

1-2011

# A Tale of Passion: Linking Job Passion and Cognitive Engagement to Employee Work Performance

Violet Ho

*University of Richmond*, [vho@richmond.edu](mailto:vho@richmond.edu)

Sze-Sze Wong

Chay Hoon Lee

Follow this and additional works at: <http://scholarship.richmond.edu/management-faculty-publications>

 Part of the [Business Administration, Management, and Operations Commons](#), [Industrial and Organizational Psychology Commons](#), and the [Performance Management Commons](#)

---

## Recommended Citation

Ho, Violet; Wong, Sze-Sze; and Lee, Chay Hoon, "A Tale of Passion: Linking Job Passion and Cognitive Engagement to Employee Work Performance" (2011). *Management Faculty Publications*. 48.

<http://scholarship.richmond.edu/management-faculty-publications/48>

This Article is brought to you for free and open access by the Management at UR Scholarship Repository. It has been accepted for inclusion in Management Faculty Publications by an authorized administrator of UR Scholarship Repository. For more information, please contact [scholarshiprepository@richmond.edu](mailto:scholarshiprepository@richmond.edu).

A Tale of Passion: Linking Job Passion and Cognitive Engagement to Employee Work  
Performance

VIOLET T. HO

University of Richmond  
Robins School of Business  
28 Westhampton Way  
University of Richmond, VA 23173  
Tel : (804) 289-8567  
Email: vho@richmond.edu

SZE-SZE WONG

Nanyang Technological University  
Nanyang Business School  
Nanyang Avenue  
Singapore 639798  
Tel : (65) 6790-6138  
Email: aszewong@ntu.edu.sg

CHAY HOON LEE

Keppel Offshore and Marine Ltd.  
50 Gul Road  
Singapore 629351  
Tel : (65) 6863-8968  
Email: chayhoon.lee@keppelom.com

We thank Denise Rousseau, Wayne Cascio, Associate Editor Colin Hales, and three anonymous reviewers for their constructive comments on this research.

### Abstract

We propose a model of job passion that links two types of passion, harmonious and obsessive passion, to employees' work performance, via the mediating mechanism of cognitive engagement (comprising attention and absorption). Results from a survey conducted with 509 employees from an insurance firm indicate that employees with harmonious passion performed better at work, and that this relationship was mediated primarily by cognitive absorption, that is, the intensity of focus and immersion experienced by the employees when working. However, even though obsessive passion was negatively related to cognitive attention (i.e., the amount of cognitive resources spent thinking about work), it did not have a significant relationship to work performance overall. We identify and discuss research and practical implications for job passion and performance management.

Keywords: cognitive engagement, harmonious passion, job passion, obsessive passion, work performance

## A Tale of Passion: Linking Job Passion and Cognitive Engagement to Employee Work Performance

The concept of passion at work has seen increased interest in the new millennium, with a surge in the number of practitioner articles stressing the value of being passionate about one's job, and how companies can benefit from having passionate employees (e.g., Boyatzis, McKee, & Goleman, 2002; Moses, 2001). At the same time, however, organizations are finding that their workers are increasingly unpassionate and apathetic at work, with only 29 percent of the U.S. working population reporting having passion for their jobs (Tucker, 2002). In response to this growing business concern, scholars have started to investigate the concept of passion in the workplace, and qualitative evidence from interviews with managers, students, and educators, among others, suggests that workers can have passion for their jobs, and that such passion drives their work success (e.g., Hill, 2002; Marques, 2007; Neumann, 2006).

Despite this growing interest in job passion, however, the conceptualizations of job passion offered in previous work have been imprecise, incompatible, or completely lacking. Job passion has been variously described as loving one's job (e.g., Marques, 2007), as experiencing personal meaning from the job (e.g., Boyatzis et al., 2002), or as engaging employees and customers (e.g., Tucker, 2002), and it is unclear whether it is an affective, psychological, or behavioral construct. Because of the lack of formal conceptualization of, as well as consensus on, what job passion really entails, it is difficult for researchers to synthesize the body of work in job passion, and to build on and extend research on the topic. As such, a tighter and more rigorous definition, conceptualization, and operationalization of the job passion construct is needed in order to advance research in this area.

In addition, an implicit notion in the existing literature is that job passion is a valuable attribute that organizations should seek to develop among employees, and that it is ultimately vital to the performance of an employee's job. However, other than anecdotal and speculative reports that passion can play a role in one's job (e.g., Hill, 2002; Marques, 2007), there is a dearth of scientific studies that link job passion to actual performance ratings or other critical work outcomes. Thus far, prior research in social psychology has only related passion for non-work activities to affective and cognitive outcomes, but not to instrumental ones; moreover, only one study by Vallerand and Houliort (2003) in the work context has demonstrated the relationship between job passion and employees' psychological adjustment. Thus, research is needed to establish whether having such passion can also be beneficial to employees' work performance (conceivably the most important employee outcome in organizations), and if so, what the mechanisms are through which passion relates to performance.

To address the abovementioned gaps in research on job passion, this study aims to contribute to extant literature in three ways. First, we extend prior social psychological research on passion into the organizational context and offer a more nuanced conceptualization of job passion as an attitude that comprises both affective and cognitive elements, and that can be distinguished and operationalized into two different forms – harmonious and obsessive passion. Although they share certain similarities, the two forms of passion are nonetheless distinct and are expected to lead to either positive or negative outcomes.

Second, we investigate the relationship between the two forms of job passion and supervisor-rated work performance. We demonstrate that depending on the type of passion an employee has, he or she may or may not necessarily experience performance benefits. This challenges previous contentions by both researchers and practitioners that job passion is

unequivocally valuable and worthy of cultivating in employees, and suggests that a more judicious consideration is warranted. This insight is also important from a practical standpoint, because for one, it can inform organizational decisions pertaining to the selection of new employees. For example, to the extent that a particular form of passion is critical to employee performance, managers, when making recruitment decisions, should take into account not only workers' skills and abilities but also their passion for doing their jobs. Additionally, understanding the link between passion and performance is useful for generating strategies to motivate existing employees, such as ways in which managers can nurture and sustain employees' passion for their jobs.

Finally, our third contribution is that, in addition to showing a link between passion and performance, we build on previous research to theorize and demonstrate that cognitive engagement is the mediating mechanism through which this link occurs. This informs extant research in passion by explicating the cognitive process that connects the attitude of job passion to the behavioral outcome of work performance, and overall, the proposed model provides a more in-depth and comprehensive understanding of the interrelationships between passion, engagement, and work performance.

## Theoretical Development and Hypotheses

### *The Concept of Job Passion*

Passion, in its general sense, is defined as a strong inclination toward an activity that people like and find important (Vallerand et al., 2003), and has been the subject of much research in the realm of social psychology. Specifically, passion has been studied in the context of numerous non-work activities such as gambling, romance, sports, and Internet use, and demonstrated to lead to both positive and negative psychological and affective outcomes (Amiot,

Vallerand, & Blanchard, 2006; Mageau, Vallerand, Rousseau, Ratelle, & Provencher, 2005; Rousseau, Vallerand, Ratelle, Mageau, & Provencher, 2002; Seguin-Levesque, Laliberte, Pelletier, Blanchard, & Vallerand, 2003). However, research on the role of passion in work organizations is comparatively scarce and, with the exception of one study (Vallerand & Houliort, 2003), has relied primarily on qualitative interviews or descriptive accounts of the role of passion at work (e.g., Marques, 2007; Neumann, 2006). Relatedly, while a relatively new stream of research has introduced the concept of entrepreneurial passion in the context of entrepreneurship, these developments have thus far been theoretical, with empirical tests yet to follow (Cardon, 2008; Cardon, Wincent, & Singh, 2009; Cardon, Zietsma, Saporito, Matherne, & Davis, 2005). Thus, as instructive as these prior perspectives are, they either fall short of providing a rigorous definition and conceptualization of what passion really is, or fail to empirically demonstrate a link between passion and work performance.

