The Dynamic Nature of Passion:

Understanding the Pursuit, Experience, and Perception of Passion

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ABSTRACT:

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This dissertation explores the dynamic nature of passion. To do so, I theoretically and empirically examine the pursuit, experience, and perception of passion. This dissertation took its initial shape when my review of the passion literature revealed two key gaps. First, there was a proliferating number of definitions of passion; many of them focused on different, but what I deemed to be essential, aspects of passion. Drawing on, integrating, and extending prior conceptualizations of passion, I define passion as a strong feeling toward a personally value/preference that motivates behaviors to express that value/preference. The second gap in the passion literature I noted was that passion was almost always conceptualized as a static, trait-like characteristic, unvarying over time. In contrast, due to its' affective and behavioral components, I propose that passion has a dynamic nature: it can vary in the short- and long-term and it is subject to social dynamics through how people perceive and respond to the expressions of passion by others. My dissertation includes four chapters, with each one offering new theoretical insights and empirical evidence that highlight the dynamic nature of passion.

In Chapter 1, I explore how people define and conceptualize the pursuit of passion for themselves. I find that employees generally hold one of two lay beliefs about how to follow their passion, believing they should either a) engage in experiences that make them feel good or b) engage in personally important experiences. I then conducted two correlational and one experimental study and find that the differential endorsement of these different lay beliefs

influences how likely employees are to attain their desired levels of passion, using a passion attainment scale I developed, and whether they quit their jobs.

Chapter 2 investigates the existence and consequences of short-term variations in passion over time, what I term passion variability. To explore the dynamics of passion variability, I ran a study that asked a sample of 526 full-time employees to respond to 30 daily prompts and three surveys, conducted a week prior to, two weeks following, and two months following the daily survey portion. This data structure also allowed me to investigate the consequences of passion variability, operationalized as the standard deviation of daily levels of passion. Indeed, I find that passion variability is double-edged: while it is associated with worse evaluative outcomes, it also associated with increased motivation.

In Chapter 3, I explore why prior studies linking both passion and grit to performance have been beset by contradictory evidence. Although grit has been defined as the combination of passion and perseverance, I highlight that prior measurements of grit have focused on perseverance but have not adequately captured passion. Across a meta-analysis and two correlational studies, I find that the combination of perseverance (measured through the grit scale) and passion attainment (a construct that explicitly incorporates passion's dynamic nature) is associated with higher performance.

Chapter 4 extends the dynamic nature of passion to the social world and explores how expressions of passion are interpreted by others. Across six studies, including an archival analysis of entrepreneurial pitches, I find that others confer status on those who express passion, but only when a) those displays of passion are viewed as appropriate to the situation, b) perceivers agree with the target of expresser's passion, and c) when the context is cooperative.

Taken together, the findings across the four chapters of this dissertation establish the dynamic nature of passion—its pursuit, experience, and perception.

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INTRODUCTION

Passion has captured the public's imagination. Graduation speakers urge students to pursue their passion, company mission statements highlight that they are great places for employees to follow their passion, and job postings specify the need for potential applicants to be passionate for their work. Increasingly, passion has also undergone academic scrutiny and entered the organizational behavior literature.

As I began to research the topic of passion I was struck by two key gaps in the literature. First, I found a lack of conceptual clarity: there appeared to be a proliferating number of definitions, many of them focusing on different, but what I deemed to be essential, aspects of the definition of passion. That is, many of the past definitions of passion were not wrong but just incomplete. Second, across these definitions, passion was predominantly conceptualized as a static and trait-like characteristic, unvarying over time. Therefore, my intellectual journey with passion as topic of scientific inquiry began with a focused attention on defining passion and considering its dynamic nature.

I also pursued this dissertation topic because of my own experiences with passion. Like most entering doctoral students, I started my PhD filled with passion. But then something unexpected happened, which neither popular writing nor scholarly research had prepared me for: I could feel myself falling out of passion with my research. When I spoke with my advisors and friends, however, it became clear that my experience was not unique; nearly everyone recalled an experience where their passion had risen and waned over time. My and their experiences have led me to ask the questions that my dissertation seeks to answer.

My dynamic perspective on passion, which I subsequently describe in more detail, seeks to understand what passion is and why it matters. In doing so, I have explored the antecedents to passion, consequences of passion, moderators of passion, and mechanisms that

specify the different pathways through which passion emerges and operates. My research has also sought to make sense of the contradictory effects of passion on performance.

My first two chapters explore variance in the pursuit and experience of passion in the short- and long-term. Chapter 1 investigated whether there is variance in how people pursue their passion over longer time frames, and whether this variance influences their career decisions. I next turned to whether the experience of passion varies over shorter time frames, and how that variance affects satisfaction, exhaustion, motivation, and performance (Chapter 2). Chapter 3 applies my dynamic perspective to passion to its measurement, particularly with regards to the mixed evidence between grit—defined as passion and perseverance—and performance, which has arisen in part because prior scales did not adequately capture passion. Chapter 4 investigated the social dynamics of passion at the interpersonal level, exploring how passion is expressed and perceived by others, and how this relationship is bound by characteristics that lie within the expresser, perceiver, and the situation. I subsequently provide a brief overview of prior research on passion, before delving into depth on each of these questions.

The Study of Passion

Previous research on passion for work has fallen into three different perspectives, outlined in more detail below: (1) the dualistic model of passion, which explores the relationship of an individuals' pursuit of passion to other domains in their life (Burke & Fiksenbaum, 2009; Forest, Mageau, Sarrazin, & Morin, 2011; Vallerand, Houlfort, & Fores, 2003); (2) entrepreneurial passion, which focusses on the different roles entrepreneurs inhabit during venture creation (for a review, see Cardon, Wincent, Singh, & Drnovsek, 2009); and (3) the expression and perception of passion, particularly in the context of venture creation, which investigates how entrepreneurs' expression of passion is related to investment

decisions (Chen, Yao, & Kotha, 2009; J. J. Li, Chen, Kotha, & Fisher, 2017; Mitteness, Cardon, & Sudek, 2010)

The Dualistic Model of Passion. In their dualistic model of passion, Vallerand and Houlfort (2003) differentiated between two types of internalization processes individuals engage in, distinguishing between healthy (what they call harmonious) and unhealthy (what they call obsessive) forms of passion. Their model suggests that the relationship between an individual's pursuit of passion and other domains in their life can either be harmonious—when they internalize the target of their passion autonomously into their identity—or obsessive, where they feel compelled to engage in the target of their passion. That is, when individuals experience high levels of harmonious passion, the target of their passion "occupies a significant but not overpowering space in the person's identity and is in harmony with other aspects of the person's life" (Vallerand, Blanchard, et al., 2003, p. 757). In contrast, when individuals are obsessively passionate, the target of their passion "eventually takes disproportionate space in the person's identity and causes conflict with other activities in the person's life" (Vallerand, Blanchard, et al., 2003, p. 757).

In subsequent studies, harmonious and obsessive passion have been linked with distinct outcomes. On the one hand, higher levels of harmonious passion have been associated with greater positive affect and increased subjective well-being (Vallerand et al., 2007). In contrast, obsessive passion has been linked with greater negative affect (Mageau & Vallerand, 2007; Vallerand, Houlfort, et al., 2003), as well as feelings of pressure and guilt (Lalande et al., 2017), especially when individuals are prevented from engaging in their work. The dualistic model of passion thus sheds important insight into the different ways an individual's pursuit of passion may relate to other domains in their life, and how these may influence important outcomes. This perspective also highlights the important role that internalization processes play in understanding passion.

Entrepreneurial Passion. The entrepreneurship literature discusses passion as it applies to the three unique identities that entrepreneurs frequently take on: developing, founding, and inventing (Cardon, Gregoire, Stevens, & Patel, 2013; Cardon et al., 2009). This role-based perspective on passion is based on self-regulation theory (Carver & Scheier, 1998), and suggests that passion triggers self-regulation processes—such as regulating internal feeling states and behaviors—that help entrepreneurs achieve their goals. For example, higher levels of entrepreneurial passion are associated with increased persistence in the face of obstacles (Cardon et al., 2009), more apt recognition of viable opportunities (Liu et al., 2011), and a challenge (vs. threat) appraisals of stressors (Lopez, Nevez, & Gonzalez-Morales, 2018).

In addition, entrepreneurial passion research proposes that passion for each role identity—developing, founding, and inventing—has unique behavioral correlates (see Cardon et al., 2009, 2013): Entrepreneurs who are passionate for developing are more likely to be absorbed in their work; entrepreneurs who are passionate for growing are more likely to persist; and entrepreneurs who are passionate for inventing have enhanced creative problem-solving behaviors. This has important implications for entrepreneurs because the development stage of their venture may change quickly, and as a result their new roles and tasks may no longer reflects attributes they are passionate about. An entrepreneurial passion perspective thus highlights that passion has a specific, identity-relevant target, which may be tied to a specific role within the venture process.

The Expression and Perception of Passion. A third stream of research has investigated the unique physical manifestations related to passion's outward expressions, including facial expressions, vocal tone, and body language, particularly in the context of venture funding (Chen et al., 2009; Li et al., 2017). As a result, passion is readily observed by

others, and its cues serve as a visible indicator of how passionate the expresser is (Curran, Hill, Appleton, Vallerand, & Standage, 2015; Smilor, 1997).

Research in this domain has investigated how likely entrepreneurs who exhibit passion during an investment pitch are to receive funding from investors. These studies have reported mixed results, with several finding no significant association between displayed passion and funding decisions. For example, in one study, 55 judges rated 31 pitches as part of a university's annual business plan competition, and found that displayed passion had no significant relationship with judges' funding decisions (Chen et al., 2009). Similarly, Mitteness, Cardon, and Sudek (2010) coded how much passion entrepreneurs expressed in 60 videotaped pitches given to potential investors and found that displayed passion was not related to funding decisions. In contrast, several other studies found a small but significant relationship between displayed passion and funding decisions. In 3,502 evaluations of 241 companies made by 64 angels, Mitteness and colleagues (2012) found that perceived passion was related to higher ratings of funding potential. Similarly, both Galbraith et al. (2014) and Davis et al. (2017) found that displayed passion had a favorable impact on judges' ratings of pitches.

While highlighting one important behavioral correlate of passion, this focus on the perception and expression of passion is also beset by contradictory evidence. This may have occurred because of the variety of ways passion is assessed throughout these studies (e.g., sometimes coded through external others, sometimes rated by those who make the venture decisions), and the lack of a comparison group (e.g., passion was not contrasted with other expressions). In addition, these studies did not incorporate the social dynamics inherent in the expression of passion, such as characteristics inherent in the situation or the perceiver.

While there are differences and similarities across these different perspectives, I draw two overarching conclusions from this overview of prior passion research. First, a number of

different definitions and perspectives of passion exist. While many definitions are overlapping, each individual one is incomplete. As a result, I will first devise a concise and precise definition of passion. Second, prior research views passion primarily through a static lens, i.e., exploring how passion as measured at one time point is related to outcomes. However, because passion is comprised of affective and motivational components, it is subject to dynamic variation over time. I will subsequently describe a novel definition of passion, and then detail a dynamic perspective of passion.

Defining Passion

Drawing on, integrating, and extending prior conceptualizations of passion (Cardon, Wincent, Singh, & Drnovsek, 2009; Chen, Yao, & Kotha, 2009; Perrewé et al., 2014; Perttula, 2003; Vallerand, Blanchard, et al., 2003), I define passion as a strong feeling toward a personally important value/preference that motivates intentions and behaviors to express that value/preference. I use the words *a strong feeling* to indicate that passion is an intense affective state, but one that is not necessarily limited to positive emotions alone (Chen et al., 2009; Perrewé et al., 2014). I use the phrase *toward a personally important value/preference* to denote that the target of passion reflects an attribute that has high personal value or strong appeal to the individual (Chen et al., 2009; Vallerand, Blanchard, et al., 2003). This builds on prior notions that passion is domain-specific, such as passion for hobbies, relationships, or entrepreneurial roles (Bonneville-Roussy, Lavigne, & Vallerand, 2011; Cardon et al., 2009a; Mageau et al., 2009; Vallerand, Blanchard, et al., 2003). I use the phrase *that motivates intentions and behaviors to express that value/preference* to capture that passion leads individuals to consistently desire engaging and interacting with this personally important value/preference, i.e., the target of their passion (Cardon et al., 2009; Perrewé et al., 2014).

This conceptualization highlights how passion overlaps and differs from related constructs. For example, both passion and intrinsic motivation—defined as "doing an activity

for its inherent satisfaction" (Ryan & Deci, 2000; see also Mossholder, 1980; Rawsthorne & Elliot, 1999; Shalley & Oldham, 1985)—describe a motivational affective state. However, passion and intrinsic motivation differ in the identity-relevance of their target; whereas the target of a person's intrinsic motivation centers on the feelings of a particular task and holds less identity-relevance, the target of a person's passion reflects a personally important value/preference, and thus holds more identity-relevance (Curran et al., 2015). That is, what individuals are passionate for represents an important part of their own identity. This definition provides conceptual clarity, establishing passion within the broader organizational behavior landscape.

Indeed, this definition, together with numerous prior studies, highlight passion's discriminant validity, both theoretically and empirically, from constructs including personal interest and meaningfulness (Birkeland & Buch, 2015; Curran et al., 2015; Ho & Astakhova, 2018; Perrewé et al., 2014; Pollack et al., 2018; Vallerand, 2015). These studies have found that passion explains variance in organizationally relevant outcomes above and beyond what related constructs can explain (Ho, Wong, & Lee, 2011; Liu et al., 2011; Trépanier, Fernet, Austin, Forest, & Vallerand, 2014). For example, higher levels of passion for work are uniquely related to higher job satisfaction, greater concentration, higher self-esteem, and greater creativity (Burke & Fiksenbaum, 2009; Curran et al., 2015; Ho & Astakhova, 2018; Pollack et al., 2018; Zigarmi, Nimon, Houson, Witt, & Diehl, 2009) as well as reduced burnout and emotional exhaustion (Birkeland, Richardsen, & Dysvik, 2017; Fernet, Lavigne, Vallerand, & Austin, 2014). These studies thus highlight the unique role passion plays in predicting work-related outcomes.

