-role behaviors. This is an important issue for future research.

Limitations and Future Research

This research has some limitations as well. First, with respect to the measure of eudaimonic orientation, the higher-order measurement model of EOS provided a good fit to the Study 1 data but only a satisfactory fit to the Study 2 data. Moreover, the length of the current scale may make it a less practical measure for scholars and practitioners to use. So one of the important areas for future research of eudaimonic orientation is to further refine and revise the EOS measure and to test its validity with more samples.

Results of Study 2 two are subject to a criticism of the concurrent nature of the EOS and job attitudes measure because data were collected from the same source in one survey. As discussed by Podsakoff and colleagues (2003), common source bias may have inflated the observed relationships. Nonetheless, I do not think that common source bias is an alternative explanation for the mediating results. Even so, I conducted Harman’s single-factor test on Study 2 data to see whether those items loaded on one factor. The basic assumption of this method is that if a single factor emerges from the factor analysis or if one general factor accounts for the majority of the covariance among the measures, there is evidence of common method variance. I loaded eudaimonic orientation, job attitudes, psychological states, and self-regulatory strategies into an exploratory factor analysis and examined the unrotated factor solution. Three factors had

an eigenvalue greater than 1, and the first factor accounted for only 32% of the variance. Although this testing cannot fully rule out the possibility of common method variance, it renders some support to the argument that common method variance may not be a major issue to this research. Nonetheless, future researchers should attempt to measure outcomes from a different source.

Third, in this research, I focused on outcomes of eudaimonic orientation, but future research is needed to understand the factors that may influence eudaimonic orientation. Previous research has hinted that some leadership styles may influence eudaimonic orientation. For instance, Ilies, Morgeson, and Nahrgang (2005) developed a theoretical model of authentic leadership (Luthans & Avolio, 2003) that outlines the process through which such a leadership style influences followers' personal expressiveness, self-development and self-efficacy. Given that authentic leaders behave in accordance with their deep-seated values and are intrinsically motivated to lead, authentic leaders may have the capability to stimulate the desire for personal growth and expressiveness within their followers.

Conclusion

I extended research by developing a higher-order construct of eudaimonic orientation and examining its implications on attitudes and performance in work settings. More specifically, I attempted to create a measure of eudaimonia that grasps the essence of the eudaimonia concept and provides additional power in explaining human well-being and extra-role behaviors. Furthermore, I examined and found support for the mediating effects of motivational resources and self-regulating strategies in promoting positive attitudes at work. Finally, I found that vitality and positive reframing are two resources

that may promote extra-role behaviors within eudaimonically oriented individuals at work. I hope that my paper, by providing a eudaimonia perspective to understand employees' well-being and their positive behaviors, provides a bridge to join the eudaimonia research in psychology with efforts in management literature to understand the positive processes at work.

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Item Sorting - Eudaimonic Orientation Scale (EOS)
(The Initial Item Pool)

Note: Items were randomized in the sorting exercise.

Instruction: In the following, you will read 3 definitions and 33 statements. Please sort each statement into one of the groups based on the definitions provided. If you don't think the statement fits in any of the three groups or you are unsure, please select "Not sure". If the "Not sure" is selected, please use the adjacent box to explain the reasons in a few words.

The three definitions are:

Learning and growth orientation refers to one's desire to learn, to gain insights into something, and to develop as a person.

Self-expressive orientation refers to one's desire to seek congruence between behaviors and the self, including one's traits, values, and competencies.

Prosocial orientation refers to one's desire to benefit the lives or work of others and to make a difference through one's actions.

- LO1 I always pursue excellence to get the maximum out of myself.
- LO2 I like to acquire new knowledge and to develop new skills.
- LO3 The opportunity to learn new things is important to me.
- LO4 I prefer to work on the tasks that force me to learn new things.
- LO5 The opportunity to do challenging work excites me.
- LO6 I seek to perform to my potential.
- LO7 I am interested in extending the range of my abilities.
- LO8 It's important for me to have new experiences that challenge how I think about myself and the world.
- LO9 I believe life is a continuous process of learning, changing, and growth.
- LO10 I always seek to develop a skill, learn, or gain insight into something.
- LO11 I am interested in activities that will expand my horizons.
- LO12 When I engage in something, I always try to get the best out of myself.
- LO13 No matter what the outcome of a project, I am satisfied if I feel I gained a new experience.
- SE1 I try to act in a manner that is consistent with my personally held values, even if others criticize or reject me for doing so.
- SE2 I am willing to endure negative consequences by expressing my true beliefs about things.
- SE3 The opportunity to exhibit my true self is important to me.
- SE4 Being able to express my beliefs and values is important to me.