In this study, we build on passion research from the social psychological literature, as well as more recent research in entrepreneurial passion, to develop the concept of job passion in the workplace. Specifically, we conceptualize job passion as a job attitude comprising both affective and cognitive elements that embody the strong inclination that one has toward his or her job. The first element underlying the concept of job passion is affective in nature, capturing the strong, intense liking for and enjoyment of the job, and the second element is a cognitive one capturing the perceived importance or significance of the job to the individual, such that the job becomes internalized to the self and defines who the individual is (Cardon et al., 2009; Vallerand et al., 2003). Thus, in order for individuals to be considered as having job passion, they must have intense liking for the job as well as view the job as personally important to them. To illustrate, a person who is passionate about his job as a research scientist would not only love his

job but also consider the job to be very important to his self-concept, such that he defines himself as a scientist first and foremost, rather than by the other roles he may play (e.g., son, animal shelter volunteer). This synthesis of an individual's affective and cognitive orientations toward a job into one passion construct sets it apart from prior job-related attitudinal constructs that, on their own, cannot capture both elements concurrently.

Specifically, while seemingly comparable to the concepts of intrinsic and extrinsic motivation (Deci & Ryan, 1985), flow (Csikszentmihalyi, 1990), and work-related attitudes such as job satisfaction, organizational commitment, and job involvement and identification, passion has been conceptually and empirically distinguished from these concepts in prior studies (Amiot et al., 2006; Vallerand et al., 2003; Vallerand & Houliort, 2003). Specifically, intrinsic motivation for an activity has been differentiated from passion in that even though both have an element of liking for the activity, the former does not encompass the internalization of the activity as personally important and constituting the definition of the self (Deci & Ryan, 1985), an element that is characteristic of passion. Rather, intrinsic motivation simply implies pursuing an activity for the pleasure and satisfaction deriving from it, and is construed as emerging from the immediate person-task interaction in the short-term (Koestner & Losier, 2002).

Extrinsic motivation is also distinct from passion in that it does not necessitate the liking of the activity, and instead entails an external stimulus (e.g., monetary compensation) for pursuing the activity (Amiot et al., 2006; Deci & Ryan, 1985). The concept of flow, defined as a peak experience or optimal state where a person becomes highly involved in an activity and experiences effortless concentration and complete control (Csikszentmihalyi, 1982, 1990), has also been distinguished from passion in that flow has been demonstrated to be an *outcome* of



passion, such that people with passion for an activity may experience more flow, depending on the type of passion they have (Vallerand et al., 2003).

Finally, passion is also distinct from other more common work attitudes; for example, while job satisfaction captures employees' liking for their jobs and is influenced by many factors such as pay and coworker relations (Locke, 1976), job passion encompasses a stronger, more intense feeling that goes beyond mere liking, includes an element of identification that is lacking in job satisfaction, and is not influenced by the same exact set of factors as job satisfaction (e.g., individuals are not likely to be passionate about their jobs simply because of they have good coworker relations). Job passion is also different from organizational commitment in that the former pertains to one's attitude about the job, whereas the latter to one's attitude about the organization. Thus, a person could be passionate about his job but yet feel little attachment to his employer and is willing to work for another company that offers him a similar job. Alternatively, a worker could be strongly committed and loyal to the firm because of her long tenure there, but yet feel little passion for the job that she does. Finally, passion can be distinguished from job involvement and identification in that passion embodies an affective component (strong liking for and enjoyment of the job) that is lacking in the latter (Kanungo, 1982; Lodahl & Kejner, 1965; Vallerand & Houliort, 2003). In fact, in Kanungo's (1979; 1982) seminal work on job involvement, he noted that earlier conceptualizations of job involvement have wrongly confounded cognitive and affective aspects together, and emphasized that involvement is purely cognitive in nature, capturing the cognitive state of psychological identification. On the other hand, job passion encompasses both affective and cognitive elements, so that an individual may identify with her job as an investment banker and find it important to her life (i.e., have job

identification), and yet not feel any liking or interest for the work she does (i.e., does not have job passion).

Prior social psychological research in passion has conceptualized it as being of two distinct types – harmonious and obsessive passion (Vallerand et al., 2003; Vallerand & Houliort, 2003). While these two types of passion are similar in that they represent a force within individuals that drives them toward the activity they are passionate about, the key difference between them is the way in which the activity is important to them and, in turn, how the activity is internalized (Amiot et al., 2006; Vallerand et al., 2003). In the work context, harmonious passion is associated with a voluntary or autonomous internalization of the job, meaning that individuals freely and voluntarily view the job as important because of characteristics of the job itself (e.g., the job being challenging). Individuals who are harmoniously passionate about their job do it because they choose to, not because of any pressures or outcomes (e.g., feelings of social approval or recognition) deriving from the job. As such, they view the job as important and significant to them, but yet not overpoweringly so such that it conflicts with other aspects of their lives, and thus these individuals can control when to or not to engage in the job (Vallerand et al., 2003).

Obsessive passion, in contrast, is associated with a pressured internalization of the job, meaning that individuals view the job as important due to certain pressures or outcomes attached to the job (Mageau et al., 2005; Vallerand et al., 2003). For example, such pressures could be from feelings of superiority over others or social acceptance deriving from the job, which in turn compels the individual to continue with it so as to sustain these outcomes (Amiot et al., 2006). In turn, these pressures or outcomes come to control the person, who then feels compelled to pursue the activity in order to maintain this sense of prestige and self-worth. This sense of internal

compulsion to pursue the activity then results in a rigid form of pursuit, whereby the individuals cannot help but feel bound to engage in them, rather than because they freely choose to do so. Because the job becomes an obsession to them, it is so overwhelmingly important to their lives that it controls them (rather than the other way around as with harmonious passion), such that they may persist with it even if it conflicts with other aspects of their lives.

While seemingly comparable to the notion of workaholism, obsessive passion is in fact distinct from the various conceptualizations of workaholism. The most prevalent conceptualization that derives from Spence and Robbins's work (1992) views workaholism as an attitude that encompasses high work involvement and drive but *low enjoyment* (e.g., Ng, Sorensen, & Feldman, 2007; Schaufeli, Taris, & van Rhenen, 2008). This deviates from the concept of obsessive job passion in that the latter includes an element of liking for the job, whereas workaholism expressly rules it out. In another stream of workaholism research, workaholism is construed as a set of potentially destructive *behaviors* that include spending excessive time at work and neglecting other areas of life (e.g., Harpaz & Snir, 2003; Mudrack, 2004; Oates, 1971; Porter, 1996), whereas obsessive job passion is defined as an attitude that may result in the set of workaholic behaviors described above.

Overall then, harmonious and obsessive job passion are conceptualized as two different types of passion capturing different concepts, such that an employee can have one type of passion but not the other. To illustrate, two software engineers may like and devote themselves to their job but may internalize it for different reasons, such that one does so because he enjoys keeping up with advancements in programming languages and using them to research and write new programs (i.e., have harmonious passion), whereas the other does so because of the sense of superiority he derives from being the one that his manager and other employees turn to to help

solve IT problems (i.e., have obsessive passion). Thus, in order to sustain this sense of superiority, the latter will feel bound to devote himself to pursuing job-related activities (e.g., learning a new software language on his personal time) and thinking about job-related issues (e.g., how to debug a particular software program) even when he is not at work, such that the job becomes an obsession that he cannot let go, even in the presence of non-work commitments and obligations. On the other hand, because the harmoniously passionate software engineer pursues his job voluntarily and not due to any pressures or job-related exigencies, the job is not an obsession to him and he can choose when to or not to engage in job-related activities, and, unlike the obsessively passionate employee, does not experience any guilt or anxiety when not doing or thinking about the job.

As another example, two employees may be passionate about their jobs as actuaries, but one may be so because she enjoys the job nature of conducting complex mathematical analyses and creating financial models needed for risk assessment (harmonious passion), whereas the other employee may find the job personally important because she enjoys the prestige and financial rewards associated with being an actuary (obsessive passion). More generally, the harmoniously passionate actuary experiences a voluntary internalization of the job arising from the job characteristics themselves, whereas the obsessively passionate actuary experiences a pressured internalization arising from outcomes attached to the job, and will pursue the job in order to sustain these outcomes rather than because of characteristics of the job itself.