Theoretical Considerations of a Dynamic Perspective on Passion

While prior research has shed considerable insight into the role of passion and its relationship to important work-related outcomes, it portrays passion from a static, trait-like

perspective. From this vantage point, passion is conceptualized as being invariant over time. A dynamic conceptualization of passion—the perspective adopted here—highlights important theoretical considerations that are not explained by prior static approaches.

One component of a dynamic view of passion is the recognition that passion reflects an attribute that employees can attain more of over the long-term, for example by engaging in behaviors that promote their pursuit of passion. Similarly, passion levels may also decrease over time, for example when individuals do not engage in behaviors that maintain their levels of passion. As a result, a dynamic perspective of passion recognizes that the pursuit of passion is a key component of its' experience, including the expectations employees have about their desired passion levels, as well as their understanding of how they believe passion should be pursued. Viewing passion through a dynamic lens thus highlights the trajectories passion can take throughout its' pursuit over time, providing an important nuance to the prior static view of passion.

A second component of a dynamic view of passion includes passion's short-term variations in addition to potential long-term changes. That is, passion levels may vary at shorter time frames, such as at the daily level—depending on several factors that rest within the employee and their organization—and these variations may capture an important but previously neglected component of an employees' experience of passion for their work. That is, despite similar average levels of passion, an employee with highly frequent variations in their daily passion levels may have a very different experience of passion at work in comparison to an employee with infrequent variations in their daily passion levels. A dynamic perspective therefore recognizes that in addition to average levels of passion, short-term variations of passion are also an important component of employees' experience of passion.

Finally, a third component of a dynamic passion perspective incorporates that passion may also be subject to social dynamics that occur between employees, and the environments they interact within. That is, an employee's expression of passion may be viewed and interpreted differently depending on the particular situation, as well as characteristics of the observer. Throughout any given workday, employees may interact with a variety of coworkers throughout different types of situations, and a dynamic perspective recognizes that expressions of passion may not have similar effects across all situations and observers.

Taken together, a dynamic perspective of passion therefore highlights both the short- and long-term changes that passion can go under, as well as the social dynamics of the expression and perception of passion. The four chapters in this dissertation explore these components in greater detail.

Measurement Considerations of a Dynamic Perspective on Passion

A dynamic perspective to passion also highlights several methodological considerations in studying passion. Indeed, through the static lens adopted in prior research, previous studies capture passion in one-off surveys and use participants' responses as proxies for their levels of passion. Viewed from a dynamic lens, there are numerous methodological considerations.

The first is a misconception of the scale commonly used to assess harmonious passion, i.e., the extent to which an individual's pursuit of passion is in harmony or conflict with other domains in their life. While the items of the harmonious passion scale (Vallerand, Blanchard, et al., 2003) such as, "My work is in harmony with the other activities in my life" and "My work is well integrated in my life," possess face validity in assessing how an employee's work relates to other domains in the life, a large number of studies have used the harmonious passion scale to more broadly measure the extent to which an employee is passionate for their work (e.g., Birkeland et al., 2017; Burke & Fiksenbaum, 2009; Curran et

al., 2015; Fernet et al., 2014; Ho & Astakhova, 2018; Ho et al., 2011; Liu et al., 2011; Pollack et al., 2019; Trépanier et al., 2014; Zigarmi et al., 2009). The harmonious passion scale, however, does not capture employee's passion levels, and research should not use it as a measure of such.

Similarly, while the scale used to assess entrepreneurial passion was designed to assess entrepreneurs' levels of passion across their different roles, it may not possess sufficient discriminant validity to distinguish it from related constructs. In the development of the entrepreneurial passion scale (Cardon et al., 2013), the authors tested its' discriminant validity against hopefulness, positive and negative affect, and self-efficacy. While these are some related constructs, there are other more closely related ones that may share considerable overlap with this scale. For example, it is unclear how items of the entrepreneurial passion scale such as, "Searching for new ideas for products/services to offer is enjoyable to me" or "I am motivated to figure out how to make existing products/services better" distinctly capture entrepreneurial passion, and not, for example, intrinsic motivation. As a result, the entrepreneurial passion scale may not be sufficiently specific to precisely capture an entrepreneur's levels of passion.

Instead, to better capture the dynamic nature of passion, I suggest that there are two alternative approaches. The first is to capture the dynamic nature of passion by explicitly incorporating the role of expectations employees have about how passionate they desire to be about their work. Prior research suggests that individuals may assess whether their pursuit of passion is successful by comparing how passionate they are relative to their expectations (Buckley, Fedor, Veres, Wiese, & Carraher, 1998; Wilson, Lisle, Kraft, & Wetzel, 1989). As a result, employees' experience of passion may be driven by the extent to which they believe they have met or fallen short of their desired levels of passion (Major, Kozlowski, Chao, & Gardner, 1995; Podsakoff, LePine, & LePine, 2007). This idea is captured through the

passion attainment scale, which measures the extent to which employees believe that their pursuit of passion is successful, and that I discuss in more detail in Chapters 1 and 3.

Moving beyond one-off scales, an alternative approach to assessing passion involves measuring passion levels repeatedly at regular time intervals over a prolonged period of time. This type of longitudinal within-participant approach is common in related fields, such as in research exploring emotion dynamics (for a review, see Houben, Van Den Noortgate, & Kuppens, 2015). Such a within-participant longitudinal approach allows researchers to investigate whether and how levels of passion vary and change over time, thus capturing further elements of passion's dynamic nature. Chapter 2 details this approach in further detail, and highlights the usefulness of measuring passion beyond one-off surveys.

Across measurements of passion, however, research should include closely related but distinct measures to further highlight the unique role that passion plays. Indeed, the studies reported in this dissertation further establish the discriminant validity of passion. For example, both Chapters 1 and 3 demonstrate important differences between passion and intrinsic motivation as well as meaningfulness; Chapter 2 finds that variations of passion are distinct from variations of positive and negative affect in predicting organizationally relevant outcomes; and Chapter 4 reveals that expressions of passion differ from expressions of extraversion or authenticity in affecting social perceptions. As a result, this dissertation highlights that passion is a construct with sufficient discriminant and predictive validity.

Overview of Chapters

Chapter 1: In Chapter I, I explore a dynamic perspective to passion by investigating how passion can change in the long-term, i.e., how employees pursue their passion. Given that passion is recognized as beneficial, I investigate why individuals differ in how successful they are in their pursuit of passion. I focus on the lay beliefs individuals hold about how they think passion is pursued. Drawing on prior academic literature and popular media, I theorized

that individuals view the pursuit of passion in one of two ways: either through a *Feelings* lay belief, i.e., the idea that passion is pursued by focusing on activities that provide individuals with positive affective experiences, or through a *Values* lay belief, i.e., the idea that passion is pursued by focusing on activities that reflect what individuals care about.

I then conducted three studies that had correlational and experimental designs. I find that employees who endorse the *Values* lay belief are more likely to successfully attain their desired levels of passion, and are subsequently less likely to quit their job, in relation to employees who endorse the *Feelings* lay belief. These studies therefore shed insight into why some individuals are more likely than others to be successful in their pursuit of passion, and provide initial evidence for a dynamic perspective on passion through the long-term changes that may arise through its' pursuit.

Chapter 2: In Chapter 2, I explore a dynamic perspective to passion by investigating how passion can change in the short-term, i.e., the extent to which passion varies at the daily level. I propose that this type of variation is systematic and represents an important component of employee's experience of passion for their work, in addition to prior research that has primarily focused on employees' average levels of passion. In an experience sampling study of 526 full-time employees who responded to thirty daily prompts as well as three longer surveys, I find that increased passion variability has negative effects for evaluative outcomes, including job satisfaction and emotional exhaustion, and positive effects for motivation, such as determination and job performance. These studies highlight passion is subject to dynamic processes in the short-term as well, and that these capture an important part of employee's experience of passion.

Chapter 3: In Chapter 3, I apply my dynamic view of passion to its' measurement, and highlight that one reason why prior studies that have explored the relationship between grit—defined as passion and perseverance—and passion are mixed is because the

measurement of grit has focused on perseverance and failed to capture passion's dynamic nature. Indeed, I find that the combination of passion attainment, a scale which explicitly incorporates passion's dynamic nature, and perseverance (as assessed through the grit scale) is robustly associated with increased performance. These studies highlight the value of a dynamic approach to passion in resolving prior mixed evidence.

Chapter 4: Finally, in Chapter 4, I explore a dynamic perspective to passion at the interpersonal level, and investigate the social dynamics at play in the expression and perception of passion. Prior research has explored the interpersonal effects of passion in isolation of possible dynamic factors and found mixed results between expressions of passion and beneficial outcomes. In contrast, six studies, including entrepreneurial pitches from Dragons' Den and two pre-registered experiments, highlight that the interpersonal consequences of expressing and perceiving passion in others depend on social dynamics. While observers conferred status onto and increased their support for individuals who express passion, these effects were weaker when passion was expressed in an inappropriate manner/context, and when observers disagreed with the target of expresser's passion. In competitive contexts, expressing passion even became threatening and decreased the support people received from others. These results demonstrate that a dynamic perspective on passion also has implications at the interpersonal level, explicitly highlighting that social dynamics influence how expressions of passion are interpreted by others.

In the General Discussion and Conclusion, I summarize the findings of this dissertation, highlight the contributions to prior literature, and suggest a future research agenda on passion, which should (a) include both a static and dynamic lens, with a focus on both short- and long-term variations; (b) study the effects of passion at the intra- and inter-personal, the team, and the organizational level, (c) explore both the positive and negative effects of passion, and (d) investigate the antecedents of passion and its' variability. Taken

together, the findings presented in this Dissertation highlight that passion's dynamic nature is an understudied, organizationally relevant, and fruitful topic for future research.

CHAPTER 1:

Igniting Passion from Within: How Lay Beliefs Guide the Pursuit of Passion and Influence Turnover

Each year, over 3.5 million students graduate from college (U.S. Department of Education National Center for Education Statistics, 2018). These workforce entrants are commonly instructed by business icons, politicians, and academics alike to "find" or "follow" work they are passionate about, as evidenced by numerous graduation speeches, talks, and articles on the topic (Hennie, 2013; Sheets, 2013). Today, in the eyes of many employees, being passionate about their work is a highly desired quality (Hagel, Brown, Ranjan, & Byler, 2014). And yet, a recent survey of 3,059 U.S. employees concluded that only 13% of these individuals were passionate about their work (Hagel, Brown, Wooll, & Ranjan, 2017).

People's desire to be passionate for their work is not without good reason, as higher levels of passion are associated with numerous beneficial work-related outcomes, including greater job satisfaction (Burke & Fiksenbaum, 2009), increased work engagement (Ho & Astakhova, 2018), greater perseverance (Duckworth, Peterson, Matthews, & Kelly, 2007), and heightened job performance (Astakhova & Porter, 2015). Given these benefits, several studies have investigated how individuals attain passion (Cardon, Post, & Forster, 2017; Li, Chen, Kotha, & Fisher, 2017; Li, Zhang, & Yang, 2017). These studies primarily centered around how work passion is *transmitted* from one passionate person to others, with a focus on affective transfer processes (Kelly & Barsade, 2001). For example, previous research has found that passion can spread from a passionate supervisor to his or her subordinate (J. Li et al., 2017), from a passionate coworker to other coworkers (Cardon et al., 2017), and even from someone outside the organization to a focal employee (J. J. Li et al., 2017). Less is known, however, about how employees generate passion by themselves.

The purpose of the current research is to investigate how employees ignite passion for their work from within. Specifically, we study lay beliefs about the pursuit of passion, which captures the idea that individuals differ in how they believe passion is attained. In analyzing the academic and popular literature, we identified two distinct lay beliefs. The first lay belief is that individuals attain their desired levels of passion by engaging in work they "like" (i.e., a focus on *feelings*). In contrast, the second lay belief emphasizes that individuals attain their desired levels of passion by engaging in work they view as "personally important" (i.e., a focus on *values*). We propose and find that these lay beliefs have opposing effects on whether individuals attain their desired levels of passion, which subsequently also has consequences for their likelihood of leaving their job.

The current research addresses critical limitations in past research on work passion in at least three key ways. First, whereas prior research views passion as "a strong inclination toward an activity that people *like*… [and] find *important*" (Vallerand, Blanchard, et al., 2003, p. 757—italics added), we argue that individuals can vary differ in the emphasis they place on the liking *or* importance aspect of passion. We also propose that the extent to which individuals pursue passion by engaging in work they *like* versus work they find *important* can have opposing effects on individuals' likelihood to quit their job. Building on several theoretical accounts that have suggested that passion is a multi-dimensional construct (Flint, Ashkanasy, & Cady, 2001; Murnieks, Mosakowski, & Cardon, 2014; Pollack et al., 2018), we conceptually establish and empirically test this assertion in the current research.

Second, we add to research on the transmission of passion from one person to another by highlighting how passion for one's work can be ignited from within. We advance the argument that the type of lay belief held by an individual can affect whether he or she attains desired levels of passion. Thus, we answer the call for more research to "discover the roots of work passion" by highlighting the importance of individual lay beliefs in passion attainment

(Perrewé, Hochwarter, Ferris, Mcallister, & Harris, 2014, p. 148; see also Cardon, Wincent, Singh, & Drnovsek, 2009; Curran, Hill, Appleton, Vallerand, & Standage, 2015; Pollack et al., 2018).

Third, we identify passion attainment as a critical mechanism that links lay beliefs about passion pursuit to important organizational outcomes, such as turnover. We argue that people who do not attain their desired level of passion may choose to quit their job in search of passion elsewhere. This pursuit for passion is consequential for organizations, as it is costly to replace exiting employees (Tziner & Birati, 1996). Our proposed perspective thus extends prior work which has predominantly focused on the way in which passion influences how employees feel and behave at work (Curran et al., 2015; Pollack et al., *in press*), toward how passion influences employees decision to quit their job. Thus, the current research provides organizations with insight into how to reduce employees' intentions and likelihood of quitting, specifically by capturing employees' lay beliefs about work passion pursuit and influencing their passion attainment by changing their lay beliefs.

In the sections that follow, we review the extant academic and popular literature on the pursuit of work passion, which leads us to propose the existence of two distinct lay beliefs. We then qualitatively explore narratives from 117 graduation speeches, and use them to develop the Work Passion Pursuit questionnaire (WPPQ), a measure of how individuals believe they can pursue their desired level of passion for work. We subsequently detail our validation of the WPPQ and our testing of the opposing effects of the *feelings* and *values* lay beliefs on the attainment of the desired level of work passion and career decisions in three studies using correlational and experimental designs across online and field samples.