- SE5 I seek work opportunities that allow me to be who I really am.
- SE6 I don't like engaging in activities that don't fit who I am as a person.
- SE7 I would not change my opinion (or the way I do things) in order to please someone else or win their favor.
- SE8 I speak my mind freely even when there might be negative results.
- SE9 I find it easy to pretend to be something other than my true self.
- SE10 I am willing to change my actions if the rewards are desirable enough.
- SE11 I've often done things that I don't want to do merely to gain approval from others.
- SE12 I pursue goals that are unimportant to me in order to please others.
- PS1 I want to have positive impact on others.
- PS2 I get energized by working on tasks that have the potential to benefit others.
- PS3 I do my best when I feel that I'm contributing to the well-being of others.
- PS4 It is important to me to have the opportunity to use my abilities to benefit others.
- PS5 I hope to have positive impact on others inside and outside the organization I am working at.
- PS6 It is important for me to do good for others.
- PS7 I would like to benefit others through my endeavors.
- PS8 Being able to contribute to the broader scheme of things is important to me.
- PS9 I'll work to make the world a better place.
- PS10 I'll work for the betterment of society.
- PS11 Being able to make a difference through my endeavors is important to me.

Study 1 Surveys

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

Focal Person Survey

Consent to Participate in Research

Thank you for participating in this research project! By providing your name and Pawprint ID below, you consent to participate in this study and understand the following:

PROJECT BACKGROUND: This project involves gathering information on students' beliefs about themselves and their behaviors.

PURPOSE: The purpose of this study is to evaluate people's behavioral tendencies.

VOLUNTARY: The survey is entirely voluntary. You may refuse to answer any question or choose to withdraw from participation at any time without any penalty. Your grade will not be affected if you choose not to participate or if you choose to withdraw from the project at any time.

WHAT DO YOU DO? Click on the link that is provided at the end of the page and complete the survey, which should take approximately 25 minutes or less to complete.

BENEFITS AND RISKS: Your participation will help us understand how people approach things in life and you will receive extra credits from your instructor for your participation. At the end of the survey, you will be asked to provide contact information of two of your friends and to send them a link to a 5-minute survey. Your eligibility for extra credits will NOT be dependent upon their completion of the survey. This project does not involve any risks greater than those encountered in everyday life.

CONFIDENTIALITY: Your confidentiality will be maintained in that no individual information will be reported. If you have questions regarding your rights as a research participant, please feel free to contact the University of Missouri-Columbia Campus Institutional Review Board at (573) 882-9585. Thank you in advance for participating in this study. If you have any questions, feel free to contact:

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If you are willing to participate, please provide your name and your pawprint ID. The following information is also needed for the extra credit purpose.

Last name _____
First name _____

Pawprint ID _____

In the following, you will read some statements regarding people's preference and behaviors. Please use the scale below to rate to what extent each of the following statement describes you in general. Your responses will be kept in absolute confidence so please give your honest answer.

- 1 not at all like me*
- 2 not like me*
- 3 neutral*
- 4 like me*
- 5 very much like me*

(EOS – Learning orientation)

- 1 I always pursue excellence to get the maximum out of myself.
- 2 I like to acquire new knowledge and to develop new skills.
- 3 The opportunity to learn new things is important to me.
- 4 I prefer to work on the tasks that force me to learn new things.
- 5 The opportunity to do challenging work excites me.
- 6 I seek to perform to my potential.
- 7 I am interested in extending the range of my abilities.
- 8 It's important for me to have new experiences that challenge how I think about myself and the world.
- 9 I believe life is a continuous process of learning, changing, and growth.
- 10 I always seek to develop a skill, learn, or gain insight into something.
- 11 I am interested in activities that will expand my horizons.
- 12 When I engage in something, I always try to get the best out of myself.

(EOS – Self-expressive orientation)

- 13 No matter what the outcome of a project, I am satisfied if I feel I gained a new experience.
- 14 I try to act in a manner that is consistent with my personally held values, even if others criticize or reject me for doing so.
- 15 I am willing to endure negative consequences by expressing my true beliefs about things.
- 16 The opportunity to exhibit my true self is important to me.
- 17 Being able to express my beliefs and values is important to me.
- 18 I seek work opportunities that allow me to be who I really am.
- 19 I don't like engaging in activities that don't fit who I am as a person.
- 20 I would not change my opinion (or the way I do things) in order to please someone else or win their favor.
- 21 I speak my mind freely even when there might be negative results.
- 22 I find it easy to pretend to be something other than my true self.
- 23 I am willing to change my actions if the rewards are desirable enough.
- 24 I've often done things that I don't want to do merely to gain approval from others.
- 25 I pursue goals that are unimportant to me in order to please others.

(EOS – Prosocial orientation)

- 26 I want to have positive impact on others.
- 27 I get energized by working on tasks that have the potential to benefit others.
- 28 I do my best when I feel that I'm contributing to the well-being of others.
- 29 It is important to me to have the opportunity to use my abilities to benefit others.