The fact that job passion can be distinguished into two forms also sets it apart from and adds value to previously established job-related constructs. Because the two forms of passion capture the different bases of internalization (voluntary vs. pressured), this also allows for the possibility that one form of passion may lead to positive outcomes while another may not. On the

other hand, pre-existing constructs such as job satisfaction, intrinsic motivation, and job identification and involvement do not make such distinctions and, consequently, are unlikely to detect these potentially differential effects. This dualistic approach to passion has found support across several studies, including those by Vallerand and colleagues (2003), who validated a two-factor structure of passion and found that while both harmonious and obsessive passion were characterized by liking for the activity and viewing the activity as important to them, they engendered different psychological outcomes. Specifically, harmonious passion resulted in positive affect and cognitions (e.g., concentration) during and after pursuit of the passionate activity, whereas obsessive passion led to negative feelings (e.g., guilt) when pursuing the activity, and also when prevented from engaging in that activity. Similar findings were also observed in other studies; in particular, obsessive passion was consistently associated with multiple negative consequences, such as anxiety, feelings of shame and guilt, and a lack of concentration (Mageau et al., 2005; Ratelle, Vallerand, Mageau, Rousseau, & Provencher, 2004; Vallerand & Houliort, 2003).

#### *Job Passion and Cognitive Engagement*

In the few empirical studies of passion, one outcome that has been examined is individuals' cognitive state of attention and absorption when pursuing a passionate activity (Mageau et al., 2005; Vallerand et al., 2003). Building on these findings, as well as theories in role investment, we propose that in the work context, harmonious and obsessive job passion would be differentially related to one's cognitive engagement at work, defined as one's psychological presence and focus at work (Kahn, 1990, 1992; Rothbard, 2001). Engagement is a relatively stable cognitive state where an employee is psychologically present and focused on the job and its related activities, and has been characterized as a positive, fulfilling, and persistent

cognitive state (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002). Engaged workers will cognitively harness and invest their selves when performing their jobs, whereas disengaged workers tend to mentally detach or uncouple their selves from the job.

Cognitive engagement comprises two factors – absorption and attention (Rothbard, 2001). Absorption refers to the intensity of focus and immersion that one experiences when working, and individuals who are absorbed would be deeply engrossed and not easily distracted by other activities. On the other hand, attention pertains to the amount of cognitive resources, including concentration and psychic energy, that an individual spends thinking about work, and can be thought of as a finite cognitive resource that individuals can choose to allocate in different ways (Gardner, Dunham, Cummings, & Pierce, 1989; Kahneman, 1973). Absorption entails a much more intense level of concentration and immersion in one's work and relates to the *quality* of cognitive efforts and investment in work, whereas attention simply pertains to the amount of cognitive resources expended and deals with the *quantity* of such cognitive efforts (Rothbard, 2001).

Several perspectives from role investment theory lead us to expect that individuals who are harmoniously passionate about their jobs would have greater cognitive absorption and attention when working. First, according to the identity perspective in role investment theory, employees will invest their cognitive attention and time in a role they find important and pleasurable (i.e., a role that they are passionate about), because it provides them with a source of self-esteem and self-actualization (Kanungo, 1979; Lobel, 1991; Rothbard & Edwards, 2003). Second, based on the utilitarian perspective, people tend to invest more time and effort in roles that they find enjoyable and pleasurable because of basic hedonistic tendencies (McAllister, 1953). Additionally, because harmoniously passionate employees have voluntarily internalized

the job into their identities, they will be in their element when performing their job tasks and experience their work more fully and with little conflict with their other roles (Vallerand et al., 2003); thus, these employees will have greater absorption compared to those without such passion.

*Hypothesis 1a: Harmonious passion is positively related to cognitive absorption.*

*Hypothesis 1b: Harmonious passion is positively related to cognitive attention.*

On the other hand, obsessive passion engenders a pressured internalization of the job such that it creates a rigid form of activity persistence that eventually conflicts with one's other roles and role identities (Vallerand et al., 2003). In turn, because of this conflict, employees who are obsessively passionate about their jobs tend to be distracted by thoughts about the other roles and responsibilities that should be fulfilled but are not, and also by negative emotions (e.g., feelings of shame, guilt, and anxiety) resulting from such conflict and obsession. Overall then, these conflicting thoughts and negative emotions prevent the employees from becoming fully absorbed with their job tasks. Furthermore, the rigid persistence that characterizes obsessive passion has been found to lead to burnout and mental and emotional exhaustion (Maslach, Schaufeli, & Leiter, 2001), which in turn impair one's attention and focus on the job.

*Hypothesis 2a: Obsessive passion is negatively related to cognitive absorption.*

*Hypothesis 2b: Obsessive passion is negatively related to cognitive attention.*

#### *Engagement as Mediator between Job Passion and Employee Performance*

The general perspective that job attitudes, such as job passion, ultimately drive work behaviors is a common one, as demonstrated in theories such as the model of attitude-behavior relation (Ajzen & Fishbein, 1977) and the attitude-engagement model (Harrison, Newman, & Roth, 2006), and leads us to expect that job passion would be related to employee performance.

However, the link between attitudes and behaviors is typically a weak one because of the distal relationship between the two (Wilson, Dunn, Bybee, Hyman, & Rotondo, 1984), and research in cognitive psychology suggests that cognitive states, compared to general attitudes, would be a more proximal predictor of performance outcomes (e.g., Ackerman & Beier, 2003). Building on this perspective, we propose that the influence of job passion on employees' work performance would be mediated by the cognitive state of engagement, that is, the state of being cognitively absorbed and attentive when performing the job.

This mediating relationship is premised on the notion that cognitive engagement, in the form of absorption and attention, contributes to superior performance. Research in engagement has demonstrated that when employees are cognitively absorbed in their work, they are not only less easily distracted by matters that are peripheral to the job, but also less easily deterred by problems or challenges that arise in the course of work (Sonnentag, 2003). Because of their intense focus and concentration on the job, they are better able to overcome obstacles that arise and, thus, become more successful and effective in getting work done, thereby leading to superior performance.

Based on theories in human information processing (e.g., Kanfer, Ackerman, Murtha, Dugdale, & Nelson, 1994; Norman & Bobrow, 1975), we also expect attention to contribute to work performance. These theories have long established that the greater the cognitive capacity devoted to a task, the better performance will be, because the individual can come up with more ideas and generate more alternatives or solutions to problems that are encountered (Simon, 1955). Additionally, an employee who is cognitively engaged on the job is more likely to find opportunities to improve performance and take up actions to improve his or her work, as evidenced by the finding that engagement was positively related to proactive behaviors such as



displaying personal initiative and pursuing opportunities to develop oneself (Sonnentag, 2003). In turn, these proactive behaviors are expected to enhance one's work performance. Overall then, we expect that cognitive absorption and attention will be positively related to work performance, and that these mechanisms will mediate the positive relationship between harmonious passion and work performance, and the negative relationship between obsessive passion and work performance.

*Hypothesis 3a: Cognitive absorption is positively related to work performance.*

*Hypothesis 3b: Cognitive attention is positively related to work performance.*

*Hypothesis 4a: Cognitive absorption and attention mediate the relationship between harmonious passion and work performance.*

*Hypothesis 4b: Cognitive absorption and attention mediate the relationship between obsessive passion and work performance.*

## Method

### *Participants*

We conducted this research with employees from the headquarters office of a large insurance firm providing a range of insurance policies to both individual and corporate customers. Examples of services and products include life and health insurance, educational endowment plans, and general business insurance policies. At the time of data collection, the firm had 717 full-time employees (excluding insurance sales agents) working in a diverse range of job functions, including actuary, product development, marketing, customer service, claims, finance, IT, and corporate support. The employees came from different ranks and hierarchical levels, ranging from management to mid-level executives and managers to non-executive staff.

Of these employees, 232 (32.4%) were male, and the average age was 36.4 years old, with an average length of tenure of 7.81 years at the firm.