Theory Development

Lay Beliefs about Work Passion

How do individuals attain their desired levels of passion? We argue that individuals vary in their endorsement of lay beliefs—systematic if-then assumptions (Detert & Edmondson, 2011; Levy, Chiu, & Hong, 2006)—about how the desired level of passion for their work is pursued. We suggest that some individuals believe that if they do something they *enjoy*, then this constitutes following their passion for work. In contrast, others believe that if they seek work that is in alignment with their *values,* then this constitutes pursuing their passion for work. These differing lay beliefs are prevalent in both the academic literature and the popular domain, particularly in the context of graduation speeches, which are one of the most common settings in which the pursuit of work passion is discussed (Duckworth, 2016).

Passion as *Feelings*. Several academic and popular accounts describe the pursuit of passion as engagement in activities that provide an intense positive affect. For example, passion has been viewed as "enthusiasm, joy, and even zeal" (Smilor, 1997, p. 342), as constituting "intense positive emotions" (Gielnik et al., 2015, p. 1014), and even as "love of one's work" (Baum & Locke, 2004, p. 588).

This lay belief that passion is *feelings* is also commonly espoused by prominent business people, politicians, journalists, and academics, particularly in graduation speeches. For example, in a 2013 graduation speech, UC San Diego Chancellor Pradeep K. Khosla said, "[h]owever you find your passion, make sure it's something that makes you happy." Likewise, during a 2007 commencement address, news anchor Brian Kenny said, "[F]ind what you love to do, and pour yourself into it. You do not want to dread driving to work every day. You'll be at your best, by the way, when you're happy. When you feel joy." Similarly, media proprietor Oprah Winfrey, in a 2008 commencement address, stated that passion will "bloom when we're doing what we love." The *feelings* lay belief thus

emphasizes that attaining desired levels of work passion entails engaging in work one likes or enjoys, no matter whether the work itself seems important or unimportant.

Passion as *Values*. A second, contrasting lay belief about passion construes the pursuit of passion for work as engaging in activities that are personally important or valuable. For instance, studies have suggested that those whose work identities are important and central to themselves experience heightened levels of work passion (Murnieks et al., 2014) and that employees direct passion toward activities they "find particularly meaningful" (Perrewé et al., 2014, p. 147).

This focus on passion as related to *values* can also be seen in popular accounts. Again, turning to commencement addresses, former Mexican President Felipe Calderón noted in 2011, "you have to embrace with passion the things that you believe in, and that you are fighting for." Likewise, in graduation remarks in 2009, former Associate Justice Yvette McGee Brown noted, "Therein lies the truth of what your life's work should really be. […] Something that you have a passion for; something that gives voice to who you are." Similarly, former presidential advisor David Gergen, in a 2010 commencement address, revisited an encounter between then-U.S. senator Barack Obama and a group of students and quoted Obama as saying, "Look. You can't plan out your life. What you have to do is first discover your passion—what you really care about." Taken together, these excerpts reflect the *values* lay belief, which suggests that desired levels of work passion can be attained by engaging in activities one finds important or valuable, no matter whether these activities are enjoyable or unpleasant.

Feelings and *Values* as Predictors of Work Passion Attainment

We argue that the two lay beliefs we have outlined—the *feelings* lay belief and the *values* lay belief—influence whether people attain their desired levels of work passion and may also shape their subsequent behavioral intentions. Prior research provides evidence that

lay beliefs affect behavior. For example, individuals who believe negotiation attributes can be improved outperform negotiators who believe negotiation attributes are fixed (Kray & Haselhuhn, 2007). Similarly, entrepreneurs who believe entrepreneurial ability is malleable outperform entrepreneurs who believe entrepreneurial ability cannot be learned (Pollack, Burnette, & Hoyt, 2012). We thus propose that, as a result of their different lay beliefs about the pursuit of work passion, individuals may vary in the extent to which they attain their desired levels of passion.

Specifically, we argue that individuals who hold the *feelings* lay belief are less likely to attain their desired levels of passion for work. These individuals are ultimately in pursuit of positive emotional experiences at work, and there is evidence that the positive emotions that individuals gain from tasks and events diminish over time (Diener, Lucas, & Scollon, 2006). Individuals who focus on feelings will thus likely soon experience less positive emotion than they desire (Frijda, 1988) because of the inevitable decline in emotional intensity in any job. This decline in positive emotional affect may be subsequently attributed to individuals' lack of passion.

Aligned with this argument is research on affective forecasting (Wilson & Gilbert, 2005). There is a large body of work demonstrating that people typically make affective forecasting errors, inadequately estimating whether future events will provide them with the feelings they seek (Gilbert & Ebert, 2002; Wilson & Gilbert, 2003). Therefore, it is possible that individuals who endorse the *feelings* lay belief may seek out work that they expect will bring them feelings but, in doing so, may inaccurately estimate whether this work will actually provide them with positive affect. We therefore hypothesized the following:

> **Hypothesis 1.** Holding the feelings lay belief will be negatively related to work passion attainment.

Since individuals with the *values* lay belief focus less on the emotions associated with work experiences, it is possible that they are less susceptible to the effects of fluctuations in positive emotions and to forecasting errors. Further, since values are stable cognitions, and not fleeting emotional experiences, jobs that reflect one's values can provide a continuing fulfilling experience, sometimes lasting over a lifetime (Rokeach, 2008). Prior research suggests that the values individuals seek to enact in their work remain relatively stable over time (Harpaz & Fu, 2002), in part because they are a component of the individual's identity (Serpe, 1987; Stryker & Burke, 2000). Since people are motivated to preserve their sense of self by engaging in aligned activities (Burke, 1991), individuals with the *values* lay belief may be more likely to persevere in their pursuit of work passion. Just as the German word for passion—"Leidenschaft"—refers to the ability to endure hardship because the reasons to engage in an activity are personally important, individuals holding this lay belief may be more likely to continue with their pursuit when feelings is lacking. In addition, individuals with the *values* lay belief may seek ways to have their job reflect what they care about (Wrzesniewski & Dutton, 2001); that is, individuals who seek out work they care about are often able to craft it, such as by including or excluding tasks or imputing meaning to their work (Berg, Grant, & Johnson, 2010).

Our assertion that the *values* lay belief may facilitate the attainment of desired work passion is further supported by research that focuses on how students develop a passion for a new activity. For instance, in one study, junior high school students learned how to play a new musical instrument. Five months later, the students who were more likely to attain greater passion were those who placed more value on music (Mageau et al., 2009). In another study, undergraduate students enrolled in entrepreneurship training, and 12 weeks later, after the course concluded, the students who were more likely to attain greater passion for entrepreneurial activities were those who had integrated entrepreneurship into their identity

(Gielnik, Uy, Funken, & Bischoff, 2017). In both studies, participants attained their desired levels of passion when they *valued* the activity they were learning. Thus, we hypothesized the following:

> **Hypothesis 2.** Holding the values lay belief will be positively related to work passion attainment.

The Relationship between Work Passion Attainment and Turnover

Having less passion for one's work than desired has the potential to influence individuals' behavioral intentions as well as actual behavior.[1] Specifically, an expectation-experience discrepancy may lead people to be unhappy with their current employment, prompting them to seek employment elsewhere with the hope of finding an environment that can provide greater passion attainment. Previous research suggests that individuals whose employment experience does not match their expectations are more likely to want to quit their job (Bedeian, Kemery, & Pizzolatto, 1991; Podsakoff, LePine, & LePine, 2007), and we thus suggest that when one's passion attainment needs are unmet, this expectation-experience gap may result in increased turnover (Bolles, 2009; Wolf, Lee, Sah, & Brooks, 2016; Perrewé et al., 2014). We therefore hypothesized the following:

> **Hypothesis 3.** Work passion attainment will be negatively related to turnover, such that those with lower passion attainment will be more likely to quit their jobs.

How Lay Beliefs Affect Turnover through Work Passion Attainment

We argue that when individuals endorse the *feelings* lay belief, they will be more likely to quit their current job, as they will experience a gap between their expectation and

[1] In the current research, we examine both turnover intentions and actual turnover. A recent meta-analysis finds that both are strongly correlated ($\rho = .45$; Griffeth, Hom, & Gaertner, 2000). For ease of comprehension, we therefore use the term 'turnover' throughout our theory and discussion to refer to both turnover intentions and actual turnover.

experience of work passion. Following our earlier logic, we propose that the *feelings* lay belief will be associated with increased turnover because of individuals' increased tendency to fall short of their desired levels of work passion. In contrast, individuals who hold the *values* lay belief will be less likely to quit their jobs because of their increased tendency to attain the desired levels of passion. Thus, we hypothesized the following:

> **Hypothesis 4.** The relationship between lay beliefs about work passion pursuit and turnover is mediated by passion attainment, with the values lay belief being positively related to passion attainment and passion attainment being related to reduced turnover.

Overview of the Studies

Three studies investigated how different lay beliefs about work passion pursuit relate to both whether individuals attain their desired levels of passion for work and whether individuals quit their jobs. In Study 1, we qualitatively explored narratives from 117 graduation speeches to develop the WPPQ, a measure of lay beliefs about work passion pursuit. We then validated this measure and tested the differential effects of lay beliefs about work passion pursuit on passion attainment and turnover intention. In Study 2, we replicated the findings of Study 1 for actual turnover in a sample of employees at a technology company. In Study 3, we manipulated lay beliefs about work passion pursuit to provide causal support for the relationship between these lay beliefs, attainment of desired levels of passion, and turnover intentions.

Study 1

The purpose of this study was to develop and validate the WPPQ, and provide initial evidence for the associations between *feelings*, *values*, passion attainment, and turnover intentions. We first developed items to reflect the *feelings* and *values* lay beliefs and then conducted an exploratory factor analysis (EFA) and a confirmatory factor analysis (CFA) of

the items. We subsequently test the hypothesized relationship using regression analyses and structural equation modelling.

Measure Development

We developed the WPPQ by collecting narratives on how to achieve work passion from 117 graduation addresses from a variety of different university categories. We chose to sample work passion pursuit narratives from graduation speeches because these speeches represent one of the most common settings in which the pursuit of work passion is highlighted (Duckworth, 2016). Three independent raters coded the speeches for the *feelings* and *values* lay beliefs (for similar methods, see Grant, Berg, & Cable, 2014; Spielmann et al., 2013). An average Cohen's kappa agreement between raters of .84 reflected reasonably good agreement overall (Landis & Koch, 1977). Examples of coded quotes from graduation speeches for both lay beliefs are summarized in Table 1.

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insert Table 1 about here

Based on the coded graduation speech statements, we developed the six items that comprise the WPPQ measure. In response to the prompt "To follow my passion for work, I believe it is important...," participants were asked to rate their agreement with the following items on a seven-point scale: for *feelings*, "to make my work leisurely," "to feel like I never work a day in my life," and "to never be bored at work," and for *values*, "to identify aspects of my work that allow me to express my values," "to trust myself to find work activities that are meaningful to me," and "to dedicate time to engage in work activities that reflect what is significant to me."

Participants

To ascertain the psychometric properties of the WPPQ, we recruited 93 full-time employees using Amazon's Mechanical Turk (MTurk; M_{age} = 35.81, 52.6% male). Individuals first answered several questions regarding their employment and were then invited to participate in the study only if they were full-time employees. Participants then completed the six items assessing their lay beliefs about the pursuit of work passion, as described above ($\alpha_{feelings}$ = .75; α_{values} = .84).

Measures

Passion Attainment. We measured the extent to which individuals attain their desired levels of work passion with a three-item measure rated on a scale from 1 = *strongly disagree* to 7 = *strongly agree*: "I am less passionate for my work than I should be," "I often feel as if I have to be more passionate for my work," and "I frequently feel obliged to be more passionate for my work than I currently am" (α = .89). We reverse-scored the items, such that higher scores reflect higher passion attainment.

Turnover Intentions. We assessed turnover intentions with a two-item measure adapted from Chen et al. (2011). On a scale from 1 = *strongly disagree* to 7 = *strongly agree*, participants rated their agreement with "I frequently think of quitting my job" and "I am planning to search for a new job during the next 12 months" (*r* = .78).

Passion-Related Constructs. To distinguish our effects from other constructs related to work passion (Ho & Astakhova, 2018; Perrewé et al., 2014), we measured intrinsic motivation (e.g., "Why are you motivated to do your work?," items included "Because I enjoy the work itself;" α = .98; Grant, 2008), work meaningfulness (e.g., "What I do at work makes a difference in the world;" α = .97), and neoclassical calling (e.g., "The work I do feels like my calling in life;" α = .95; Bunderson & Thompson, 2009). Participants also provided their age and gender. Table 2 gives an overview of the descriptive statistics for the study variables.

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insert Table 2 about here

Factor Analysis

An EFA of the WPPQ using varimax rotation yielded two factors, and all item loadings were as expected. In addition, all factor loadings were greater than .59, and all crossloadings were less than .28, suggesting an adequate factor structure (Tabachnick & Fidell, 2007). The two factors accounted for 65.00% of the variance. Table 3 provides the factor loadings.

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insert Table 3 about here

We next conducted a CFA and found that the six items loaded onto their respective factors (*feelings* and *values*). This model fit the data significantly better than a single-factor model ($\Delta\chi^2 = 35.19$, $p < .001$). Next, to examine whether *feelings* and *values*, intrinsic motivation, meaningfulness, and neoclassical calling were distinct, we conducted another CFA. Given the extremely high correlation between meaningfulness and neoclassical calling, we decided to drop the former (Grewal, Cote, & Baumgartner, 2004). Standardized factor loadings are shown in Table 4. The fit indices when loading items onto their own construct were adequate (Schermelleh-Engel, Moosbrugger, & Müller, 2003), with $\chi^2(105) = 153.19$, *CFI* = .95, *RMSEA* = .09, *SRMR* = .07, and the fit was significantly better than for any other three- or two-factor models or for a one-factor model.

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insert Table 4 about here

Hypothesis Testing

We next tested the hypothesized associations between *feelings*-based passion pursuit, *values*-based passion pursuit, passion attainment, and turnover intentions.