- 30 I hope to have positive impact on others inside and outside the organization I am working at.
- 31 It is important for me to do good for others.
- 32 I would like to benefit others through my endeavors.
- 33 Being able to contribute to the broader scheme of things is important to me.
- 34 I'll work to make the world a better place.
- 35 I'll work for the betterment of society.
- 36 Being able to make a difference through my endeavors is important to me.

Intrinsic Aspiration Index (Kasser & Ryan, 1996)

This set of questions asks you about the future. Rate each item by indicating how important it is to you that it happen in the future.

- 1 not at all*
- 2 a little*
- 3 so/so*
- 4 pretty important*
- 5 very important*

IN THE FUTURE...

- 37 You will be the one in charge of your life.
- 38 At the end of your life, you will look back on your life as meaningful and complete.
- 39 You will deal effectively with problems that come up in your life.
- 40 You will know and accept who you really are.
- 41 You will have a couple of good friends that you can talk to about personal things.
- 42 You will have good friends that you can count on.
- 43 You will share your life with someone you love.
- 44 You will have people who care about you and are supportive.
- 45 You will know people that you can have fun with.
- 46 You will donate time or money to charity
- 47 You will work for the betterment of society.
- 48 You will work to make the world a better place.
- 49 You will help others improve their lives.
- 50 You will help people in need.
- 51 You will be physically healthy.
- 52 You will feel good about your level of physical fitness.
- 53 You will feel energetic and full of life.
- 54 You will be relatively free from sickness.

Growth Need Strength (Hackman & Oldham, 1980)

Please indicate the degree to which you would like to have each characteristic present in your job.

- 1 a small amount*
- 2*
- 3 moderate amount*
- 4*
- 5 extremely much*

- 55 Stimulating and challenging work.

- 56. Chances to exercise independent thought and action in my job.
- 57. Opportunities to learn new things from my work.
- 58. Opportunities to be creative and imaginative in my work.
- 59. Opportunities for personal growth and development in my job.
- 60. A sense of worthwhile accomplishment in my work.

Please indicate the degree to which you agree with the following statements. Again, your responses will be kept in absolute confidence so please give your honest answer.

- 1 strongly disagree*
- 2 disagree*
- 3 slightly disagree*
- 4 neutral*
- 5 agree*
- 6 slightly agree*
- 7 strongly agree*

Self-Actualization scale (Jones & Crandall, 1986; the short version only includes 1,3,4,7,10,12,15)

- 61. I do not feel ashamed of any of my emotions.
- 62. I believe that people are essentially good and can be trusted.
- 63. I feel free to be angry at those I love.
- 64. I can like people without having to approve of them.
- 65. It is better to be yourself than to be popular.
- 66. I can express my feelings even when they may result in undesirable consequences.
- 67. I am loved because I give love.

Hedonic Orientation - adapted from hedonic motives subscale (Huta & Ryan, 2010)

- 68. I seek enjoyment in my life.
- 69. I seek fun in my life.
- 70. I want to have a relaxed life.
- 71. I seek pleasure in my life.

Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985)

- 72. In most ways my life is close to my ideal.
- 73. The conditions of my life are excellent.
- 74. I am satisfied with my life.
- 75. So far I have gotten the important things I want in life.
- 76. If I could live my life over, I would change almost nothing.

The Presence subscale of the Meaning in Life Questionnaire (MLQ; Steger, Frazier, Oishi, & Kaler, 2006)

- 77. I understand my life's meaning.
- 78. My life has a clear sense of purpose.
- 79. I have a good sense of what makes my life meaningful.
- 80. I have discovered a satisfying life purpose.
- 81. My life has no clear purpose.

Self-esteem scale (Rosenberg, 1965)

- 82 On the whole, I am satisfied with myself.
- 83 At times, I think I am no good at all.
- 84 I feel that I have a number of good qualities.
- 85 I am able to do things as well as most other people.
- 86 I feel I do not have much to be proud of.
- 87 I certainly feel useless at times.
- 88 I feel that I'm a person of worth, at least on an equal plane with others.
- 89 I wish I could have more respect for myself.
- 90 All in all, I am inclined to feel that I am a failure.
- 91 I take a positive attitude toward myself.

Locus of Control - the Internality subscale of Levenson's (1981) IPC Scale

- 92 Whether or not I get to be a leader depends mostly on my ability.
- 93 Whether or not I get into a car accident depends mostly on how good a driver I am.
- 94 When I make plans, I am almost certain to make them work.
- 95 How many friends I have depends on how nice a person I am.
- 96 I can pretty much determine what will happen in my life.
- 97 I am usually able to protect my personal interests.
- 98 When I get what I want, it is usually because I worked hard for it.
- 99 My life is determined by my own actions.

Big Five (IPIP scale)

On the following pages, there are phrases describing people's behaviors. Please use the rating scale below to describe how accurately each statement describes you. Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. So that you can describe yourself in an honest manner, your responses will be kept in absolute confidence. Please read each statement carefully, and then fill in the bubble that corresponds to the number on the scale.