### *Procedure*

We conducted an organization-wide questionnaire-based survey with all full-time employees at their office premises over a period of two weeks, as part of the firm's annual organizational climate survey. We administered the survey to participants over 32 sessions at a conference room in the office premises; between 12 to 35 employees were present in each session. At least one of the researchers was present at each session, and we distributed the questionnaire to each participant who then completed and returned it directly to us. Employees were assured that their participation was voluntary and responses were confidential. Two months after the survey was administered, we provided a feedback report to management, containing aggregated results from the study. At the same time, we worked with the Human Resource department to conduct a debriefing and feedback session to the employees.

Of the 717 employees, 557 (77.7%) returned fully completed and usable questionnaires. Of these 557 respondents, we obtained individual performance data on 509 of them from the company's performance appraisal records, as the remaining respondents had either left the firm subsequently or had joined for less than a year and had yet to have their performance appraised by their supervisors. This yielded an effective response rate of 71.0%. The average age of respondents in this final sample was between 31 to 40 years old, and 158 of them (30.9%) were male. The average tenure was 8.34 years, and 284 (55.6%) of them had at least a Bachelor's degree. Analyses revealed that the respondents were not significantly different from non-respondents in age, gender, or tenure.

### *Measures*

*Harmonious and obsessive passion.* The passion variables were measured using the Passion Scale developed by Vallerand and colleagues (2003). Because the original scale referenced a generic activity for which one was passionate about (e.g., “This activity is in harmony with other activities in my life”), we adapted it by rewording the items to refer to one’s job. Harmonious passion was captured with seven items (e.g., “This job is a passion that I manage to control”, “This job reflects the qualities I like about myself”) and obsessive passion with another seven items (e.g., “I have almost an obsessive feeling for this job”, “I am emotionally dependent on this job”). Both measures used a seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree), and their scale reliabilities were .90 and .85 respectively.

*Cognitive engagement.* Because cognitive engagement comprised two factors of absorption and attention, we measured it with two scales developed and validated by Rothbard (2001). Absorption, the first factor of engagement, was measured with five items (e.g., “When I am working, I am completely engrossed in my work”), with a scale reliability of .84. Attention, the second factor, was measured with four items (e.g., “I pay a lot of attention to my work”) and had a scale reliability of .86. Both measures used the same seven-point response scale as job passion.

*Work performance.* Employees’ work performance ratings were obtained from the organization’s records. All employees were rated by their direct supervisors in the firm’s annual performance appraisal, which was conducted subsequent to the survey. The following five-point scale was used in the firm’s evaluations: 1 = requires improvement; 2 = solid; 3 = strong; 4 = outstanding; and 5 = excellent.

*Control variables.* To distinguish the concept of job passion from other common job-related attitudes such as job satisfaction, organizational commitment, and job identification, as

well as to examine the role of job passion in predicting performance over and above the influence of these other attitudes, we measured and controlled for these three variables in our analyses. The variables were measured using a seven-point scale ranging from 1 (not at all) to 7 (to a great extent). Job satisfaction was measured with three items (e.g., “I am very satisfied with my current job”) developed by Quinn and Shepard (1974), and had a scale reliability of .89. Organizational commitment was measured with four items (e.g., “I would be very happy to spend the rest of my career in this company”) by Meyer and Allen (1997), while job identification was measured with three items (e.g., “My job provides me with successes which make me feel great”) developed by Leiter (1992); their scale reliabilities were .85 and .86 respectively.

We also included respondents’ educational level, gender, tenure, and rank as control variables, based on previous findings that these variables related to engagement and/or job performance (e.g. Rothbard, 2001; Tsui & O’Reilly, 1989). Education was measured on a scale ranging from 1 (no education) to 9 (Ph.D.), and gender with a dichotomous scale (0 = male; 1 = female). Tenure was measured as the number of years the respondent had been with the firm, and rank was measured based on respondents’ position in the organizational hierarchy.

### *Analyses*

We tested our hypotheses by conducting structural equation modeling in LISREL 8.54 (Jöreskog & Sörbom, 2001) using the two-step approach advocated by Anderson and Gerbing (1988). In the first step, we used the covariance matrix as input and analyzed the measurement model via several confirmatory factor analyses to assess the adequacy of the hypothesized factor structures of the multi-item variables (i.e., the two passion variables, job satisfaction, organizational commitment, job identification, absorption, and attention). In the second step, we

tested the fit of the hypothesized structural model and assessed it against a series of nested alternative structural models via sequential chi-square difference tests. Comparing the hypothesized model against reasonable alternative models is recommended as an important part of assessing model fit (Bollen, 1989; Kelloway, 1998) and is also an established procedure as it ensures that the final model is the best-fitting and most parsimonious one.

Following the recommendations of Kelloway (1995), we assessed model fit using multiple fit indices, including absolute fit indices such as the chi-square ( $\chi^2$ ) goodness-of-fit statistic, the Root Mean Square Error of Approximation (RMSEA), and the Goodness of Fit Index (GFI), as well as relative fit indices comprising the Normed Fit Index (NFI) and Comparative Fit Index (CFI), which are not sensitive to sample size (Gerbing & Anderson, 1992). RMSEA values equal to or smaller than 0.08 are indicative of reasonable fit (Cudeck & Browne, 1993), while values greater than or equal to 0.90 for the fit indices represent good fit (Hoyle, 1995).

## Results

### *Measurement Model*

We first tested a two-factor model of job passion where harmonious and obsessive passion items loaded onto two separate factors, and after dropping one harmonious passion indicator that did not have a clear meaning (“I am completely taken with this job”), and one obsessive passion indicator that had high correlated measurement errors with other obsessive passion items (“The urge is so strong, I cannot help myself from doing my work”), the results indicated a reasonable fit to the data ( $\chi^2 = 254.30$ ,  $df = 50$ ,  $p < .05$ ; RMSEA = .09; NFI = .96; CFI = .97; GFI = .92). We then compared the two-factor model to a one-factor model where the

items loaded onto one latent variable, and results indicated that the one-factor model provided a worse fit ( $\chi^2 = 1134.01$ ,  $df = 51$ ,  $p < .05$ ; RMSEA = .21; NFI = .83; CFI = .83; GFI = .73).

We then tested whether the two factors of engagement – attention and absorption – were indeed distinct, and results showed that the two-factor model where the nine engagement indicators loaded onto their underlying latent variables ( $\chi^2 = 110.11$ ,  $df = 23$ ,  $p < .05$ ; RMSEA = .08; NFI = .98; CFI = .99; GFI = .96) provided a better fit than a one-factor model where all indicators loaded onto one latent variable ( $\chi^2 = 966.30$ ,  $df = 24$ ,  $p < .05$ ; RMSEA = .28; NFI = .83; CFI = .83; GFI = .70). This demonstrates that attention and absorption are indeed two distinct factors of cognitive engagement, and is also consistent with Rothbard's (2001) conceptualization and operationalization of the engagement construct.