Passion Attainment. To test Hypothesis 1, we regressed passion attainment onto both *feelings*- and *values*-based passion pursuit. As predicted, we found that higher levels of *feelings* were marginally related to lower levels of passion attainment (Table 5, Model 1; B = -.18, SE = .10, p = .079). In contrast, and aligned with Hypothesis 2, individuals who held the *values* lay belief were significantly more likely to experience passion attainment (B = .97, SE = .14, p < .001). These results remained similar when age and gender were added as controls (*feelings:* B = -.18, SE = .10, p = .089; *values:* B = .94, SE = .15, p < .001).[2] In sum, individuals who held the *feelings* lay belief reported marginally lower passion attainment, whereas individuals who focused more on *values* experienced significantly higher passion attainment.

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insert Table 5 about here

We next conducted regression analyses controlling for related constructs: Intrinsic motivation, work meaningfulness, and neoclassical calling. The significance levels of our results remained unchanged (*feelings:* B = -.19, SE = .10, p = .066; *values:* B = .74, SE = .17, p < .001; see Table 5, Model 2), and all VIFs were below the suggested value of 10 (O'Brien, 2007).[3]

[2] In addition, to rule out the alternative explanation that passion attainment is highest when an individual holds both *feelings* and *values* lay beliefs, we analyzed the interaction between both lay beliefs and passion attainment. The interaction term was not statistically significant (B = .04, SE = .07, p = .57).
[3] The VIF was 1.23 for *feelings*, 1.75 for *values*, 5.95 for intrinsic motivation, 6.17 for meaningfulness, and 6.93 for neoclassical calling.

As an additional robustness check, we conducted Structural Equational Modeling (SEM), taking the correlation of all measured variables into account by simultaneously regressing the factors of *feelings*, *values*, intrinsic motivation, work meaningfulness, and neoclassical calling onto passion attainment. In this analysis, *feelings* was significantly related to lower passion attainment (*estimate* = -.27, *SE* = .13, $p = .046$), and *values* remained significantly associated with higher passion attainment (*estimate* = .95, *SE* = .25, $p < .001$). This finding was obtained while controlling for the effects of intrinsic motivation (*estimate* = -.28, *SE* = .22, $p = .21$), work meaningfulness (*estimate* = -.18, *SE* = .23, $p = .44$), and neoclassical calling (*estimate* = .68, *SE* = .32, $p = .034$), with $\chi^2(215) = 453.62$, *CFI* = .907, *TLI* = .890, *RMSEA* = .109.

Turnover Intentions. To test Hypothesis 3, we examined the effect of passion attainment on an employee's desire to quit his or her job. We regressed turnover intentions onto passion attainment and found a statistically significant relationship (*B* = -.74, *SE* = .10, $p < .001$), such that higher levels of passion attainment were related to lower turnover intentions.

Mediation. To test Hypothesis 4, we examined if *feelings* increased turnover intentions through an indirect effect of lower passion attainment. Bootstrapped bias-corrected confidence intervals (5,000 iterations) indicated a marginally significant indirect effect ($CI_{90\%}$ = [.017; .229]), such that individuals who held the *feelings* lay belief had a marginally increased desire to quit their job through lower passion attainment. We also examined whether *values* decreased turnover intentions through higher passion attainment. Bootstrapped bias-corrected confidence intervals (5,000 iterations) indicated a significant indirect effect ($CI_{95\%}$ = [-.727; -.246]), such that individuals who held the *values* lay belief had a decreased desire to quit their job through higher passion attainment.

Summary

In Study 1, we validated the WPPQ to highlight that the differing passion lay beliefs of feelings and values are distinct constructs. Further, we provided initial evidence for the opposing effects of *feelings* and *values* on passion attainment.

Study 2

The goal of Study 2 was to further validate the WPPQ scale and to replicate our finding that lay beliefs about the pursuit of passion differentially affect passion attainment and turnover intentions, as well as to extend those findings to *actual* turnover.

Method

Participants. We recruited 994 employees from a large technology company in a Spanish-speaking country (M_{age} = 31.90, 59.05% male, mean tenure = 55.20 months). Employees received an invitation from the company's human resources department to participate in a survey hosted on Qualtrics.com and were assured that their responses would be anonymous and not shared with their employer (response rate = 43.34%). For all measures described below, we used back translation to ensure semantic item equivalence in English and Spanish (Schaffer & Riordan, 2003).

Measures. As above, we used the same six-item WPPQ to measure employees' lay beliefs about work passion pursuit ($\alpha_{feelings}$ = .61; α_{values} = .82), the same three items to measure employees' passion attainment (α = .83), and the same two items to measure turnover intentions (r = .76). Employees also provided information about their age, gender, and tenure in the organization.

Actual Turnover. In addition, the organization provided us with information on employees that voluntarily left the organization in the nine months following the survey, which was the case for 90 employees (a turnover rate of 9.05%).

Table 6 gives an overview of the descriptive statistics and bivariate correlations.

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Results

Passion Attainment. In support of Hypothesis 1, employees who held the *feelings* lay belief experienced lower passion attainment (B = -.14, SE = .05, p = .012), whereas the *values* lay belief was significantly related to higher passion attainment (B = .23, SE = .07, p < .001), in line with Hypothesis 2. These results remained robust when controlling for age, gender, and tenure (*feelings:* B = -.13, SE = .05, p = .014; *values:* B = .22, SE = .07, p = .001).[4]

Turnover Intentions. Higher levels of passion attainment were associated with a decreased desire to quit the organization (B = -.72, SE = .03, p < .001), as predicted by Hypothesis 3.

Actual Turnover. Higher levels of passion attainment were also associated with lower turnover nine months after the survey (B = -.16, SE = .07, p = .026), in support of Hypothesis 3. In addition, turnover intentions were also a significant predictor of actual turnover (B = .21, SE = .06, p < .001).

Mediation. Bootstrapped bias-corrected confidence intervals (5,000 iterations) of our indirect effects indicated that *feelings* increased turnover intentions through lower passion attainment ($CI_{95\%}$ = [.064; .220]), whereas *values* decreased turnover intentions through higher passion attainment ($CI_{95\%}$ = [-.321; -.097]). The same is the case with actual turnover; the indirect effect from *feelings* to actual turnover through lower passion attainment was significant and positive ($CI_{95\%}$ = [.0003; .010]), while the path from *values* to actual turnover through higher passion attainment was significant and negative ($CI_{95\%}$ = [-.013; -.002]). These analyses provide further support for Hypothesis 4.

[4] Similar to what was found for the online survey participants in Study 1, there was no significant interaction between the *feelings* and *values* lay beliefs and passion attainment (B = -.009, SE = .04, p = .81).

Summary and Discussion

Across Study 1 and Study 2, we find evidence for the opposing effects of *feelings* and *values* on passion attainment: Individuals who held the *feelings* lay belief reported lower passion attainment and increased turnover intentions and higher turnover rates, whereas individuals who held the *values* lay belief reported higher passion attainment and reduced turnover intentions and lower turnover rates.

However, due to the correlational nature of these studies, we cannot argue for a causal link between either *feelings* or *values* and passion attainment or subsequent turnover (intentions). One could imagine the possibility of reverse causality, where individuals who feel they are less passionate than desired about their job may report their intention to find a job they *enjoy* instead of a job they *value*. Thus, to determine the causal effect of emphasizing one lay belief over the other, we conducted an experiment where we manipulated lay beliefs about work passion pursuit to examine their opposing effects on passion attainment and turnover intentions.

Study 3

In Study 3, we manipulated lay beliefs about work passion pursuit as consisting of either *feelings* or *values* and tested whether these differing lay beliefs would influence whether individuals reported attaining their desired levels of work passion and their subsequent turnover intentions.

Method

Participants. We recruited 270 participants from MTurk (M_{age} = 35.81, SD_{age} = 10.62, 55.0% male). Fifty-one participants (18.9%) failed either the attention or comprehension check, leaving a final sample size of 219 participants. There were no significant differences in demographics between participants who failed the attention or comprehension check and those who did not (Age: $t(487) = .51$, $p = .61$, $d = .05$; Gender:

$t(487) = .13$, $p = .90$, $d = .01$). We present our analysis without participants who failed attention checks although results are consistent if individuals who failed either the attention or comprehension check are included in the analyses.

Lay Belief Manipulation. Participants were randomly assigned to either the *feelings* or v*alues* condition. Participants in both conditions were asked to read the transcript of a highly passionate person's graduation address at a local college. We manipulated the speech text to reflect different lay beliefs about work passion pursuit. The experimental stimuli for the manipulation were based on the graduation speeches examined in the scale development in Study 1. However, key words were manipulated using different codes extracted from Study 1. In particular, the speech text either emphasized that to achieve more work passion, one should seek work that one finds "fun" or "enjoyable" or that makes one "happy" (*feelings*), versus seeking work that reflects "obtaining clarity of personal values," "reflects personal values," or helps individuals engage in activities they "care about" (*values*) (see Appendix A for full manipulation text). For example, one excerpt read, "The important point is thus: you need to have a strong desire to work on things you enjoy [care about], and make sure you set aside time each day to do what makes you happy [what you personally value]." Subsequently, participants responded to attention and comprehension checks that captured whether they had read and understood the manipulated text.

Measures. Participants then responded to the same three-item measure of passion attainment ($\alpha = .86$) and turnover intentions ($r = .86$) as in the previous studies.

Results

Passion Attainment. In support of Hypotheses 1 and 2, participants in the *feelings* condition reported lower levels of passion attainment (M = 3.45, SD = 1.53) than participants in the *values* condition (M = 3.97, SD = 1.47; $t(217) = 2.58$, $p = .01$, $d = .35$).[5]

Turnover Intentions. We next examined whether participants with higher passion attainment reported lower intentions to quit their organization, in line with Hypothesis 3. Across conditions, higher levels of passion attainment were related to decreased turnover intentions (B = -.60, SE = .07, $p < .001$).[6]

Mediation. We then tested the indirect effect of condition on turnover intentions through passion attainment. Providing support for Hypothesis 4, the bias-corrected confidence interval did not include zero ($CI_{95\%}$ = [.072, .564]; 5,000 bootstrapped iterations).[7] This finding suggests that participants in the *feelings* condition reported increased turnover intentions through lower passion attainment compared to participants in the *values* condition.

Summary

Study 3 showed that participants who read a graduation speech emphasizing the *feelings* lay belief about work passion pursuit were more likely to indicate lower passion attainment and, as a result, increased turnover intentions, in comparison to participants who read a graduation speech emphasizing *values*.

General Discussion

We introduced the concept of lay beliefs about work passion pursuit to capture the idea that individuals differ in how they believe their desired levels of passion can be attained. Across three studies, we predicted and found that two distinct lay beliefs—the *feelings* and

[5] When participants who failed the attention or comprehension check were included, the difference in passion attainment between conditions remained marginally significant ($M_{feelings}$ = 3.57, $SD_{feelings}$ = 1.51; M_{values} = 3.91, SD_{values} = 1.52; $t(268) = 1.88$, $p = .06$, $d = .23$).

[6] Likewise, results were significant when including participants who failed the attention or comprehension check when including (B = -.66, SE = .06, $p < .001$).

[7] Results were consistent when including participants who failed the attention or comprehension check ($CI_{95\%}$ = [.002, .457])

values lay beliefs—have consistent opposing effects: Individuals who held the *feelings* lay belief were less likely to attain their desired levels of passion and were subsequently more likely to quit their current jobs relative to individuals who held the *values* lay belief. The current research thus highlights a previously neglected perspective on how work passion is pursued and demonstrates a critical link between the pursuit of work passion, work passion attainment, and career decisions.

Theoretical and Empirical Contributions

We make several contributions to the literature on work passion. First, we disentangle two lay beliefs that people associate with the pursuit of work passion and show that those who do a job because it is important to them are more likely to attain desired levels of passion for work and less likely to quit their job than those who do their job because they want to enjoy it. To assess these lay beliefs about work passion pursuit, we developed a novel measure, the WPPQ. While we focused the effects of the WPPQ on passion attainment and turnover, future studies can use the WPPQ to investigate other consequences of differential lay beliefs about work passion pursuit for individuals in organizations.

Second, prior research predominantly views passion as a relatively stable trait-like characteristic of employees (Amiot, Vallerand, & Blanchard, 2006; Balon, Lecoq, & Rimé, 2013; Philippe, Vallerand, Houlfort, Lavigne, & Donahue, 2010). The current research challenges this perspective and highlights that desired levels of passion for work can be attained when employees endorse the lay belief that passion is pursued by following work that is important, rather than work that is enjoyable. Our findings thus contribute to a growing body of research that suggests that passion is malleable and can be developed. Whereas previous research focused on the interpersonal dynamics by which passion spreads from one person to another (Cardon et al., 2017; J. J. Li et al., 2017; J. Li et al., 2017), we added an intrapersonal perspective that highlights the important role of lay beliefs in the development

of passion, answering the calls for more research to "discover the roots of work passion" (Perrewé et al., 2014, p. 108).

Third, our results also suggest that scholars may need to take individuals' lay beliefs about work passion pursuit into account when theorizing about or assessing the beneficial effects of passion for work. Consider that to date, the evidence for a relationship between passion and job performance is surprisingly mixed: While some studies have found a significant but weak relationship (e.g., Astakhova & Porter, 2015; Ho et al., 2011; McAllister et al., 2017), other studies have not found a significant relationship (Birkeland & Buch, 2015; Ho, Kong, Lee, Dubreuil, & Forest, 2018; Ho & Pollack, 2014). The current results may provide insight into why the evidence is mixed. Given the opposing effects of the *values* and *feelings* lay beliefs on individuals' passion attainment, it is possible that employees who hold the *values* lay belief are less likely to fall out of passion and therefore better able to reap work passion's beneficial effects on performance. In contrast, employees who hold the *feelings* lay belief may be more likely to fall out of passion and subsequently less likely to remain passionate. Future work may thus be able to leverage our distinction between varying lay beliefs about work passion pursuit.

We also entertained the idea that attaining desired levels of passion requires individuals to hold both *feelings* and *values* lay beliefs. That is, one could argue that individuals are least likely to fall short of desired passion for work when they believe the pursuit of passion entails the combination of both following work they like and enjoy, as well as work they find important or valuable. However, pursuing *feelings* and *values* may lead to conflicting implications for employees: Work that is personally important often involves continuous engagement, stretch goals, and even hardship, and may thus not be enjoyable (O'Keefe, Dweck, & Walton, 2018), whereas for many, work that is enjoyable entails easy tasks within one's comfort zone that provide quick rewards (Woolley & Fishbach, 2017).