- 1 Very Inaccurate*
- 2 Moderately Inaccurate*
- 3 Neither Inaccurate nor Accurate*
- 4 Moderately Accurate*
- 5 Very Accurate*

- 100. Am the life of the party.
- 101. Feel comfortable around people.
- 102. Start conversations.
- 103. Talk to a lot of different people at parties.
- 104. Don't mind being the center of attention.
- 105. Don't talk a lot.
- 106. Keep in the background.
- 107. Have little to say.
- 108. Don't like to draw attention to myself.
- 109. Am quiet around strangers.
- 110. Am interested in people.

111. Sympathize with others' feelings.
112. Have a soft heart.
113. Take time out for others.
114. Feel others' emotions.
115. Make people feel at ease.
116. Am not really interested in others.
117. Insult people.
118. Am not interested in other people's problems.
119. Feel little concern for others.
120. Am always prepared.
121. Pay attention to details.
122. Get chores done right away.
123. Like order.
124. Follow a schedule.
125. Am exacting in my work.
126. Leave my belongings around.
127. Make a mess of things.
128. Often forget to put things back in their proper place.
129. Shirk my duties.
130. Am relaxed most of the time.
131. Seldom feel blue.
132. Get stressed out easily.
133. Worry about things.
134. Am easily disturbed.
135. Get upset easily.
136. Change my mood a lot.
137. Have frequent mood swings.
138. Get irritated easily.
139. Often feel blue.
140. Have a rich vocabulary.
141. Have a vivid imagination.
142. Have excellent ideas.
143. Am quick to understand things.
144. Use difficult words.
145. Spend time reflecting on things.
146. Am full of ideas.
147. Have difficulty understanding abstract ideas.
148. Am not interested in abstract ideas.
149. Do not have a good imagination.

Positive Affect - PANAS (Watson, Clark, & Tellegen, 1988)

**This scale consists of a number of words that describe different feelings and emotions.
Please read each item and indicate to what extent you feel this way in general.**

- 1 very slightly or not at all*
- 2 a little*
- 3 moderately*
- 4 quite a bit*
- 5 extremely*

- 150. interested
- 151. excited
- 152. strong
- 153. enthusiastic
- 154. proud
- 155. alert
- 156. inspired
- 157. determined
- 158. attentive
- 159. active

Social desirability scale (Reynolds, 1982)

Please read the following statement carefully and decide whether it is true (T) or false (F) for you.

1 True 2 False

- 160. It is sometimes hard for me to go on with my work if I am not encouraged.
- 161. I sometimes feel resentful when I don't get my way.
- 162. On a few occasions, I have given up something because I thought too little of my ability.
- 163. There have been times when I felt like rebelling against people in authority even though I knew they were right.
- 164. No matter who I'm talking to, I'm always a good listener.
- 165. There have been occasions when I have taken advantage of someone.
- 166. I'm always willing to admit it when I make a mistake.
- 167. I sometimes try to get even rather than forgive and forget.
- 168. I am always courteous, even to people who are disagreeable.
- 169. I have never been irked when people expressed ideas very different from my own.
- 170. There have been times when I was quite jealous of the good fortune of others.
- 171. I am sometimes irritated by people who ask favors of me.
- 172. I have never deliberately said something that hurt someone's feelings.

Broad role definition (created in this study)

To what extent do you believe the following activities are important to you as a college student?

- 1 not at all important*
- 2 somewhat unimportant*
- 3 neither important nor unimportant*
- 4 somewhat important*
- 5 extremely important*

- 173. Actively seeking learning opportunities.
- 174. Actively seeking feedback for personal development.
- 175. Actively engaging in student or non-student organizations.
- 176. Actively planning for my future career.
- 177. Going out the way to help people in need at college or in the community.

Please answer the following questions.

Extra-curricular roles (created in this study)

0, 1, 2, 3, 4, 5, more than 5

178. In how many organizations do you hold a membership?(please put “0” if you are not a member of any organization.)
179. In how many organizations do you hold an officer position (e.g. president, vice president, or an important committee member)? (Please put —0 if you do not hold any officer position.)

Career planning (created in this study)

1 yes, 2 no

180. Have you ever sought an internship opportunity that will help your future career?
181. Have you ever had an internship that will help your future career?

Please indicate to what extent the following statements accurately describe you.

- 1 very inaccurate
2 inaccurate
3 neutral
4 accurate
5 very accurate

Helping behaviors (adapted from Moorman & Blakely, 1995)

182. Go out of my way to help others with problems.
183. Voluntarily help others who have needs.
184. Go out of my way to make others feel welcome.
185. Show genuine concern and courtesy toward others, even under the most trying business or personal situations.

Voice behaviors (adapted from Van Dyne & LePine, 1998)

186. Develop and make recommendations concerning issues that affect our lives at college.
187. Speak up and encourage other students to get involved in issues that affect our lives as students.
188. Get involved in issues that affect the quality of student life at college.