To demonstrate the discriminant validity of the passion and engagement constructs from the three attitudinal control variables, we conducted several more focused confirmatory factor analyses. First, we estimated a five-factor model where the harmonious and obsessive passion items loaded onto two factors and the job satisfaction, organizational commitment, and job identification items loaded onto their respective three factors. Results for this model ( $\chi^2 = 685.60$ ,  $df = 296$ ,  $p < .05$ ; RMSEA = .07; NFI = .97; CFI = .98; GFI = .89) were significantly better than those from a one-factor model where all the items loaded onto one factor ( $\chi^2 = 2443.10$ ,  $df = 206$ ,  $p < .05$ ; RMSEA = .16; NFI = .90; CFI = .91; GFI = .65), suggesting that these five variables were indeed distinct from one another. Next, we conducted a similar set of analyses to distinguish the two engagement constructs from the three attitudinal control variables, and the results showed that a five-factor model where attention, absorption, and the three control variables were distinct ( $\chi^2 = 468.89$ ,  $df = 139$ ,  $p < .05$ ; RMSEA = .07; NFI = .97; CFI = .98; GFI = .91) was superior to a one-factor model ( $\chi^2 = 3353.93$ ,  $df = 149$ ,  $p < .05$ ; RMSEA = .22; NFI

= .81; CFI = .82; GFI = .55). We also conducted another set of confirmatory factor analyses that distinguished the two passion constructs from the two engagement constructs of attention and absorption. As expected, results from a four-factor model provided a better fit ( $\chi^2 = 700.92$ ,  $df = 177$ ,  $p < .05$ ; RMSEA = .08; NFI = .96; CFI = .97; GFI = .89) than a one-factor model where all items loaded onto one factor ( $\chi^2 = 2387.26$ ,  $df = 86$ ,  $p < .05$ ; RMSEA = .26; NFI = .80; CFI = .80; GFI = .56). Finally, we conducted an overall confirmatory factor analysis for all the multi-item variables by loading the indicators onto their respective seven latent variables, and the results indicate a good fit to the data ( $\chi^2 = 1352.64$ ,  $df = 407$ ,  $p < .05$ ; RMSEA = .07; NFI = .97; CFI = .98; GFI = .86). The descriptive statistics and correlations of the key variables are presented in Table 1.

-----  
 Insert Table I about here  
 -----

### *Structural Model*

We first tested a structural model representing the hypothesized relationships in our theoretical model. For the single-item control variables of education, gender, rank, and tenure, we assumed that no error existed in their measurement because they were not perceptual in nature. For the latent variable of performance, we accounted for measurement error by specifying its error variance as 0.1 of its variance and setting the measurement path estimate to 0.95 of its standard deviation, as advocated by Sörbom and Jöreskog (1982). Each of the other remaining latent variables was estimated using multiple indicators. Also, based on prior findings as well as theoretical conceptualizations, we freely estimated paths from the control variables to the attention, absorption, and performance constructs in the structural model.

Overall, the hypothesized model provided a good fit to the data ( $\chi^2 = 1920.73$ ,  $df = 530$ ,  $p < .05$ ; RMSEA = .07, NFI = .95; CFI = .97; GFI = .83). We then compared the hypothesized model with a series of nested models using the change in chi-square test, so as to assess whether the hypothesized model is the best-fitting and most parsimonious one to the data (Bentler & Bonett, 1980). Our first comparison was between the hypothesized model and the structural null model where all paths relating the constructs to one another were set to zero. The difference in chi-square was significant ( $\Delta\chi^2 = 2,706.81$ ,  $\Delta df = 69$ ,  $p < .01$ ), indicating that the hypothesized model was a better fit to the data. The next comparison was made between the hypothesized model and an alternative model where we included direct paths from the passion variables to the performance outcome, to test the possibility that passion could affect performance through other mechanisms not related to cognitive engagement (i.e., a partial mediated model). This alternative model was not significantly better than the hypothesized model ( $\Delta\chi^2 = 3.25$ ,  $\Delta df = 2$ ,  $ns$ ), and the direct paths from harmonious and obsessive passion to performance were also not significant ( $\gamma = -0.26$  and  $-0.07$ ,  $n.s.$ ); overall, the results indicate that the hypothesized model was the best-fitting and most parsimonious one, and thus was used to analyze the hypothesized relationships.

Figure 1 shows the results of the hypothesized model. As predicted in Hypotheses 1a and 1b respectively, harmonious passion had a significant, positive relationship with absorption ( $\gamma = 0.55$ ,  $p < .01$ ) and attention ( $\gamma = 0.52$ ,  $p < .01$ ). Also, obsessive passion was negatively related to attention as predicted in Hypothesis 2b ( $\gamma = -0.12$ ,  $p < .05$ ), but was not significantly related to absorption ( $\gamma = 0.05$ ,  $n.s.$ ), failing to support Hypothesis 2a. In turn, consistent with Hypothesis 3a, absorption was positively related to work performance ( $\beta = 0.14$ ,  $p < .05$ ), but contrary to Hypothesis 3b, attention was not ( $\beta = 0.09$ ,  $n.s.$ ). In terms of the effects of control variables, we found that organizational commitment was significantly related to attention ( $\gamma = 0.39$ ,  $p < .01$ )



and absorption ( $\gamma = 0.34, p < .01$ ), while gender ( $\gamma = -0.09, p < .05$ ) and rank ( $\gamma = 0.10, p < .05$ ) were significantly related to absorption.

-----  
 Insert Figure 1 about here  
 -----

Overall, the total effect of harmonious passion on performance was 0.12 ( $p < .05$ ) and was accounted for by the mediating role of absorption (0.07) and, to a smaller extent, attention (0.05), giving some support to Hypothesis 4a. However, the total effect of obsessive passion on performance was not significant ( $-0.004, n.s.$ ) and failed to support Hypothesis 4b. In total, the variance in each of the endogenous variables that was explained by the model totaled 36.7% for attention, 30.3% for absorption, and 17.7% for work performance.

#### Discussion

The current study introduces a model of job passion that illuminates the relationship between job passion, cognitive engagement, and employee work performance. Specifically, our theory contributes to research in several ways. First, this is one of the first studies in the organizational literature to offer a rigorous conceptualization and operationalization of the job passion construct, and is also one of the first in the social psychological literature to extend the concept of passion to one's job, an activity that occupies a major part of many people's lives. Prior to this, scholars have studied passion in relation to romance (Hatfield & Walster, 1978), gambling (Mageau et al., 2005; Vallerand et al., 2003, Study 4) and sports such as hockey (Amiot et al., 2006), football, and cycling (Vallerand et al., 2003, Studies 2 and 3), but passion research in the context of work has trailed behind. The bulk of this literature has consisted of practitioner-oriented articles that allege the importance of job passion with little scientific

evidence or formal definition of what passion really is, and qualitative studies that rely on students' or managers' speculative accounts of how they think passion plays a role at work. While research in entrepreneurial passion has made further developments in conceptualizing about passion in the context of entrepreneurship, it does not differentiate between the various forms of passion and, accordingly, the differential outcomes that may result. In the current study, we provide a rigorous conceptualization of job passion as comprising two distinct forms – harmonious and obsessive job passion – and also offer empirical evidence of construct validity to support this conceptualization. In addition, we demonstrate that employees can have harmonious or obsessive job passion; specifically, 80.9% of respondents reported having at least some harmonious passion for their jobs (with a median score of 5.00), and 38.0% of respondents have at least some obsessive passion (median score of 3.83). These results suggest that individuals can be passionate not only about traditional non-work-related activities that are typically considered more pleasurable and fun (e.g., sports, leisure), but also about their jobs. Additionally, the fact that more respondents reported being harmoniously passionate about their jobs than those who were obsessively so is encouraging, as it suggests that employees are able to experience job passion while still balancing other priorities and activities in their lives. Given the role of job passion in the workplace and, in particular, its relationship with work performance, this concept warrants further consideration by both researchers and practitioners alike.

A second contribution of this study lies in the fact that while previous social psychological studies have demonstrated that harmonious and obsessive passion are different in relation to affective outcomes and psychological adjustment, our study shows that the two forms of passion are also different in relation to employee work performance. Specifically, we found that harmonious passion was positively related to work performance, whereas obsessive passion

had no significant relationship to performance. The fact that these results were obtained after controlling for the effects of common job attitudes such as job satisfaction and involvement demonstrates that the passion construct does have additional value over pre-existing ones and will exhibit differential effects on work performance depending on the type of passion that one has. Conceptually, this finding is significant in that it not only challenges prior works that view passion as an unquestionably positive characteristic that should be developed in all employees, and instead suggests that not all forms of passion are valuable or desirable. Depending on whether employees have harmonious or obsessive passion for their jobs, they may ultimately enjoy some or no performance benefits.

Another contribution of this study is the finding that cognitive engagement is the primary mediating mechanism in the relationship between harmonious passion and work performance, such that cognitive absorption and, to a lesser extent, cognitive attention are the mechanisms through which harmonious passion relates to performance. More generally, this suggests that employees with harmonious passion tend to experience a heightened cognitive state, expending greater quantities and intensity of cognitive energy into their work, and that it is this cognitive state of engagement that ultimately translates passion into higher work performance. In addition, by shedding light on the cognitive mechanism that links passion to performance, this study addresses the concern in social psychological research that the relationship between individuals' attitudes and behaviors is typically distal and the mediating mechanism in this relationship unexplained (Wilson et al., 1984).