Thus, if employees are unlikely to reconcile these differences, they are likely to lean to one side or the other. In addition, pursuing both *feelings* and *values* may make it even harder for employees to attain their desired level of passion for work because they would optimize along two criteria, rather than one. Using our data to empirically explore whether the combination of *feelings* and *values* lay beliefs affect turnover, we find that the interaction term between *feelings* and *values* lay beliefs on passion attainment was not statistically significant in any of our studies. Thus, our data suggests that what matters is whether people pursue passion for work as *feelings* or *values*, rather than as both.

More broadly, the contributions of the current research may extend to the wider management literature by providing a novel angle to established models of job design. Most prior models, such as the job characteristics model (Hackman & Oldham, 1976; Hackman & Oldham, 1980), focus on the extent to which the design of a job allows employees to experience autonomy and task identity, which subsequently predicts various important workplace outcomes, such as job stress, satisfaction, and performance (de Jonge, Bosma, Peter, & Siegrist, 2000; Karasek et al., 1998; Morris & Venkatesh, 2010; Schaufeli, Taris, & Van Rhenen, 2008) as well as passion for work (Fernet et al., 2014; Ho et al., 2018; Warnick, Murnieks, McMullen, & Brooks, 2018). Our results complement this research by highlighting that an employee's lay belief about work passion pursuit may influence which job characteristics take on more importance. For example, employees who hold the *values* lay belief may place more emphasis on job characteristics that determine whether they are able to engage in work they find personally important, while employees who hold the *feelings* lay belief may place more emphasis on job characteristics that determine whether they are able to engage in work they find enjoyable. As a result, the current research may help future researchers better understand how varying job characteristics differentially influence employees, depending on their lay beliefs about work passion pursuit.

Practical Implications

The current research bears several practical implications. For individuals, the findings of our studies indicate that they may be more likely to attain their desired levels of work passion by emphasizing the enactment of values in their pursuit of passion, rather than seeking work that brings them feelings. What this suggests is that employees may be able to restructure their own pursuit of work passion to reap the benefits of attaining their desired levels of passion, including increased engagement (Ho & Astakhova, 2018; Ho et al., 2011) and persistence (Zigarmi et al., 2009).

Our findings also have implications for HR practices. Companies could design training programs that help shift employees' mindsets from an *feelings* to a *values* mindset, altering their HR practices to emphasize the ongoing maintenance and nourishment of the pursuit of work passion.

Limitations and Future Directions

The current research has several shortcomings that future research could address. First, while we find that lower levels of passion attainment may lead employees to quit their jobs, this does not rule out the existence of additional processes; for example, individuals who intend to leave their employer because they have fallen short of their desired levels of work passion may engage in other, compensatory strategies to address their expectation-experience discrepancy. They could, for example, intend to attain their desired levels of passion for work through company volunteering programs (Brockner, Senior, & Welch, 2014) or their employers' CSR practices (Burbano, 2016). Future research could therefore examine whether individuals with the *feelings* lay belief are more likely to explore potential alternative strategies and could further clarify the longer-term consequences of varying endorsement of lay beliefs about work passion pursuit.

A second opportunity for future research is to evaluate individuals' pursuit of their desired levels of work passion over time. Individuals' attainment of their desired level of passion for work may fluctuate over time, such that the same employee may be more likely to desire leaving the company on one day than another. However, it is possible that differences in lay beliefs about work passion pursuit are also associated with the extent to which passion attainment may vary over time; given the stability of values (Rokeach, 2008), it is conceivable that individuals who focus more on *values* in their pursuit of work passion fluctuate less in passion attainment and turnover intentions than those who focus on *feelings*. Such a longitudinal perspective, perhaps obtainable through daily diary methods, would be able to uncover potential temporal variations and provide further evidence on the links between *feelings*, *values*, passion attainment, and turnover (Liden, Wayne, & Stilwell, 1993; Morrison, 1993).

Another avenue that is ripe for future investigation is whether individuals differ in the extent to which they desire passion attainment; that is, the expectation to be passionate about work may hold greater importance for some individuals than others. As a consequence, failing to attain their desired level of passion for work could have a greater effect on those individuals for whom passion constitutes a more important expectation, who may subsequently have a greater desire and likelihood to quit their jobs (Mobley, 1977; Podsakoff et al., 2007; Porter & Steers, 1973). This can be detrimental to individuals' quest for a passion-filled job and to organizations' costs, as they will have to frequently replace exiting individuals (Finnegan, 2015).

In conclusion, our theoretical perspective and findings suggest that the extent to which individuals attain their desired level of work passion may have less to do with their actual jobs and more to do with their beliefs about how work passion is pursued.

CHAPTER 2:

The Dynamic Nature of Passion: The Down- and Upsides of Passion Variability

Prior research portrays passion as a trait-like characteristic. In their seminal paper introducing passion as a scientific construct, Vallerand and colleagues (2003) conceptualize passion as a stable trait with influences on long-term processes and propose that it remains steady across long time spans (see also Amiot, Vallerand, & Blanchard, 2006; Balon, Lecoq, & Rimé, 2013; McAllister, Harris, Hochwarter, Perrewé, & Ferris, 2017; Philippe, Vallerand, Houlfort, Lavigne, & Donahue, 2010). Aligned with this perspective, the vast majority of prior studies are cross-sectional and measure passion through self-report questionnaires at one time point (Amiot et al., 2006; Mageau et al., 2009; Vallerand et al., 2007; Vallerand, Blanchard, et al., 2003). Utilizing this approach, several prior studies have found that passion correlates with personality traits, thus giving further support to the predominant trait-like perspective on passion (Balon et al., 2013; Moeller, Keiner, & Grassinger, 2015; Tosun & Lajunen, 2009; Wang & Yang, 2008).

The current research challenges this conceptualization of passion as an enduring trait-like characteristic. Because passion comprises emotional and motivational components (Jachimowicz, Wihler, Bailey, & Galinsky, 2018), it may be subject to the dynamics around emotions, self-regulation, and goal pursuit (Bandura, 1991; Carver & Scheier, 1990; Carver & Scheier, 1982; Houben, Noortgate, & Kuppens, 2015). Indeed, a recent review of the passion literature highlights the need to investigate passion from a dynamic perspective, stating that "it would be useful for researchers to know more about how passion develops, [and] changes over time" (Pollack, Ho, O'Boyle, & Kirkman, *in press*: xxx). This sentiment is also reflected in the popular arena; for example, in graduation speeches, the journalist and author Katie Couric ("Do what you love, even if you don't love it every day") as well as the

actor and director Michael Coleman ("Follow your passion but understand that your passion may change along the way") have hinted at a more dynamic nature of passion. Variations in passion levels may therefore be more common and widespread than previously appreciated.

To help understand why passion variability is likely to matter, consider four employees who rate their level of passion for their work daily on a 1-to-7 scale, where "1" represents "not at all passionate" and 7 represents "extremely passionate." Over the course of a few weeks, one employee may have an average passion rating of "5" by regularly indicating moderate levels of passion (i.e., rating themselves a "5" every day). In contrast, another employee may have an average rating of "5" by indicating very high levels of passion (a "7") on half of the days and moderately low levels of passion (a "3") on the other half of the days. The third employee may hover around the mean (mostly indicating a "5") but have a few very passionate days (i.e., a few "7s"), and the fourth employee may also hover around the mean (mostly indicating a "5") but have a few low-passion days (i.e., a few "3s").

Research to date would treat these four employees similarly, focusing on average levels of passion and neglecting the difference in variation of daily levels of passion. Instead, the research presented here takes a dynamic view of passion and explores the influences on and consequences of passion variability, i.e., the standard deviation of daily passion over time. I propose that passion variability, as well as its various forms, will have important predictive value over and above mean passion levels. I develop a model that captures the dynamic nature of passion, one that offers both a theoretical framework for and a new methodological approach to the study of passion.

The current model and empirical research make several contributions to the literature. Theoretically, by exploring the dynamics of passion, I connect passion research with the related fields of emotion dynamics, self-regulation, and goal pursuit (Bandura, 1991; Carver & Scheier, 1990; Carver & Scheier, 1982; Houben, Noortgate, et al., 2015) to both identify

passion variability and reveal why individuals may not be able to maintain as steady a level of passion as previously assumed (Amiot et al., 2006; Balon et al., 2013; Philippe et al., 2010). This dynamic approach to passion also specifically connects to uncertainty management theory and self-affirmation research (Sherman & Cohen, 2006; Steele, 1988; van den Bos & Lind, 2002) to propose that passion variability is associated with consequential work-related outcomes. As a result, the current research shows how a number of individuals with the same average levels of passion can have dissimilar outcomes if their passion variability differs, a set of findings that cannot be captured in commonly used one-off surveys (Amiot et al., 2006; Mageau et al., 2009; Vallerand et al., 2007; Vallerand, Blanchard, et al., 2003).

Empirically, the research presented here reveals that higher levels of passion variability can have both negative (e.g., increased emotional exhaustion and decreased job satisfaction) and positive (e.g., enhanced determination and job performance) effects on important organizational behavior. Furthermore, I distinguish between passion variability's negative and positive variance components and demonstrate that the negative variance component predicts the downsides, whereas the positive variance component predicts the upsides of passion variability. In so doing, the current research also addresses a prior call to understand "how and when passion is related to negative employee outcomes" (Pollack, Ho, O'Boyle, & Kirkman, *in press*: xxx). Finally, in showing that the effects of passion variability hold even after controlling for positive- and negative-affect mean and variability, the research presented here provides further evidence for the important and unique role that passion plays in predicting work-related outcomes, establishing a place for the study of passion within the organizational behavior literature (Curran, Hill, Appleton, Vallerand, & Standage, 2015; Perrewé, Hochwarter, Ferris, McAllister, & Harris, 2014; Pollack et al., *in press*).

The Dynamic Nature of Passion

Past research exploring passion within the organizational literature has led to many insights but has been limited by its conceptualization of passion as a static, trait-like characteristic; this conceptualization is evident in the fact that passion is commonly measured at a single point in time. Here, I propose that passion may also possess a dynamic component—i.e., that it varies over time—for at least two reasons. First, because passion denotes *a strong feeling*, it likely is subject to similar dynamics as other emotions (Eid & Diener, 1999; Kernis, Grannemann, & Mathis, 1991; Kernis, Cornell, Sun, Berry, & Harlow, 1993). Emotions—including passion—tend to vary over time because of onset-bound emotion processes (i.e., processes that influence when an emotion begins, such as how an event is appraised and how quickly individuals habituate to them; Grandjean & Scherer, 2008; Tong et al., 2009) as well as offset-bound emotion processes (i.e., processes that influence when an emotion ends, such as emotion regulation and how long individuals pay attention; Koole, 2009; Wadlinger & Isaacowitz, 2011). Second, because passion comprises a motivational component—it *sparks intentions and behaviors which express that value/preference*—passion underlies theories of self-regulation and goal pursuit (Bandura, 1991; Carver & Scheier, 1990; Carver & Scheier, 1982). That is, employees' experience of passion may be guided in part by their responses to the pursuit and attainment of goals. As a result, passion may possess a dynamic component in addition to the static, trait-like characteristic advanced by prior research.

By viewing passion through this dynamic lens, I highlight that it falls within a rich tradition of research that emphasizes the importance of incorporating not only average tendencies but also variability into theory and research to get a more complete picture of individuals' affect, behavior, and cognition (Eid & Diener, 1999; Kernis, Grannemann, & Mathis, 1991; Kernis, Cornell, Sun, Berry, & Harlow, 1993). For example, in past studies,

intra-person variability has been examined in a variety of domains, including self-esteem (Crocker & Wolfe, 2001; Kernis et al., 1991; Kernis et al., 1993; Updegraff, Emanuel, Suh, & Gallagher, 2010; Wang, Hamaker, & Bergeman, 2012), personality (Fleeson, 2001, 2004; Moskowitz & Zuroff, 2004), emotional labor (Beal, Trougakos, Weiss, & Green, 2006; Bono & Vey, 2005; Judge, Woolf, & Hurst, 2009; Scott & Barnes, 2011; Scott, Barnes, & Wagner, 2012b; Totterdell & Holman, 2003), status (Yu, Pettit, Howell, & Kilduff, 2018), interpersonal trust (Fleeson & Leicht, 2006), justice (Matta, Scott, Colquitt, Koopman, & Passantino, 2017), and self-efficacy (Peng, Schaubroeck, & Xie, 2015). Indeed, past studies have shown that over half of the variability in behavior occurs within, rather than between, individuals (Ceja & Navarro, 2011; Fournier, Moskowitz, & Zuroff, 2008; Miner, Glomb, & Hulin, 2005).

Although individuals may differ in the averages that they experience—for example, what has been termed an "affective home base" for emotions (Kuppens, Oravecz, & Tuerlinckx, 2010)—intra-individual variation around this average may not be random, but instead may differ systematically from one person to the next. That is, meaningful individual differences may also exist in the variability of a given construct over time (Murray, 1938), which can exhibit systematic patterns and regularities that differ between individuals (Kuppens, Stouten, & Mesquita, 2009; Kuppens, 2015). Prior research has found that such variability can be reliably measured, is stable within an individual, and is independent of or only weakly correlated with the mean affect levels experienced (Chow, Ram, Fujita, Boker, & Clore, 2005; Eid & Diener, 1999; Trull et al., 2008). Across measures of affect variability (Kuppens, Van Mechelen, Nezlek, Dossche, & Timmermans, 2007), self-esteem variability (Hayes, Harris, & Carver, 2004; Kernis, Cornell, Sun, Berry, & Harlow, 1993), and personality variability (Moskowitz & Zuroff, 2004), this kind of variation—commonly measured by the standard deviation around the mean—explains variance in outcomes over

and above averages. Importantly, variability in one domain has been found to be independent of variability in another domain (Linley, Dovey, Beaumont, Wilkinson, & Hurling, 2016), such that individuals do not display the same variability across affect, behaviors, and cognitions *per se*, but instead vary differently in different domains.

Drawing on these convergent streams of research, I suggest that individuals systematically differ from one another in how variable their experience of passion for their work is over time: some individuals may be more consistently passionate, while others may more inconsistently experience passion for their work. To capture this variation, I introduce the concept of *passion variability*, which reflects between-person differences in the variability of passion. Drawing on similar conceptions in affect (Kuppens et al., 2010), self-esteem (Hayes, Harris, & Carver, 2004), and justice (Matta et al., 2017), I define passion variability as *the extent of fluctuations in employees' passion for work over time*. Accordingly, two individuals can have similar average levels of passion but can differ in their passion variability, as illustrated in Figure 1. This provides the starting point for my investigation of passion variability.