Taking charge (adapted from Morrison & Phelps, 1999)

189. Often try to adopt improved procedures for doing things.
190. Often try to change how activities are executed in order to be more effective.
191. Often try to bring about improved procedures.
192. Often try to change procedures that are nonproductive or counterproductive.
193. Often make constructive suggestions for improving how things operate.
194. Often try to eliminate redundant or unnecessary procedures.
195. Often try to implement solutions to pressing problems.

Please answer the following questions.

196. On average, how many hours per day do you spend networking and socializing with people (e.g. in a bar, at a cafe, twittering and/or using facebook, etc.)?
197. Approximately how many hours per week do you spend reading books or periodicals, browsing the Internet, or engaging in other activities that are relevant to your coursework but are not a course assignment? (Please give your best estimate.)
198. On average, approximately how many free campus lectures or seminars per month do you attend during the school year? (Please give your best estimate—put "0" if you never attend such events.)
199. Your GPA is
200. Your age is
201. You are Male Female
202. Your ethnic background is
African American
Asian
Caucasian
Hispanic
Native American
Other _____

To fully complete this survey, we ask you to forward an email to two of your best friends at Mizzou. Once you press the button below, you will receive an email which contains a link to a short 5-minute survey. Please forward the email to one of your friends at Mizzou who really know you and invite them to participate in this research. This is an important step for the success of this research! Thank you!

Peer Survey

Consent to Participate in Research

This survey asks you to evaluate the attitudes and behaviors of your friend who sent you the survey link. To participate in this study you need to be at least 18 years old. If you are younger than 18 years old, please inform us at this time. In the following, you will read more about this research project.

PROJECT BACKGROUND: This project involves gathering information on students' beliefs and behaviors.

PURPOSE: The purpose of this study is to evaluate people's behavioral tendencies.

VOLUNTARY: The survey is entirely voluntary. You may refuse to answer any question or choose to withdraw from participation at any time without any penalty to you or to the focal person.

WHAT DO YOU DO? Click on the arrow below and complete the survey, which should take you approximately 5 minutes or less to complete.

BENEFITS AND RISKS: Your participation will help us understand how people approach things in life. This project does not involve any risks greater than those encountered in everyday life.

CONFIDENTIALITY: All the information you provide will be kept confidential. No individual other than the researchers of this project will have access to your response. No individual information will be reported. Meanwhile, if you have questions regarding your rights as a research participant, please feel free to contact the University of Missouri-Columbia Campus Institutional Review Board at (573) 882-9585. Thank you in advance for participating in this study. If you have any questions, feel free to contact:

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If you are willing to participate, please enter your name here:

Last name: _____
First name: _____

Please also tell us your friend's name (the person who sent you the survey link)

Last name: _____
First name: _____

Please click on the arrow below, which will direct you to the survey. Thank you for participating in this research project!

Please indicate to what extent the following statements accurately describe your friend. Your responses will be kept in absolute confidence so please give your honest answer.

He/She ...

Helping behaviors (adapted from Moorman & Blakely, 1995)

1. Goes out of his/her way to help others with problems.
2. Voluntarily helps others who have needs.
3. Goes out of his/her way to make others feel welcome.
4. Shows genuine concern and courtesy toward others, even under the most trying business or personal situations.

Voice behaviors (adapted from Van Dyne & LePine, 1998)

5. Develop and make recommendations concerning issues that affect our lives at college.
6. Speak up and encourage other students to get involved in issues that affect our lives as students.
7. Get involved in issues that affect the quality of student life at college.

Taking charge (adapted from Morrison & Phelps, 1999)

8. Often try to adopt improved procedures for doing things.
9. Often try to change how activities are executed in order to be more effective.
10. Often try to bring about improved procedures.
11. Often try to change procedures that are nonproductive or counterproductive.
12. Often make constructive suggestions for improving how things operate.
13. Often try to eliminate redundant or unnecessary procedures.
14. Often try to implement solutions to pressing problems.

In the following, you will read some statements regarding people's preference and behaviors. Please use the scale below to rate to what extent each of the following statement describes your friend who sent you the survey link. Your responses will be kept in absolute confidence so please give your honest answer.

1 Very inaccurate 2 Inaccurate 3 Neutral 4 Accurate 5 Very accurate

(EOS – Learning orientation)

15. S/HE always pursues excellence to get the maximum out of the self.
16. S/HE likes to acquire new knowledge and to develop new skills.
17. The opportunity to learn new things is important to her/him.
18. S/HE prefers to work on the tasks that force her/him to learn new things.
19. The opportunity to do challenging work excites her/him.
20. S/HE seeks to perform to her/his potential.
21. S/HE is interested in extending the range of her/his abilities.
22. It's important for her/him to have new experiences that challenge how s/he think about the self and the world.
23. S/HE believes life is a continuous process of learning, changing, and growth.
24. S/HE always seeks to develop a skill, learn, or gain insight into something.