While harmonious passion was positively related to both absorption and attention, an unanticipated finding was that obsessive passion was not negatively related to absorption. Originally, we predicted that because obsessively passionate people tend to experience a rigid

and conflicted form of job pursuit, they would be distracted by other conflicting roles and, thus, are less likely to become cognitively absorbed compared to people without such obsessive passion. However, the fact that this relationship was not found suggests that absorption is of such an intense nature that the mere absence of obsessive passion would not necessarily result in greater absorption compared to instances where obsessive passion was present. Rather, the results imply that in order for people to become absorbed at work, they need to pursue the job-related activities in a more flexible manner and to be in their element when doing such activities, characteristics that are reflected in the concept of harmonious passion.

Another unexpected finding was that attention did not significantly relate to work performance, suggesting that expending more cognitive resources on the job will not necessarily lead to significant performance benefits, and that it is the quality more so than the quantity of cognitive effort that drives superior performance. One possible explanation for the lack of relationship between attention and performance is that high work attention may not only reflect positive factors such as harmonious job passion, but may also result from more negative aspects such as increased job complexity and demands (Gardner et al., 1989). Specifically, workers who experience problems in doing their work or in coping with job demands would have to devote greater attention and cognitive resources to overcoming these difficulties or meeting the demands. At the same time, these complexities and excessive demands could impair their job performance, thereby negating the hypothesized positive impact of attention on performance.

Our study also contributes in a couple of ways to extant research in engagement. Previous studies in engagement have focused primarily on organizational, task, and situational factors that drive engagement, and less so on the role of individual characteristics (e.g., Kahn, 1990; May, Gilson, & Harter, 2004), which then risk suggesting that how individuals think and feel about

their jobs play little or no part in shaping their engagement at work. Our finding that job passion is indeed associated with engagement serves to rectify this perspective; specifically, passion accounted for an additional 5.5% of variance in attention and 4.8% in absorption, over and above the effects of demographic variables and common job-related attitudes of job satisfaction, organizational commitment, and job identification. This highlights the link between passion and engagement, and also bears out Rothbard's (2001) proposition that engagement can entail passionate interest. Finally, by demonstrating that engagement, particularly the absorption component, relates to employees' work performance, our study also broadens our understanding of the work consequence of engagement, which had previously been limited to individuals' attitudes and perceptions (e.g., Jones & Harter, 2005) and unit-level outcomes (e.g., Harter, Schmidt, & Hayes, 2002; Salanova, Agut, & Peiro, 2005) but is now extended to a key individual behavioral outcome in organizations as well.

#### *Implications for Practice*

Several implications for practice can be drawn from this research. First, given the relationship that harmonious passion has with cognitive engagement and, in turn, employee performance, managers should consider nurturing employees' harmonious passion for their jobs. Because a core characteristic of harmonious passion is employees' valuation and voluntary internalization of the job, one way to develop harmonious passion is to increase employees' interest in and valuation of their jobs, which in turn can be accomplished by fostering conditions that make workers feel that they and their contributions matter. For example, previous research suggests that some of these conditions include empowering workers to make their own decisions, designing work to be meaningful and stimulating, and offering positive feedback about the import of the work they do and their contributions to the firm (e.g., Vallerand & Houlfort, 2003).

In this way, employees could feel a stronger sense of ownership and interest toward their work and freely accept them as a significant part of their lives, a condition that underlies the concept of harmonious passion.

At the same time, we emphasize a judicious use of the above-mentioned strategy of providing workers with positive feedback, based on findings deriving from cognitive evaluation theory (Deci & Ryan, 1985). This body of research has shown that positive feedback that is unanticipated and is an indicator of one's competence would enhance the employee's valuation of the job, implying that it would enhance harmonious passion. However, if positive feedback comes to be an expected outcome of the employee's job and a focal reason for the employee to continue doing well, this could instead lead to a pressured internalization of the job and, in turn, the development of obsessive passion, where the job becomes valued not because of its inherent characteristics but because of outcomes and rewards attached to it. Hence, while the provision of positive feedback is a potentially effective strategy in developing employees' passion for their jobs, we counsel against its indiscriminate and excessive use.

To the extent that passion is driven not only by situational and job factors but also by individual differences, managers may also wish to evaluate job candidates' passion for their work during the recruitment process. In particular, managers should aim to assess and differentiate between harmonious and obsessive passion among potential employees. Additionally, they should take into account the possibility that candidates who profess to have an obsession for their jobs may not necessarily be the best performers. Rather, those who are passionate about the jobs that they do but yet are also able to balance this passion with other aspects of their lives (i.e., those with harmonious passion) may turn out to be better performers.

*Limitations and Future Research Directions*

The strengths of this study lie in its large sample size and the use of supervisor-reported performance data from organizational records, the latter of which reduces the possibility of common-source and common-method biases given that the independent variables were obtained from employee survey ratings. Although the independent variable measures were obtained from self-reports and thus presented some risk of percept-percept bias, results from our confirmatory factor analyses demonstrated discriminant validity and indicated that such a bias was not a significant concern. In addition to these two steps, we adopted other techniques to address potential common method biases, including reverse-coding several items in the questionnaire, and conducting Harman's one-factor test wherein no single factor emerged that accounted for most of the variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). In totality, these procedures help address the risk of common method variance, and the fact that we found differential effects of passion on engagement also serves to reduce this concern.

Notwithstanding this, a limitation of this study is that we utilized a cross-sectional design that precludes us from establishing the causal direction of the relationships. For example, it could be argued that superior performers in the firm were given more opportunities and resources and less nonessential responsibilities, which in turn allowed them to expend more cognitive energy and investments on the job itself. Future research would benefit from the use of longitudinal data to assess these possibilities. In addition, because ours is the first study to examine the links between passion, engagement, and employee work performance, the current set of results needs further replication and validation, ideally with different samples across different industries, in order to provide greater confidence in and generalizability of the findings.

Another potential limitation of our study is that we measured job passion as an overall job attitude, which does not allow for the possibility that individuals may be more passionate

about certain job tasks than others. While we acknowledge that most jobs can be broken down into more detailed tasks, responsibilities, and activities, we also think that employees are capable of experiencing passion for the job as a whole. Tangential evidence for this notion exists in job satisfaction research, which shows that although a job can comprise multiple tasks, each with differing characteristics and some of which are better liked than others, individuals were nonetheless able to make global job satisfaction evaluations (Taber & Alliger, 1995). Similarly, conceptualizations of entrepreneurial passion also view it as a higher-level construct, wherein entrepreneurs are conceived as being passionate about the entire entrepreneurship pursuit even though it consists of many different specific tasks or activities (e.g., identifying and inventing new opportunities; commercializing and exploiting opportunities). Thus, our conceptualization of job passion is consistent with past approaches in that we define it in terms of passion for one's job as a whole. However, we also encourage future research to consider adopting a finer-grained approach and delve into the specific tasks (and the related characteristics) for which one may have more or less passion.

Another direction for future research is to examine a variety of other work-related outcomes of harmonious and obsessive passion. In the current study, we examined employee work performance as a consequence of passion, given that performance is one of the most important, if not *the* most important, outcome in organizations. Nonetheless, it would be valuable to investigate the impact of passion on other vital organizational behaviors such as turnover, absenteeism, and citizenship behavior, as well as work-related outcomes important to the employee, such as job affect and psychological well-being. A different class of outcome variables that may also be of particular interest to employees pertain to career outcomes, including promotions, salary, and bonuses.