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insert Figure 1 about here

An additional way to conceptualize the variability around average levels of passion is to further decompose passion variability into *positive passion variance* (i.e., the variance of all days when individuals reported passion levels higher than their mean) and *negative passion variance* (i.e., the variance of all days when individuals reported passion levels lower than their mean). In Figure 2, I depict two simulated participants who have a similar degree of variability but differ in the valence of their variability, such that one participant exhibits more positive passion variance (i.e., increased variance above the mean) and the other

participant exhibits more negative passion variance (i.e., increased variance below the mean). In the subsequent analyses, I first explore passion variability (i.e., the standard deviation of daily passion) and then further investigate positive and negative passion variance.

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insert Figure 2 about here

Negative Consequences of Passion Variability for Evaluative Dimensions

I first explore the potential downsides of passion variability, which I argue are particularly pronounced for evaluative dimensions, as described below. To do so, I draw on uncertainty management theory, which is based on the idea that individuals are driven to "feel certain about their world and their place within it" (van den Bos & Lind, 2002, p. 5). Within this framework, greater uncertainty is thought to give individuals the sense that they have less control over their life, which is a stressful and aversive experience (Fiske & Taylor, 1991; Hogg, 2002; Lind & van den Bos, 2002; Lopes, 1987; Sorrentino & Roney, 1986). Central to the present research, uncertainty arises when individuals experience inconsistency in their behaviors or cognitions (Lind & van den Bos, 2002; van den Bos & Lind, 2002)—particularly their self-concept (Mazar, Amir, & Ariely, 2008)—which can lead to increased feelings of distress (LePine, LePine, & Jackson, 2004).

In accordance with this perspective, several studies across domains find that higher variability leads to detrimental outcomes. For example, in the domain of affect, studies have shown that over and above mean affect levels, higher levels of affect variability lead to increased distress (Kashdan & Rottenberg, 2010; Waugh, Thompson, & Gotlib, 2011) and reduced well-being (Gruber, Kogan, Quoidbach, & Mauss, 2013). Comparable findings have been obtained for variability in other domains. For example, variation in self-esteem over time has been associated with increased vulnerability to depression (Roberts & Monroe,

1994). Similarly, both status and justice variance have been found to increase stress and reduce well-being (Matta et al., 2017; Yu et al., 2018). Thus, from an uncertainty management perspective, greater variability may be associated with worse work-related outcomes because individuals experience greater distress.

Over and above positive- and negative-affect variability, greater *passion* variability in particular may induce increased feelings of distress (LePine et al., 2004). Consider that passion differs from related constructs, such as intrinsic motivation, in that it is closely internalized into an individual's identity (Birkeland & Buch, 2015; Liu, Chen, & Yao, 2011; Pollack et al., 2018; Vallerand, 2015). That is, employees commonly entrench their passion into their self-definition, i.e., their sense of who they are (Ashforth & Kreiner, 1999; Dutton, Roberts, & Bednar, 2010; Perrewé et al., 2014; Vallerand, Houlfort, et al., 2003). Because employees strive toward a coherent sense of self (Mazar et al., 2008), they may be particularly likely to experience greater distress when their levels of passion vary more, as this provides them with greater uncertainty about their sense of self. This enervating consequence for employees' self-concept is unique to passion, and not positive or negative affect, as the latter do not have similar identity relevance.

These negative consequences for employees' sense of self prompted by higher passion variability may manifest in lower job satisfaction (Desai, Sondak, & Diekmann, 2011; Diekmann, Barsness, & Sondak, 2004) and greater emotional exhaustion (Bernhard-Oettel, Sverke, & De Witte, 2005; De Cuyper & De Witte, 2006; Schumacher, Schreurs, Van Emmerik, & De Witte, 2015). That is, given the tight coupling between passion for work and the way that people think about themselves (Vallerand et al., 2003), passion variability can prompt particularly high levels of personal uncertainty, which may promote emotional exhaustion and dissatisfaction with their work (Greco & Roger, 2003; Zhang, 2008).

I further specify that the relationship between higher passion variability and both increased emotional exhaustion and decreased job satisfaction may be especially pronounced for negative, but not positive, passion variance. That is, more frequent and intense *negative* outliers from the mean may particularly imbue individuals with a greater sense of uncertainty about their self-concept (LePine et al., 2004), in contrast to more frequent and intense positive outliers. Consequently, I propose that the negative passion variance component of passion variability, but not the positive component, will be associated with increased emotional exhaustion and decreased job satisfaction.

Hypothesis 1a. Higher passion variability is associated with increased emotional exhaustion and decreased job satisfaction.

Hypothesis 1b. This effect is driven by negative, but not positive, passion variance.

Greater passion variability, however, may not necessarily lead to increased distress. Prior research suggests that strong affiliation with a broader entity can buffer against the aversive feeling of uncertainty (Hogg, 2000; Hogg & Terry, 2000). That is, individuals are able to reduce uncertainty about their self-concept through stronger self-categorization with a group. In an organizational context, this may be reflected by higher levels of organizational identification, which has been found to be related to increased sense-giving, thus alleviating self-concept uncertainty (Ashforth, Harrison, & Corley, 2008; Sluss & Ashforth, 2008). This buffering effect against uncertainty is specific to organizational identification and does not occur for affective commitment (Meyer, Becker, & Van Dick, 2006; Van Knippenberg & Sleebos, 2006). Aligned with these results, one study finds that organizational identification moderates the negative relationship between affective variability and job satisfaction (Xu, Martinez, Van Hoof, Eljuri, & Arciniegas, 2016).

Along these lines, I propose that employees who experience greater levels of organizational identification will be less likely to incur negative effects of increased passion variability in terms of increased emotional exhaustion and decreased job satisfaction.

> ***Hypothesis 2.*** The relationships between passion variability and emotional exhaustion and between passion variability and job satisfaction are moderated by organizational identification, such that passion variability has stronger negative effects in terms of increased emotional exhaustion and decreased job satisfaction when organizational identification is weaker.

Positive Consequences of Passion Variability for Motivation

Although Hypotheses 1 and 2 make clear that passion variability has potential downsides, I also hypothesize that it can produce potential upsides as well, particularly in the domain of motivation. Indeed, in other domains, variability has been found to predict a number of positive outcomes. For example, greater variability in physiological stress levels is associated with better psychological adjustment, i.e., participants with more variable levels were better able to deal with varying demands in their environment (Mikolajczak et al., 2010). Similarly, greater emotional variability is associated with better emotion regulation abilities, i.e., that individuals with more variability were better adept at responding to challenging environments (Gross & John 2003). Consistent across past studies is the idea that greater variability is associated with beneficial outcomes because it reflects greater self-regulatory ability, whereby individuals are more responsive to situational demands (Kashdan & Rottenberg, 2010).

Here, I propose an additional benefit of variability that may particularly arise due to variability in employees' levels of passion. Prior research highlights that individuals commonly aim to attain overall integrity of the self, which includes feeling competent, having a core identity, and seeing oneself as in control (Mazar et al., 2008; Steele, 1988;

Steele, Spencer, & Lynch, 1993). While individuals can draw on many different sources to form their sense of self-worth (Crocker & Wolfe, 2001), one primary source is their work (Dutton, Dukerich, & Harquail, 1994). Pertinent to the current investigation, because an employee's passion is closely internalized into his or her identity, that employee's passion for work may be closely linked to his or her self-definition, or sense of who he or she is (Birkeland & Buch, 2015; Liu et al., 2011; Perrewé et al., 2014; Pollack et al., *in press*; Vallerand, 2015). As a result, it is possible that employees use their levels of passion as a reference to affirm their self-concept (Heatherton & Polivy, 1991; McQueen & Klein, 2006; Sivanathan & Pettit, 2010).

Self-affirmation commonly reflects engagement in behaviors that both bring to mind and assert what individuals care about (Sherman, 2013). For example, in self-affirmation interventions, participants are often asked to write about core personal values (Cohen & Sherman, 2014). Beyond these type of interventions, self-affirmation can also occur through other types of behaviors, such as Facebook use (Toma & Hancock, 2013) or the purchase of particularly aesthetic products (Townsend & Sood, 2012). Within this framework, I suggest that days with particularly high levels of passion may reflect an affirming experience that supports the integrity of employees' self-concept. That is, one additional way to affirm the self occurs when employees experience particularly high levels of passion, which serves as positive feedback that the effort and energy that employees are investing in their pursuit of passion successfully promote a value that they deeply care about (Gielnik et al., 2015; Jachimowicz, Wihler, Bailey, et al., 2018).

On days when employees feel highly passionate for their work, they may therefore be more likely to believe that they are enacting a value that they care about, and this may have long-lasting effects on their self-integrity, akin to self-affirmation interventions (Cohen & Sherman, 2014). From a methodological and statistical perspective, the experience of

particularly high-passion days is captured through increased passion variability, and particularly higher positive passion variance. In other words, when positive passion variance is higher, employees are more likely to experience particularly high-passion days, and I propose that these reflect a self-affirming experience.

Accordingly, increased passion variability may be associated with beneficial motivational outcomes. Prior research highlights that subsequent to self-affirmation, individuals are more likely to be determined and show resolve, particularly when faced with threats and challenges (Cohen & Sherman, 2014; Sherman & Cohen, 2006). Thus, following self-affirmation, employees are more likely to focus on the big picture (Wakslak & Trope, 2009) and are thus less discouraged by setbacks and more determined in their goal pursuit (Davis, Kelley, Kim, Tang, & Hicks, 2016; Fujita & Carnevale, 2012). Higher passion variability—and in particular, increased positive passion variance—may therefore be associated with increased determination:

Hypothesis 3a. Higher passion variability is associated with greater determination.

Hypothesis 3b. This effect is driven by positive, and not negative, passion variance.

Past studies have linked higher levels of determination to better job performance (Luthans, Avolio, Avey, & Norman, 2007; Meneghel, Salanova, & Martínez, 2016; Youssef & Luthans, 2007). In particular, these studies find that determination promotes individuals' proactive and reactive responses, thus boosting their work performance. Building on this link, I thus predict that higher passion variability will be associated with better job performance and that this relationship will be mediated by greater determination.

Hypothesis 4a. Higher passion variability is associated with better job performance through increased determination.

Hypothesis 4b. This effect is driven by positive, and not negative, passion variance.

Figure 3 summarizes my predictions, which I explore in an experience-sampling study of 526 full-time employees who responded to 30 daily prompts (13,860 responses in total) and three surveys, conducted a week prior to, two weeks following, and two months following the daily survey portion, as further detailed below.

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insert Figure 3 about here

Study

Screener Survey: 1st week of July 2018

I recruited participants through Amazon's Mechanical Turk (Goodman, Cryder, & Cheema, 2013; Paolacci & Chandler, 2014) to complete an initial screener survey that assessed participants on several criteria, described below, which were set to ensure that the participant sample would be well suited to participate in daily sampling. The screener survey was kept open until 800 participants, who subsequently formed part of the study, passed it. A total of 2,971 participants were required to reach this target sample size.

Participants only passed the screener survey and became part of the final participant pool if the following criteria were met: (1) they worked full-time, (2) they were not self-employed, (3) they had only one job, (4) they were not retired, unemployed, or a student, (5) they commonly worked at least 30 hours per week and no more than 50 hours per week, (6) they usually worked Monday to Friday (i.e., 5 days per week) and not on weekends, (7) they usually started work between 6am and 10am every morning, and (8) they commonly ended their workday between 3pm and 7pm.

Pre-Daily Event Sampling Survey: 2nd week of July 2018

I next invited the 800 participants identified in the screener survey to complete the first longer survey, to which a total of 704 participants responded (response rate 88%; *M*age = 35.94, *SD*age = 9.97, 51.11% female). I included the following measure in this survey:

Organizational Identification. [*Moderator of Passion Variability*]. I measured the extent to which employees identified with their organization with a three-item scale (adapted from Allen & Meyer, 1990): "When I talk about the organization I work at, I usually say 'we' rather than 'they'," "My organization's successes are my successes," and "When someone praises the organization I work at, it feels like a personal compliment" (α = .87).

Daily Event Sampling: August-September 2018

I subsequently invited the 704 participants who responded to the first longer survey to the event sampling portion of the study. For 30 days, on Monday through Friday, participants received an email toward the end of their workday (between 6:00pm and 6:30pm). A total of 624 participants responded to at least one of the daily surveys. Following prior guidelines that specify the minimum number of responses needed to accurately estimate variability (Houben, Van Den Noortgate, et al., 2015), I removed the 98 participants who responded to fewer than 10 surveys, for a final sample size of 526 participants (response rate in relation to initial screener survey: 65.8%). Among those 526 participants, each responded to an average of 26.35 daily surveys (*SD* = 4.90), for a total of 13,860 responses.

Daily Passion. I measured daily passion with the following item: "How passionate for your work were you today?" Response options ranged from 1 ("not at all passionate") to 7 ("extremely passionate").

Daily Positive and Negative Affect. For discriminant validity—i.e., to show that the effects were specific to passion variability and did not extend to positive- or negative-affect variability more broadly—I also measured daily positive and negative affect. Participants were asked to respond to the question "To what extent did you feel this way today?" on a

scale ranging from 1 (not at all) to 7 (very much so) for the following items (five-item PANAS short form, Mackinnon et al., 1999): “afraid,” “upset,” “nervous,” “scared,” and “distressed” α = .88. Positive affect was measured by assessing the following five items (five-item PANAS short form; Mackinnon et al., 1999): “inspired,” “alert,” “excited,” “enthusiastic,” and “determined” (α = .86).

Survey 2: End of September 2018 (Two Weeks after Event Sampling)

After the daily sampling, I invited the 526 participants who responded to at least 10 of the daily prompts to complete the second longer survey, and 489 participants responded (response rate in relation to initial screener survey: 61.1%).

Determination. [*Outcome of Passion Variability*]. I measured determination with five items adapted from prior research (Schaufeli et al., 2008), which included “It is important to me to work hard even when I do not enjoy what I am doing” and “I feel that there is something inside me that drives me to work hard” (α = .73).

Job Performance. [*Outcome of Passion Variability*]. I assessed employees’ self-rated job performance with a four-item scale (Williams & Anderson, 1991), with items such as “I adequately complete assigned duties” and “I perform the tasks that are expected of me” (α = .89).