25. S/HE is interested in activities that will expand her/his horizons.
26. When S/HE engages in something, S/HE always tries to get the best out of the self.

(EOS – Self-expressive orientation)

27. No matter what the outcome of a project, s/he is satisfied if s/he feels s/he gained a new experience.
28. S/HE tries to act in a manner that is consistent with her/his personally held values, even if others criticize or reject her/him for doing so.
29. S/HE is willing to endure negative consequences by expressing her/his true beliefs about things.
30. The opportunity to exhibit her/his true self is important to her/him.
31. Being able to express her/his beliefs and values is important to her/him.
32. S/HE seeks work opportunities that allow her/him to be who I really am.
33. S/HE doesn't like engaging in activities that don't fit who S/He is as a person.
34. S/HE would not change her/his opinion (or the way I do things) in order to please someone else or win their favor.

35. S/HE speaks her/his mind freely even when there might be negative results.
36. S/HE finds it easy to pretend to be something other than her/his true self.
37. S/HE is willing to change the actions if the rewards are desirable enough.
38. S/HE has often done things that s/he doesn't want to do merely to gain approval from others.
39. S/HE pursues goals that are unimportant to her/him in order to please others.

(EOS – Prosocial orientation)

40. S/HE wants to have positive impact on others.
41. S/HE gets energized by working on tasks that have the potential to benefit others.
42. S/HE does the best when s/he feels contributing to the well-being of others.
43. It is important to her/him to have the opportunity to use the abilities to benefit others.
44. S/HE hopes to have positive impact on others inside and outside the organization s/he working at.
45. It is important for her/him to do good for others.
46. S/HE would like to benefit others through the endeavors.
47. Being able to contribute to the broader scheme of things is important to her/him.
48. S/HE 'll work to make the world a better place.
49. S/HE 'll work for the betterment of society.
50. Being able to make a difference through the endeavors is important to her/him.

Study 2 Surveys

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

Focal Person Survey

Consent to Participate

Thank you for your interest in this research! Below you will read more about this research and how to participate in this study.

PROJECT BACKGROUND: This project involves gathering information on people's beliefs about themselves and their behaviors.

WHAT DO YOU DO? Click on the link that is provided at the end of the page and complete the survey, which should take you approximately 20 minutes or less to complete.

BENEFITS AND RISKS: Your participation in this project will enhance our understanding of the factors contributing to positive work experiences, which may lead to healthier work conditions in the future. This project is not expected to involve risks greater than those ordinarily encountered in daily life.

VOLUNTARY: The survey is entirely voluntary. You may refuse to answer any question or choose to withdraw from participation at any time without any penalty. Your decision to participate in the research will not affect your working conditions, performance evaluations or opportunities for job advancement. But please be aware that your data will be most useful if you answer all the questions.

CONFIDENTIALITY: All information will be kept strictly confidential. Only group findings will be reported in this research. No individual responses will be reported. Likewise, your name will not appear on any of the results. Finally, your supervisors will not have access to your responses.

In addition to being an invitation to participate in the study, this letter also serves as a consent-to-participate form. By entering your name below you are indicating your willingness to participate. If you do participate in our study, please answer the questions as honestly as you can. Some of the questions on the survey may appear similar; please answer all questions so that we have a good understanding of your perceptions. Your help is greatly appreciated!

If you have questions concerning human subject research please call the University of Missouri Institutional Review Board at (573) 882-9585. If you have any questions concerning this study, please feel free to contact the research group:

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If you are willing to participate, please provide your name:

First name _____
Last name _____

In the following, you will read some statements regarding people's preference and behaviors. Please use the scale below to rate to what extent each of the following statement describes you in general. Your responses will be kept in absolute confidence so please give your honest answer.

1 not at all like me 2 not like me 3 neutral 4 like me 5 very much like me

(EOS – Learning orientation)

- 1 I always pursue excellence to get the maximum out of myself.
- 2 I like to acquire new knowledge and to develop new skills.
- 3 The opportunity to learn new things is important to me.
- 4 I prefer to work on the tasks that force me to learn new things.
- 5 The opportunity to do challenging work excites me.
- 6 I seek to perform to my potential.
- 7 I am interested in extending the range of my abilities.
- 8 It's important for me to have new experiences that challenge how I think about myself and the world.
- 9 I believe life is a continuous process of learning, changing, and growth.
- 10 I always seek to develop a skill, learn, or gain insight into something.
- 11 I am interested in activities that will expand my horizons.
- 12 When I engage in something, I always try to get the best out of myself.