Finally, another possible avenue for research is to examine the antecedents and boundary conditions of job passion. While we believe that employees' job passion is likely an amalgamated outcome of organizational and job characteristics (e.g., organizational size and constraints) and individual needs and preferences, research is still needed to identify the specific individual traits and situational features that will play a part. Likewise, the link between job passion and work performance may vary depending on situational and job factors (e.g., degree of job autonomy), an issue that warrants further investigation. Addressing these issues would not only further our understanding of the antecedents and boundary conditions of job passion, but also serve to inform managers on how they can design jobs or develop organizational policies that help in nurturing employees' job passion and its impact on key work outcomes.

In conclusion, this research investigates the role of passion within the job context, and links passion to employee work performance via the mediating role of cognitive engagement, particularly absorption. Overall, we find empirical support for the hypothesized model and draw several insights and implications in terms of the performance benefits of being harmoniously passionate about one's job, as well as the cognitive mechanism through which this relationship operates.

## References

- Ackerman, P. L. and Beier, M. E. (2003). 'Trait complexes, cognitive investment, and domain knowledge', in Sternberg, R. J. and Grigorenko, E. L. (Eds.), *The psychology of abilities, competencies, and expertise*. New York: Cambridge University Press.
- Ajzen, I. and Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological Bulletin*, **84**, 888-918.
- Amiot, C. E., Vallerand, R. J., and Blanchard, C. (2006). Passion and psychological adjustment: A test of the person-environment fit hypothesis. *Personality and Social Psychology Bulletin*, **32**, 220-229.
- Anderson, J. C., and Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, **103**, 411-423.
- Bentler, P. M., and Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, **88**, 588-606.
- Bollen, K. A. (1989). *Structural equations with latent variables*. New York: Wiley.
- Boyatzis, R., McKee, A., and Goleman, D. (2002). Reawakening your passion for work. *Harvard Business Review*, **80**(4), 86-94.
- Cardon, M. S. (2008). Is passion contagious? The transference of entrepreneurial passion to employees. *Human Resource Management Review*, **18**, 77-86.
- Cardon, M. S., Wincent, J., and Singh, J. (2009). The nature and experience of entrepreneurial passion. *Academy of Management Review*, **34**, 511-532.
- Cardon, M. S., Zietsma, C., Saparito, P., Matherne, B. P., and Davis, C. (2005). A tale of passion: New insights into entrepreneurship from a parenthood metaphor. *Journal of Business Venturing*, **20**, 23-45.

- Csikszentmihalyi, M. (1982). *Beyond boredom and anxiety*. San Francisco: Jossey-Bass.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper Row.
- Cudeck, R., and Browne, M. W. (1993). 'Alternative ways of assessing model fit', in Bollen, K. A. and Long, J. S. (Eds.), *Testing structural equation models*. Newbury Park, CA: Sage.
- Deci, E. L., and Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- Gardner, D. G., Dunham, R. B., Cummings, L. L., and Pierce, J. L. (1989). Focus of attention at work: Construct definition and empirical validation. *Journal of Occupational Psychology*, **62**, 61-77.
- Gerbing, D. W., and Anderson, J. C. (1992). Monte Carlo evaluations of goodness of fit indices for structural equation models. *Sociological Methods and Research*, **21**, 132-160.
- Harpaz, I., and Snir, R. (2003). Workaholism: Its definition and nature. *Human Relations*, **56**, 291-319.
- Harrison, D. A., Newman, D. A., and Roth, P. L. (2006). How important are job attitudes? Meta-analytic comparisons of integrative behavioral outcomes and time sequences. *Academy of Management Journal*, **49**, 305-325.
- Harter, J. K., Schmidt, F. L., and Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology*, **87**, 268-279.
- Hatfield, E., and Walster, G. W. (1978). *A new look at love*. Reading, MA: Addison Wesley.
- Hill, R. P. (2002). Managing across generations in the 21st century: Important lessons from the ivory trenches. *Journal of Management Inquiry*, **11**, 60-66.

- Hoyle, R. H. (1995). 'The structural equation modeling approach: Basic concepts and fundamental issues', in Hoyle, R. H. (Ed.), *Structural equation modeling, concepts, issues, and applications*. Thousand Oaks, CA: Sage.
- Jones, J. R., and Harter, J. K. (2005). Race effects on the employee engagement-turnover intention relationship. *Journal of Leadership and Organizational Studies*, **11**, 78-88.
- Jöreskog, K. G., and Sörbom, D. (2001). *LISREL 8 user's reference guide*. Chicago: Scientific Software.
- Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, **33**, 692-724.
- Kahn, W. A. (1992). To be fully there: Psychological presence at work. *Human Relations*, **45**, 321-349.
- Kahneman, D. (1973). *Attention and effort*. Englewood Cliffs, NJ: Prentice Hall.
- Kanfer, R., Ackerman, P. L., Murtha, T. C., Dugdale, B., and Nelson, L. (1994). Goal setting, conditions of practice, and task performance: A resource allocation perspective. *Journal of Applied Psychology*, **79**, 826-835.
- Kanungo, R. N. (1979). The concepts of alienation and involvement revisited. *Journal of Applied Psychology*, **67**, 341-349.
- Kanungo, R. N. (1982). Measurement of job and work involvement. *Journal of Applied Psychology*, **67**, 341-349.
- Kelloway, E. K. (1995). Structural equation modeling in perspective. *Journal of Organizational Behavior*, **16**, 215-224.
- Kelloway, E. K. (1998). *Using LISREL for structural equation modeling: A researcher's guide*. Thousand Oaks, CA: Sage.

- Koestner, R., and Losier, G. F. (2002). 'Distinguishing three ways of being internally motivated: A closer look at introjection, identification, and intrinsic motivation', in Deci, E. L. and Ryan, R. M. (Eds.), *Handbook of self-determination research*. Rochester, NY: University of Rochester Press.
- Leiter, M. P. (1992). Burnout as a crisis in professional role structures: Measurement and conceptual issues. *Anxiety, Stress, and Coping*, **5**, 79-93.
- Lobel, S. A. (1991). Allocation of investment in work and family roles: Alternative theories and implications for research. *Academy of Management Review*, **16**, 507-521.
- Locke, E. A. (1976). 'The nature and causes of job satisfaction', in Dunnette, M. (Ed.), *The handbook of industrial and organizational psychology*. Chicago, IL: Rand McNally.
- Lodahl, T., and Kejner, M. (1965). The definition and measurement of job involvement. *Journal of Applied Psychology*, **49**, 24-33.
- Mageau, G. A., Vallerand, R. J., Rousseau, F. L., Ratelle, C., and Provencher, P. J. (2005). Passion and gambling: Investigating the divergent affective and cognitive consequences of gambling. *Journal of Applied Social Psychology*, **35**, 100-118.
- Marques, J. F. (2007). Leadership: Emotional intelligence, passion, and ... what else? *Journal of Management Development*, **26**, 644-651.
- Maslach, C., Schaufeli, W. B., and Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, **52**, 397-422.
- May, D. R., Gilson, R. L., and Harter, L. M. (2004). The psychological conditions of meaningfulness, safety, and availability and the engagement of the human spirit at work. *Journal of Occupational and Organizational Psychology*, **77**, 11-37.

- McAllister, W. K. (1953). Toward a re-examination of psychological hedonism. *Philosophy and Phenomenological Research*, **13**, 499-505.
- Meyer, J. P., and Allen, N. J. (1997). *Commitment in the workplace: Theory, research, and application*. Thousand Oaks, CA: Sage.
- Moses, B. (2001). It's all about passion. *Across the Board*, **38**(3), 55-58.
- Mudrack, P. E. (2004). Job involvement, obsessive-compulsive personality traits, and workaholic behavioral tendencies. *Journal of Organizational Change Management*, **17**, 490-508.
- Neumann, A. (2006). Professing passion: Emotion in the scholarship of professors at research universities. *American Educational Research Journal*, **43**, 381-424.
- Ng, T. W. H., Sorensen, K. L., and Feldman, D. C. (2007). Dimensions, antecedents, and consequences of workaholism: A conceptual integration and extension. *Journal of Organizational Behavior*, **28**, 111-136.
- Norman, D. A., and Bobrow, D. B. (1975). On data-limited and resource-limited processes. *Cognitive Psychology*, **7**, 44-64.
- Oates, W. (1971). *Confessions of a workaholic: The facts about work addiction*. New York: World Publishing Co.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J., and Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, **88**, 879-903.
- Porter, G. (1996). Organizational impact of workaholism: Suggestions for researching the negative outcomes of excessive work. *Journal of Occupational Health Psychology*, **1**, 70-84.