Survey 3: November 2018 (Two Months after Event Sampling)

Two months after the daily sampling, I invited the 489 participants who responded to the second survey to complete the third longer survey, and 410 participants responded (response rate in relation to initial screener survey: 51.3%).

Emotional Exhaustion. [*Outcome of Passion Variability*]. I measured emotional exhaustion with an eight-item scale (Maslach & Jackson, 1981), with items such as “I feel emotionally drained from my work” and “I feel frustrated by my job” (α = .94).

Job Satisfaction. [*Outcome of Passion Variability*]. I assessed job satisfaction with a three-item scale (Morris & Venkatesh, 2010), with items including "Overall, I am satisfied with my job" ($\alpha = .89$).

Results

Table S1 contains the bivariate correlations of all study variables.

Descriptive Statistics for Daily Passion Responses

Across all participants, the average of daily levels of passion was 4.55, with an *SD* of 1.58 (see Figure 4).

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insert Figure 4 about here

An alternative way to describe the distribution of daily passion levels is to explore how often each individual participant indicated each level of passion. Throughout the 30-day daily sampling time period, 28.59% of participants responded to the daily passion question with a "1" at least once, 50.16% of participants indicated at least one "2," 61.60% of participants indicated at least one "3," 64.05% of participants indicated at least one "4," 85.46% of participants indicated at least one "5," 69.28% of participants indicated at least one "6," and 27.61% of participants indicated at least one "7." This demonstrates that the majority of participants experienced a wide range of different passion levels throughout the 30-day daily sampling period.

Confirmatory Factor Analysis

I next explored whether the measures of positive and negative affect were distinct from the measure of passion. To do so, I compared confirmatory factor analyses of the three-factor structure (positive-affect items loading onto one factor, negative-affect items loading onto one factor, and passion loading onto one factor) and the two-factor structure (positive-

affect items and passion loading onto one factor and negative-affect items loading onto one factor). The three-factor solution provided a significantly better fit than the two-factor solution, $\Delta\chi^2$ (1) = 104.56, $p < .001$. Thus, passion and positive affect are distinct and are subsequently treated as such.

Decomposing Daily Passion into Average and Variability

I next calculated average passion for each participant by summing across all daily passion responses and determined passion variability using the within-person *SD* (for a similar methodology, see: Houben, Van Den Noortgate, & Kuppens, 2015). Passion mean and variability were moderately correlated in an inverse U-shape, such that the quadratic effect of passion mean on passion variability was statistically significant (b = -.302, SE = .030, $p < .001$; see Figure 5). That is, at very low and very high levels of mean passion, passion variability was lower, whereas at middle levels of mean passion, passion variability was higher. This was likely an artifact of the scale construction, i.e., participants who were closer to the floor/ceiling ("1"/"7") experienced lower variability because the scale did not provide them with the opportunity to more granularly express how passionate they were (Flake & Fried, 2019). While statistically significant, average levels of passion only accounted for 9.10% of the variance in passion variability. Consequently, two individuals could have similar levels of passion mean but could differ widely in their passion variability (see also Figure 6 for comparisons to positive and negative affect).

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insert Figure 5 and 6 about here

I also further decomposed passion variability into *positive passion variance* (i.e., the variance of all days when individuals reported passion levels higher than the mean) and *negative passion variance* (i.e., the variance of all days when individuals reported passion

levels lower than the mean). Passion variability was closely correlated with both positive passion variance ($r = .643$, $p < .001$) and negative passion variance ($r = .673$, $p < .001$), whereas positive passion variance and negative passion variance were only weakly correlated with each other ($r = .081$, $p = .061$). In subsequent analyses, I first explored the effects on passion variability (i.e., the *SD* of daily passion) and then further tested the effects of positive and negative passion variance.

To highlight the unique effects of passion variability, I also calculated positive- and negative-affect mean and variability and subsequently reported the analysis results with and without these control variables.

Negative Consequences of Passion Variability in Terms of Emotional Exhaustion and Job Satisfaction

I first tested the negative consequences of passion variability for evaluative outcomes. As predicted by Hypothesis 1a, I found that passion variability was positively associated with emotional exhaustion above and beyond mean passion ($b = .228$, $SE = .071$, $p = .001$). This effect remained marginally significant when controlling for positive- and negative-affect mean and variability ($b = .153$, $SE = .089$, $p = .086$). I further explored this relationship by decomposing passion variability into positive and negative passion variance and simultaneously regressing both on emotional exhaustion. In support of Hypothesis 1b, I found that negative passion variance was related to greater emotional exhaustion above and beyond mean passion ($b = .196$, $SE = .068$, $p = .004$), an effect that remained statistically significant when controlling for positive- and negative-affect mean and variability ($b = .148$, $SE = .070$, $p = .035$). In contrast, positive passion variance was not significantly related to emotional exhaustion ($b = .078$, $SE = .078$, $p = .321$). That is, higher passion variability—over and above average levels of passion and positive- and negative-affect mean and variability—was associated with greater emotional exhaustion, and this effect appeared to be

driven by negative, and not positive, passion variance. The relationship between passion variability and job satisfaction, however, was not statistically significant (b = -.066, SE = .065, p = .306), in contrast to Hypothesis 1a.

I next explored Hypothesis 2, i.e., I examined the interaction between passion variability and organizational identification on emotional exhaustion and job satisfaction. In contrast to Hypothesis 2, the interaction between passion variability and organizational identification on emotional exhaustion was not statistically significant (b = -.063, SE = .067, p = .344). However, I found that the interaction between passion variability and organizational identification on job satisfaction—beyond average levels of passion—was marginally significant (b = .097, SE = .059, p = .099), in line with Hypothesis 2. Simple slopes analyses revealed that the relationship between passion variability and job satisfaction was statistically significant at -1 *SD* levels of organizational identification (b = -.179, SE = .087, p = .040), but was not statistically significant at +1 *SD* levels of organizational identification (b = .015, SE = .084, p = .859). I further explored this interaction effect by decomposing passion variability into positive and negative passion variance, and I found that the interaction between negative passion variance and organizational identification on job satisfaction was marginally significant (b = .122, SE = .063, p = .053; see Figure 7), whereas the interaction between positive passion variance and organizational identification was not (b = .015, SE = .048, p = .762). The interaction effect of negative passion variance and organizational identification on job satisfaction and the associated simple slopes remained similar when controlling for positive- and negative-affect mean and variability (b = .102, SE = .062, p = .099). Thus, passion variability was related to decreased job satisfaction, but only when employees had lower organizational identification; this effect appeared to be driven by negative, but not positive, passion variance.

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insert Figure 7 about here

Positive Consequences of Passion Variability on Determination and Job Performance

I next explored the positive consequences of passion variability for motivation. As specified in Hypothesis 3a, I found that passion variability, beyond average passion, was positively associated with determination (b = .194, SE = .054, p < .001). This relationship remained statistically significant when controlling for positive- and negative-affect mean and variability (b = .158, SE = .071, p = .026). I further explored the relationship between passion variability and determination by decomposing passion variability into positive and negative passion variance and simultaneously regressing both on determination. I found that, beyond mean passion, positive passion variance was related to greater determination (b = .168, SE = .061, p = .006), an effect that remained marginally significant when controlling for positive- and negative-affect mean and variability (b = .113, SE = .066, p = .086) and that supported Hypothesis 3b. In contrast, negative passion variance was not significantly related to determination (b = .058, SE = .055, p = .296). In sum, higher passion variability—over and above average levels of passion and positive- and negative-affect mean and variability—was associated with greater determination, and this effect appeared to be driven by positive, and not negative, passion variance.

I next tested whether passion variability was associated with job performance, as specified in Hypothesis 4a. I found that passion variability, beyond average passion, was related to better job performance (b = .082, SE = .033, p = .014). This effect also held when controlling for positive- and negative-affect mean and variability (b = .096, SE = .042, p = .024). Further decomposing this relationship, I next regressed both positive and negative passion variance on job performance. In support of Hypothesis 4b, I found that, beyond mean levels of passion, positive (b = .103, SE = .037, p = .006), but not negative (b = .017, SE

= .031, p = .587), passion variance was related to higher performance. The effect of positive passion variance on job performance also held when controlling for positive- and negative-affect mean and variability (b = .094, SE = .039, p = .017). In sum, employees with higher passion variability reported higher levels of job performance, over and above mean levels of passion, and this effect was driven by positive, and not negative, passion variance.

I subsequently tested the indirect path from passion variability to job performance through determination, in line with Hypothesis 4a. Because employees' determination and job performance (r = .181, p < .001) were significantly positively correlated, I constructed the 95% confidence intervals around the indirect effect from passion variability to job performance through employees' determination, above and beyond mean levels of passion, and found that it did not include zero ([.005; .030]). In follow-up analyses to provide support for Hypothesis 4b, I found that the link from positive passion variance to job performance through employees' determination effort excluded zero ([.003; .030]), and not the link from negative passion variance ([-.002; .020]). That is, this analysis revealed that passion variability was linked to job performance through determination, and this effect was particularly pronounced for positive, and not negative, passion variance.

General Discussion

The current research takes a dynamic view of passion and highlights the down- and upsides of passion variability. In an experience sampling study of 526 full-time employees who responded to 30 daily prompts (13,860 responses in total) and three surveys conducted a week prior to and two weeks and two months following the daily survey portion, I found that higher passion variability is associated with both detrimental and beneficial outcomes. On the one hand, higher passion variability is associated with increased emotional exhaustion and—for employees with lower organizational identification—reduced job satisfaction. These effects were driven by negative passion variance, i.e., the variance of passion levels below

the mean, which may trigger uncertainty about individuals' self-concept (Lind & van den Bos, 2002). On the other hand, higher passion variability is associated with increased determination and job performance. These effects were driven by positive passion variance, i.e., the variance of passion levels above the mean, which may boost self-affirmation (Cohen & Sherman, 2014; Sherman & Cohen, 2006; Steele, 1988; Steele et al., 1993). Taken together, the research presented here thus documents the necessity of a dynamic perspective on passion and—because the results hold when controlling for positive- and negative-affect mean and variability—provides further evidence for the important and unique role that passion plays in predicting work-related outcomes (Curran, Hill, Appleton, Vallerand, & Standage, 2015; Perrewé, Hochwarter, Ferris, McAllister, & Harris, 2014; Pollack et al., *in press*).

Theoretical and Practical Implications

The current research makes several theoretical contributions. First, the theory and results presented here provide a contrasting perspective to prior research, which predominantly views passion as a trait-like, stable characteristic (Amiot et al., 2006; Balon et al., 2013; Philippe et al., 2010). Responding to a call to explore a dynamic perspective on passion (Pollack et al., *in press*), the research presented here highlights that because passion contains both emotional and motivational components (Jachimowicz, Wihler, Bailey, et al., 2018; Perrewé et al., 2014; Vallerand, Blanchard, et al., 2003), it is subject to similar dynamics as have been identified in related fields, including emotion dynamics, self-regulation, and goal pursuit (Bandura, 1991; Carver & Scheier, 1990; Carver & Scheier, 1982; Houben, Noortgate, et al., 2015). Drawing on this literature provides both a theoretical framework and a methodological approach to study passion through a dynamic lens.

More specifically, the results of the current study demonstrate that passion varies systematically within participants and that this variation has important downstream

consequences for work-related outcomes. Theoretically, this dynamic view connects research on passion with literature on uncertainty management theory (Lind & van den Bos, 2002) and self-affirmation theory (Cohen & Sherman, 2014; Sherman & Cohen, 2006; Steele, 1988; Steele et al., 1993), which provides a foundation to explore the positive and negative consequences of higher passion variability. Methodologically, this dynamic view of passion highlights that previous studies that take a cross-sectional approach to studying passion, measuring it at one time point through a self-report questionnaire (Amiot et al., 2006; Mageau et al., 2009; Vallerand et al., 2007; Vallerand, Blanchard, et al., 2003), may neglect important variance, conflating individuals who experience similar average levels of passion but differ in their degree or type of passion variability. This dynamic approach thus situates passion within a broader research tradition exploring variability, such as in affect (Eid & Diener, 1999; Houben, Van Den Noortgate, et al., 2015), self-esteem (Crocker & Wolfe, 2001; Kernis et al., 1991; Kernis et al., 1993; Updegraff, Emanuel, Suh, & Gallagher, 2010; Wang, Hamaker, & Bergeman, 2012), and personality (Fleeson, 2001, 2004; Moskowitz & Zuroff, 2004).

Empirically, the results presented in the current research highlight the value of a dynamic view of passion by connecting it to both negative and positive work-related outcomes. Because of passion's close connection to an employee's identity (Curran et al., 2015; Perrewé et al., 2014), higher variation in passion over time may prompt employees to feel uncertain about their self-concept (Lind & van den Bos, 2002). As a result, employees with higher passion variability in the present study reported higher levels of emotional exhaustion, which can have debilitating effects for employees in the long run, including an increased likelihood of burnout and turnover (Maslach, Schaufeli, & Leiter, 2001). While increased passion variability was not significantly related to reduced levels of job satisfaction, subsequent moderation analyses revealed that the relationship between passion

variability and job satisfaction was statistically significant for those employees who also reported lower levels of organizational identification and thus do not have a buffer against the experienced feelings of uncertainty (Hogg & Terry, 2000). These results were particularly pronounced for negative passion variance, and not positive passion variance, highlighting that it is the negative outliers of daily passion levels that trigger uncertainty in employee's self-concept and subsequently trigger detrimental outcomes. This contributes to a better understanding of the dark side of passion, addressing a prior call to do so particularly outside of the dualistic model of passion that explores the relationship between employees' pursuit of passion and other domains in their life (Pollack, Ho, O'Boyle, & Kirkman, *in press*). In particular, because of passion's internalization into the self-concept, negative variation in passion is particularly distressing to employees.

In contrast, and drawing on research in self-affirmation theory, the current study also reveals the motivational benefits of higher passion variability (Cohen & Sherman, 2014; Sherman & Cohen, 2006; Steele, 1988; Steele et al., 1993). Higher passion variability—specifically, higher positive passion variance—may reflect a self-affirming experience for employees, supporting the integrity of their self-concept. That is, days when employees experience particularly high levels of passion may serve as positive feedback that the effort and energy that they are investing in their pursuit of passion successfully promote a value that they deeply care about (Gielnik et al., 2015; Jachimowicz, Wihler, Bailey, et al., 2018). This is especially the case because an employee's passion is closely internalized into his or her identity (Birkeland & Buch, 2015; Liu et al., 2011; Perrewé et al., 2014; Pollack et al., *in press*; Vallerand, 2015), such that employees may rely on their levels of passion as a guide for their self-concept integrity.