(EOS – Self-expressive orientation)

- 13 I try to act in a manner that is consistent with my personally held values, even if others criticize or reject me for doing so.
- 14 I am willing to endure negative consequences by expressing my true beliefs about things.
- 15 The opportunity to exhibit my true self is important to me.
- 16 Being able to express my beliefs and values is important to me.
- 17 I seek work opportunities that allow me to be who I really am.
- 18 I would not change my opinion (or the way I do things) in order to please someone else or win their favor.
- 19 I speak my mind freely even when there might be negative results.
- 20 I find it easy to pretend to be something other than my true self.
- 21 I am willing to change my actions if the rewards are desirable enough.
- 22 I've often done things that I don't want to do merely to gain approval from others.
- 23 I pursue goals that are unimportant to me in order to please others.

(EOS – Prosocial orientation)

- 24 I want to have positive impact on others.
- 25 I get energized by working on tasks that have the potential to benefit others.
- 26 I do my best when I feel that I'm contributing to the well-being of others.
- 27 It is important to me to have the opportunity to use my abilities to benefit others.
- 28 I hope to have positive impact on others inside and outside the organization I am working at.
- 29 It is important for me to do good for others.
- 30 I would like to benefit others through my endeavors.
- 31 Being able to contribute to the broader scheme of things is important to me.
- 32 I'll work to make the world a better place.

- 33 I'll work for the betterment of society.
 34 Being able to make a difference through my endeavors is important to me.

In the following, you will read some statements regarding people's beliefs and behaviors. Please use the scale below to rate to what extent you agree with each of the following statements. Your responses will be kept in absolute confidence so please give your honest answer.

1 strongly disagree 2 disagree 3 neutral 4 agree 5 strongly agree

Job satisfaction (Cammann, Fichman, Jenkins, & Klesh, 1983)

- 35 All in all, I am satisfied with my job.
 36 In general, I don't like my job.
 37 In general, I like working at my job.

Affective commitment (Meyer & Allen, 1984)

- 38 My employment in this company is a big part of who I am.
 39 I would be very happy to spend the rest of my career with this organization.
 40 I enjoy discussing my organization with people outside of it.
 41 I really feel as if this organization's problems are my own.
 42 I think that I could easily become as attached to another organization as I am to this one.
 43 I do not feel like "part of the family" at my organization.
 44 I do not feel "emotionally attached" to this organization.
 45 This organization has a great deal of personal meaning for me.
 46 I do not feel a strong sense of belonging to my organization.

Broad role definition (followed the procedure used by McAllister et al., 2007)

- 47 It is part of my job to come up with new ideas.
 48 It is part of my job to implement new ideas.
 49 Finding improved ways to do things is part of my job.
 50 It is part of my job to create better processes and routines.
 51 It is part of my job to submit suggestions to improve work.
 52 It is part of my job to approach my supervisor with suggestions for improvement when problems are encountered in the work.
 53 It is part of my job to search for the cause of work problems.
 54 It is part of my job to change something in my work in order to improve it.
 55 Coming up with new, original ideas for handling work is part of my job.
 56 It is part of my job to redesign job tasks for greater effectiveness and efficiency.
 57 It is part of my job to take initiative and do whatever is necessary.

Vitality (Ryan & Frederick, 1997; Salanova, Agut, and Peiró, 2005)

- 58 I feel alive and vital at work.
 59 I have energy and spirit at work.
 60 I look forward to each new work day.
 61 I nearly always feel alert and awake at work.
 62 In my job, I feel energized.

- 63 In my job, I feel strong and vigorous.
- 64 I am mentally very resilient at work.

Meaningful work scale (May, Gilson, & Harter, 2004)

- 66 My job activities are personally meaningful to me.
- 67 The work I do on this job is worthwhile.
- 68 I feel that the work I do on my job is valuable.

Goal setting (adapted from Erez & Judge, 2001)

- 69 Over the past year, I have set some difficult work goals for myself.
- 70 The work goals that I have set for myself are hard to achieve.
- 71 The work goals that I have set for myself are easily attainable.

Self-observation (Houghton & Neck, 2001)

- 72 I make a point to keep track of how well I'm doing at work.
- 73 I usually am aware of how well I'm doing as I perform an activity.
- 74 I pay attention to how well I am doing in my work.
- 75 I keep track of my progress on projects I'm working on.

In the following, you will read some statements regarding your organization and your job. Please use the scale below to rate to what extent you agree with each of the following statements. Your responses will be kept in absolute confidence so please give your honest answer.

1 strongly disagree 2 disagree 3 neutral 4 agree 5 strongly agree

RBSE scale (Parker, 1998)

- 76. I am confident in analyzing a long-term problem to find a solution.
- 77. I am confident in representing my work area in meeting with senior management.
- 78. I am confident in designing new procedures for my work.
- 79. I am confident in making suggestions to management about ways to improve the work.

The following statements are about how people react in stressful situations. Please indicate the extent to which you agree with the following statements.

Positive reframing (Carver et al., 1989)

1 strongly disagree 2 disagree 3 neutral 4 agree 5 strongly agree

In stressful situation ...