- Quinn, R. P., and Shephard, L. J. (1974). *Quality of employment survey*. Ann Arbor, MI: University of Michigan, Institute for Social Research.
- Ratelle, C., Vallerand, R. J., Mageau, G. A., Rousseau, F. L., and Provencher, P. J. (2004). When passion leads to problematic outcomes: A look at gambling. *Journal of Gambling Studies*, **20**, 105-119.
- Rothbard, N. P. (2001). Enriching or depleting? The dynamics of engagement in work and family roles. *Administrative Science Quarterly*, **46**, 655-684.
- Rothbard, N. P., and Edwards, J. R. (2003). Investment in work and family roles: A test of identity and utilitarian motives. *Personnel Psychology*, **56**, 699-730.
- Rousseau, F. L., Vallerand, R. J., Ratelle, C., Mageau, G. A., and Provencher, P. J. (2002). Passion and gambling: On the validation of the Gambling Passion Scale (GPS). *Journal of Gambling Studies*, **18**, 45-66.
- Salanova, M., Agut, S., and Peiro, J. M. (2005). Linking organizational resources and work engagement to employee performance and customer loyalty: The mediation of service climate. *Journal of Applied Psychology*, **90**, 1217-1227.
- Schaufeli, W. B., Salanova, M., Gonzalez-Roma, V., and Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*, **3**, 71-92.
- Schaufeli, W. B., Taris, T. W., and van Rhenen, W. (2008). Workaholism, burnout and work engagement: Three of a kind or three different kinds of employee well-being? *Applied Psychology: An International Review*, **57**, 173-203.

- Seguin-Levesque, C., Laliberte, M.-L. N., Pelletier, L. G., Blanchard, C., and Vallerand, R. J. (2003). Harmonious and obsessive passion for the Internet: Their associations with the couple's relationship. *Journal of Applied Social Psychology*, **33**, 197-221.
- Simon, H. A. (1955). A behavioral model of rational choice. *Quarterly Journal of Economics*, **69**, 99-118.
- Sonnentag, S. (2003). Recovery, work engagement, and proactive behavior: A new look at the interface between nonwork and work. *Journal of Applied Psychology*, **88**, 518-528.
- Sörbom, D., and Jöreskog, K. G. (1982). 'The use of structural equation models in evaluation research', in Fornell, C. (Ed.), *A second generation of multivariate analysis*. New York: Praeger.
- Spence, J. T., and Robbins, A. S. (1992). Workaholism: Definition, measurement, and preliminary results. *Journal of Personality Assessment*, **58**, 160-178.
- Taber, T. D., and Alliger, G. M. (1995). A task-level assessment of job satisfaction. *Journal of Organizational Behavior*, **16**, 101-121.
- Tsui, A. S., and O'Reilly, C. A., III. (1989). Beyond simple demographic effects: The importance of relational demography in superior-subordinate dyads. *Academy of Management Journal*, **32**, 402-423.
- Tucker, K. A. (2002, February 19). A passion for work. *Gallup Management Journal*, pp. 1-3.
- Vallerand, R. J., Blanchard, C., Mageau, G. A., Koestner, R., Ratelle, C., Léonard, M., et al. (2003). Les passions de l'âme: On obsessive and harmonious passion. *Journal of Personality and Social Psychology*, **85**, 756-767.



- Vallerand, R. J., and Houliort, N. (2003). 'Passion at work: Toward a new conceptualization', in Skarlicki, D., Gilliland, S., and Steiner, D. (Eds.), *Emerging perspectives on values in organizations*. Greenwich, CT: Information Age Publishing.
- Wilson, T. D., Dunn, D. S., Bybee, J. A., Hyman, D. B., and Rotondo, J. A. (1984). Effects of analyzing reasons on attitude-behavior consistency. *Journal of Personality and Social Psychology*, **47**, 5-16.

Table I

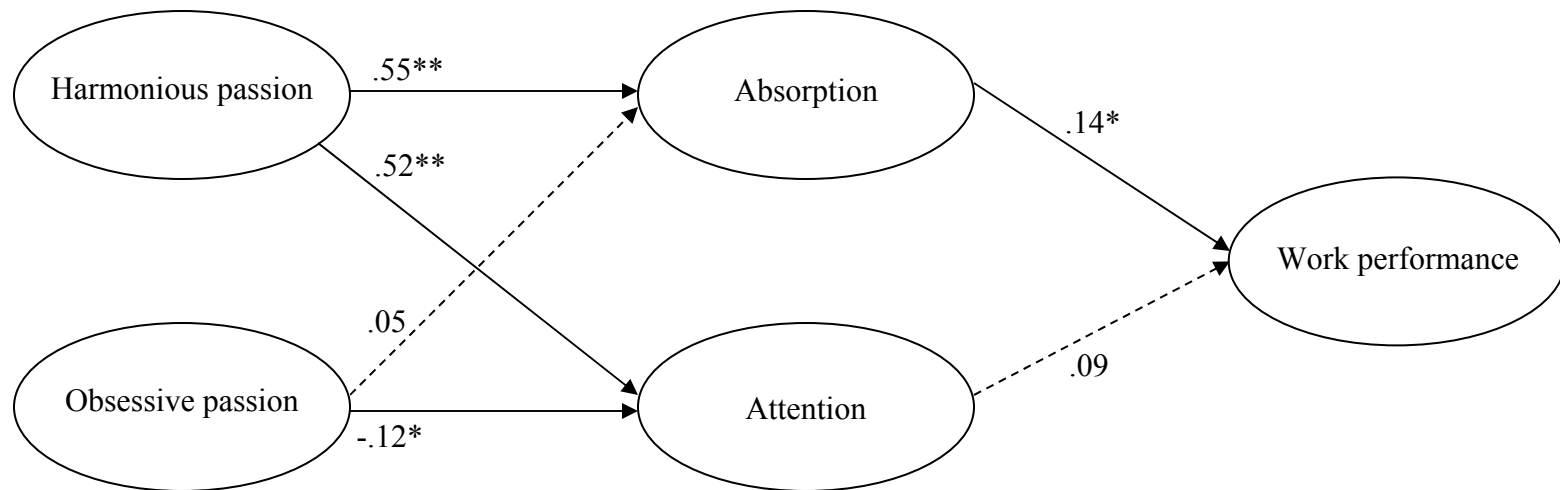
*Means, Standard Deviations, Reliabilities, and Correlations among Study Variables*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1. Education	5.09	1.44											
2. Gender	0.32	0.47	.17**										
3. Tenure	8.34	7.99	-.50**	-.14**									
4. Rank	5.81	3.44	.38**	.18**	-.04								
5. Job satisfaction	4.92	1.14	-.07	.08*	.06	.15**							
6. Organizational commitment	4.63	1.06	-.16**	.06	.24**	.07	.59**						
7. Job identification	5.07	1.07	-.05	.11**	.08	.13**	.60**	.61**					
8. Harmonious passion	4.94	0.97	-.07	.04	.09*	.09*	.66**	.61**	.59**				
9. Obsessive passion	3.69	1.15	-.20**	.06	.12**	-.09	.31**	.46**	.29**	.30**			
10. Attention	5.54	0.82	.10*	.12**	.04	.23**	.38**	.40**	.42**	.38**	.16**		
11. Absorption	5.10	0.88	-.06	.03	.12**	.11**	.30**	.35**	.31**	.33**	.25**	.59**	
12. Work performance	2.64	1.04	.10*	.02	-.14**	.12**	.14**	.03	.20**	.12**	-.05	.14**	.11**

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

Figure 1

*Hypothesized model and results.*



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

*Note:* Standardized parameter estimates are shown. Control variables are not shown here for the sake of clarity. Non-significant paths are denoted with dotted lines.