- 80. I look for something good in what is happening.
- 81. I try to see it in a different light, to make it seem more positive.
- 82. I learn something from the experience.
- 83. I try to grow as a person as a result of the experience.

The following questions ask about your work intensity and your perception about your career. Please use the following scale to answer the questions.

Effort expenditure (VandeWalle et al., 1999)

1 *much less than average* 2 *a bit less than average* 3 *average*
4 *a bit more than average* 5 *much more than average*

84. How much time do you put in your work compared to your coworkers?
85. How much overall effort do you put in your work compared to your coworkers?
86. How is your work intensity compared to your coworkers?

The following questions are concerned with your work situation. Please indicate to what extent you agree with each of the following statements.

Role ambiguity (Rizzo, House, & Lirtzman, 1970)

1 *strongly disagree* 2 *disagree* 3 *neutral* 4 *agree* 5 *strongly agree*

87. I feel certain about how much authority I have.
88. I have clear, planned goals and objectives for my job.
89. I know that I have divided my time properly.
90. I am certain of what my responsibilities are.
91. I have just the right amount of work to do.
92. I know exactly what is expected of me.

Now we would like to get some basic background information from you. Please respond to the following questions by filling in your response or checking the appropriate answer.

Gender: _____ Male _____ Female

Age: _____

Educational status:

- High school graduate or less
- Some college—no degree
- Two-year college degree
- Four-year college degree
- Graduate degree (Masters or Doctorate)

Employment information.

How long have you worked with your current employer?
_____ Years _____ Months

Please mark the one ethnic group that you identify most with:

- African-American/Black
- Asian-American/Asian
- European-American/Caucasian/White
- Hispanic-American/Latino

Native American
Other

Peer/Supervisor Survey

Consent to Participate

Thank you for your interest in this research! Below you will read some information about this project and how to participate in this study.

PROJECT BACKGROUND: This project involves gathering information on people's beliefs about themselves and their behaviors.

WHAT DO YOU DO? Your participation involves completing a survey, which asks you to evaluate your subordinate's performance based on 15 short statements. The evaluation will take you approximately 2-3 minutes.

BENEFITS AND RISKS: Your participation in this project will enhance our understanding of the factors contributing to proactive work behaviors. This project is not expected to involve risks greater than those ordinarily encountered in daily life.

VOLUNTARY: The survey is entirely voluntary. You may refuse to answer any question or choose to withdraw from participation at any time without any penalty. Your decision to participate in the research will not affect your working conditions, performance evaluations or opportunities for job advancement. But please be aware that your data will be most useful if you answer all the questions.

CONFIDENTIALITY: All information will be kept strictly confidential. Only group findings will be reported in this research. No individual responses will be reported. Likewise, your name will not appear on any of the results. Finally, your subordinates will not have access to your responses.

In addition to being an invitation to participate in the study, this letter also serves as a consent-to-participate form. By entering your name in the following section, you are indicating your willingness to participate. If you do participate in our study, please answer the questions as honestly as you can. Some of the questions on the survey may appear similar; please answer all questions so that we have a good understanding of your perceptions. Your help is greatly appreciated!

If you have questions concerning human subject research please call the Institutional Review Board at (573) 882-9585. If you have any questions concerning this study, please feel free to contact the research group:

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If you are willing to participate, please enter your name below:

First name:

Last name:

Please enter the name of the person you are evaluating.

First name: _____

Last name: _____

Please use the following scale to evaluate this person's performance.

In-role and extra-role performance (Bono, J. E., & Judge, T. A., 2003).

1 Needs much improvement 2 Needs some improvement 3 Satisfactory 4 Good 5 Excellent

- 1 Overall performance in the tasks associated with his/her job
- 2 Quantity of work
- 3 Quality of work
- 4 Coming up with new ideas
- 5 Working to implement new ideas
- 6 Finding improved ways to do things
- 7 Creating better processes and routines
- 8 Submitting suggestions to improve work
- 9 Approaching his or her supervisor with suggestions for improvement when problems are encountered in the work
- 10 Searching for the cause of work problems he or she encounters
- 11 Changing something in his/her work in order to improve it
- 12 Coming up with new, original ideas for handling work
- 13 Redesigning job tasks for greater effectiveness and efficiency
- 14 Taking initiative and doing whatever is necessary
- 15 Going against established policies and procedures if he or she thinks it will result in meeting broader organizational goals

VITA

Wan Yan earned her BS in Economics at Huazhong University of Science and Technology in China and her MS in Agricultural Economics at the University of Missouri at Columbia. She is currently working as a Project Manager at a marketing research company in California. Before coming to the U.S. for graduate education, she worked in Deutsche Bank China and Colgate-Palmolive China. She is a member of the Academy of Management and the Society of Industrial and Organizational Psychologists. Her research has been presented at national conferences and published in *Research in Personnel and Human Resource Management* and *Journal of Dispute Resolution*.