These self-affirming effects of higher passion variability may have long-lasting effects on self-integrity, akin to other self-affirmation interventions (Cohen & Sherman,

2014), shifting employees' focus toward the big picture (Wakslak & Trope, 2009) and making them more determined in their goal pursuit (Davis et al., 2016; Fujita & Carnevale, 2012). Indeed, in the current study, employees with higher passion variability—particularly increased positive passion variance—reported increased levels of determination at work. Through this mechanism, higher positive passion variance is also linked to better job performance (Luthans et al., 2007; Meneghel et al., 2016; Philippe, Lecours, & Beaulieu-Pelletier, 2009; Speer & Mauricio, 2017; Youssef & Luthans, 2007).

Thus, passion variability is a double-edged sword, being associated with both positive and negative outcomes, with the specific outcome depending on the valence of passion variability's variance. These findings therefore highlight the necessity and usefulness of passion variability, above and beyond average levels of passion, which have been the predominant focus of prior research (Curran et al., 2015; Perrewé et al., 2014; Pollack et al., *in press*).

The research presented here also provides further evidence for the important and unique role that passion plays in the workplace more broadly. Prior studies that have distinguished passion from several related constructs, such as personal interest and intrinsic motivation (Birkeland & Buch, 2015; Curran et al., 2015; Ho & Astakhova, 2018; Perrewé et al., 2014; Pollack et al., *in press*; Vallerand, 2015), have predominantly focused on the dualistic model of passion, i.e., the relationship between an employee's pursuit of passion and other life domains (i.e., harmonious or obsessive passion; for one notable exception, see Jachimowicz, Wihler, et al., 2018). The current research—by showing that the effects of passion variability hold above and beyond positive- and negative-affect mean and variability—further establishes the unique role that passion plays in predicting work-related outcomes (Curran, Hill, Appleton, Vallerand, & Standage, 2015; Perrewé, Hochwarter, Ferris, McAllister, & Harris, 2014; Pollack et al., *in press*).

Finally, the current research also makes contributions to literature that explores variability in other domains. Prior research that has explored variability—such as in affect (Eid & Diener, 1999; Houben, Van Den Noortgate, et al., 2015) or self-efficacy (Crocker & Wolfe, 2001; Kernis et al., 1991; Kernis et al., 1993; Updegraff, Emanuel, Suh, & Gallagher, 2010; Wang, Hamaker, & Bergeman, 2012)—has not differentiated between different types of variability and instead treats positive and negative variance as one composite variable. In doing so, however, these prior studies may have overlooked the important differences between positive and negative variance; as the current research reveals, the detrimental consequences of higher variability are specifically associated with negative passion variance, and the beneficial outcomes with positive passion variance. Thus, different kinds of variability may have different consequences in other domains as well, a possibility that future research could explore.

Limitations and Future Directions

The current research has several limitations, which provide opportunities for future research. The focus of the present inquiry was on passion variability operationalized through the daily level, but passion may also vary across both shorter (e.g., hours) and longer (e.g., weeks, months, years) time periods. Prior research highlights that short-term changes may occur because of sudden changes in the environment, while long-term changes can occur through learning, development, or aging processes (Dalal, Bhave, & Fiset, 2014). Future research could explore how passion varies across different timescales and which factors guide these changes. Such studies could also explore broader trajectories of passion and investigate the factors that determine whether and why employees fall out of passion and the attributes that predict how employees can regain their passion for work (Jachimowicz, To, Menges, & Akinola, 2018).

Subsequent studies could also explore the mechanisms that underlie the associations found in the research presented here. One shortcoming of the data collected is their correlational nature, which does not allow for causal claims (Fiedler, Schott, & Meiser, 2011). While the present study was conducted during subsequent time periods, thus minimizing concerns about common method variance (Lindell & Whitney, 2001), this type of study design does not shed light on underlying processes or the direction of the relationship between passion variability and work-related outcomes. For example, while the theory outlined in the previous sections highlights how higher passion variability, and particularly negative passion variance, could decrease job satisfaction, the reverse is also possible (i.e., that lower job satisfaction causes more low-passion days, thus boosting negative passion variance). Future research could therefore adopt an instrumental variable approach or experimental design to provide causal evidence for the links between passion variability and work-related outcomes and uncover the mechanisms driving these results (Wooldridge, 2012).

Subsequent research could also explore how the associations between passion variability and work-related outcomes found in the present research may differ across different job types and industries. Different job types and industries may both promote different kinds of variability—for example, in the degree of job control that they provide—as well as having varying outcomes related to passion variability, e.g., the extent to which determination is important for performance (Ng, Sorensen, & Yim, 2009). While the current research included employees from a large number of job types and industries, it is not adequately powered to explore how these aspects may influence passion variability.

Different cultures may also have a different understanding of passion. All participants in the present study were located in the United States, so the current design is not able to provide insight into how varying understandings of passion and its importance in the

workplace may relate to passion variability (Jachimowicz & McNerney, 2015), which future research could explore. Such an extension of the present study could also help extend the present exploratory findings toward a confirmatory research framework (Nelson, Simmons, & Simonsohn, 2018).

A further limitation is the reliance on self-report measures, which has particular shortcomings when examining the relationship between passion variability and its downstream consequences. For example, prior research has shown that employees and their supervisors may have varying views on the employees' job performance (Heidemeier & Moser, 2009). Future research could therefore explore to what extent passion variability is also related to other-rated job performance and link these findings to objective data at other levels (e.g., sick days and turnover as proxies for emotional exhaustion and job satisfaction; Dwyer & Ganster, 1991; Griffeth, Hom, & Gaertner, 2000).

Conclusion

Prior research portrays passion for work as a static, trait-like characteristic. However, because of its affective and motivational components, passion is inherently dynamic. Viewing passion through this dynamic lens connects it with a rich literature exploring variability as well as a conceptual framework that provides novel insights into the consequences of passion variability. Passion varies over time, and the current research offers both a theoretical framework and a new methodological approach to study passion through a dynamic lens.

CHAPTER 3:

Why grit requires perseverance *and* passion to positively predict performance

The concept of grit has captured the public imagination. Angela Duckworth's 2013 TED talk introduced grit to a broad audience and described it as an important predictor of future success; the talk clearly resonated with audiences as it has over 14 million views to date. Her subsequent 2016 book, "Grit: The Power of Passion and Perseverance," became an international best-seller. Grit has also crept into educational policy throughout the United States, influencing the design of school curriculums to boost their future success by making students "grittier" (Smith, 2014). These developments are seemingly occurring for good reason: prior studies have found that grit relates to several intermediaries of success, including increased deliberate practice (Duckworth, Kirby, Tsukayama, Berstein, & Ericsson, 2011), sustained retention in difficult jobs (Duckworth et al., 2007; Duckworth & Quinn, 2009), and task persistence (Lucas, Gratch, Cheng, & Marsella, 2015).

Given the widespread attention and initial evidence, one would expect to find copious studies showing that grit predicts performance. Surprisingly, evidence linking grit and performance is beset by contradictory empirical results. A recent meta-analysis, as well as high-powered empirical studies, have found a weak or non-significant relationship between grit and various indicators of success (Credé, Tynan, & Harms, 2017; Ivcevic & Brackett, 2014; Rimfeld, Kovas, Dale, & Plomin, 2016). Because the evidence regarding the relationship between grit and performance has been inconclusive, several commentators have stated that grit is "overrated," "limited," "hyped" and "under attack" (Barshay, 2016; Dahl, 2016; Denby, 2016; Useem, 2016).

We propose that the inconsistency between grit's initial promise and its subsequent lack of empirical support has occurred because grit's measurement has not matched its definition. Duckworth et al. (2007, p. 1087) define grit as "perseverance and passion for

long-term goals." Although this definition of grit contains two conceptual components—perseverance and passion—we suggest that the grit literature and consequently its measurement has focused only on perseverance and has not adequately captured passion. The tight link between grit and perseverance has even made its way into on-line thesauruses: on www.thesaurus.com, synonyms of perseverance include grit and synonyms of grit include perseverance, but neither include passion.

The issue is not just conceptual but also methodological. We propose that the current measure of grit likely reflects perseverance alone. Indeed, studies which find effects of the grit scale on performance-related outcomes are highly connected to perseverance (e.g., increased deliberate practice, sustained retention, and task persistence). We suggest that passion is key to grit but missing in its theory and measurement, which as a result, has produced the empirical inconsistencies found in the grit literature.

Overall, academics and popular commentators alike frequently equate grit with perseverance alone and neglect the passion component. Prominent educational psychologist Mike Rowe, critiquing grit, states, "[r]ather than calling their construct 'perseverance' or 'persistence,' they chose to call it 'grit'" (Strauss, 2015). Similarly, consider that a meta-analysis of the grit literature refers to grit as "a personality trait" (Credé et al., 2017, p. 492), and compares grit to conscientiousness in their analyses. Angela Duckworth herself noted this shortcoming of the theory and measurement of grit, stating that she is thinking about revising her grit scale, "specifically the questions about passion" (Kamenetz, 2016).

The neglect of passion in the measurement of grit is particularly problematic because prior research stresses that passion produces beneficial effects on performance through a key mechanism: immersion. Several studies converge on the idea that the combination of perseverance and passion may heighten individuals' immersion in a performance domain—that is, the intensity of focus experienced—which may in turn promote higher levels of

performance (Dumas & Smith, 2018; Ho et al., 2011; Mitteness et al., 2010; Schaufeli, Bakker, & Salanova, 2006). In fact, passion is key to how Angela Duckworth speaks about the beneficial outcomes of grit. In a recent interview, she noted, "I think the misunderstanding—or, at least, one of them—is that it's only the perseverance part that matters […] But I think that the passion piece is at least as important. I mean, if you are really, really tenacious and dogged about a goal that's not meaningful to you, and not interesting to you—then that's just drudgery. It's not just determination—it's having a direction that you care about" (as cited in Dahl, 2016).

The current research brings passion back into the conceptualization and measurement of grit. We propose that only the combination of the current grit measure, the Grit-S scale (Duckworth & Quinn, 2009)—which emphasizes perseverance—with a measure that assesses whether individuals attain desired levels of passion will predict higher performance. Furthermore, we hypothesize that immersion will be a key route through which the combination of perseverance and passion attainment will improve performance. We test these propositions in a meta-analysis, a field study with employees at a technology company, and a field study of undergraduate students.

The Absence of Passion in Grit Literature and Measurement

From its inception, grit has theoretically stood on the dual pillars of perseverance and passion. The definition of grit includes the word passion: "perseverance and passion for long-term goals" (Duckworth et al., 2007, p. 1087). Despite the conceptual importance of passion in grit, there are theoretical and empirical concerns about whether the grit scale truly captures passion. The scale used to assess grit features two components—"persistence of effort" and "consistency of interests"—the latter of which has been suggested to measure passion (Duckworth et al., 2007; Duckworth & Quinn, 2009). Theoretically, the claim that "consistency of interests" equates to passion is not supported by research. Although

"consistency of interests" may be statistically correlated with personally important values/preferences, they are conceptually distinct. Consider this example: an academic may maintain a high consistency in an interest (e.g., the revision of manuscripts as part of the publication process), but the interest itself may have little personal importance (e.g., revising a manuscript on an unimportant topic).

Empirical results similarly cast doubt on the equivalence of "consistency of interests" and passion. Consider that a recent study finds no significant relationship between self-rated "consistency of interests" and other-rated passion (Grohman, Ivcevic, Silvia, & Kaufman, 2017). This concern is also borne out in a recent meta-analysis (Credé et al., 2017), which reports a corrected correlation of $\rho = .60$ between "persistence of effort" and "consistency of interests." This correlation size supports the presence of a single construct (Judge, Erez, Bono, & Thoresen, 2002), leading the authors of the meta-analysis (2017) to conclude that the grit scale only measures the single factor of perseverance. This discrepancy may have occurred because the grit literature has not connected with prior passion research. In Duckworth et al.'s (2007) paper introducing grit, the word "passion" only appears in the manuscript title, the definition of grit, and as a reference to a scale the authors discarded. In subsequent publications, there is no reference to passion other than including the word passion in the definition (Duckworth et al., 2011; Duckworth & Quinn, 2009; Eskreis-Winkler, Shulman, Beal, & Duckworth, 2014; Robertson-Kraft & Duckworth, 2014; Von Culin, Tsukayama, & Duckworth, 2014).

Taken together, there is considerable theoretical and empirical evidence that the scale intended to measure both components of grit—perseverance and passion—likely captures only perseverance. We therefore subsequently refer to what the grit scale measures as perseverance. We highlight why passion is a key component of grit's beneficial effects and

propose that uncovering grit's predictive power requires adequate measurement of both perseverance and passion.

Passion Attainment as a Key Component of Grit

We propose that passion is a key ingredient of grit and needs to be empirically captured for a positive relationship between perseverance and performance to emerge. We suggest that passion is essential for perseverance to unfold its beneficial effects because it increases immersion in an activity, evidenced by increased focus and pursuit of activities related to their passionate endeavor (Dumas & Smith, 2018; Ho et al., 2011; Mitteness et al., 2010). That is, the increased immersion produced by passion leads individuals to devote greater cognitive effort and investment to their goals, as evidenced in more intense concentration (Rothbard, 2001). This heightened immersion, in turn, provides the energy and dedication that makes it more likely that individuals attain their goals (Salanova, Bakker, & Llorens, 2006; Sonnentag, 2003). Although perseverance helps individuals by remaining committed to their goal pursuit (Duckworth et al., 2007; Von Culin et al., 2014), passion provides individuals with the focus necessary to achieve their goals (Duckworth et al., 2011; Eskreis-Winkler et al., 2014; Locke, 1968). Thus, when individuals pursue goals they are not passionate for, perseverance may not produce increased performance. In contrast, when employees pursue goals they are passionate for, higher perseverance may improve their performance.

Anecdotal evidence indicates that many highly persevering individuals achieve success only when pursuing goals they are passionate about. Consider the Italian singer Andrea Bocelli, who originally started his career as a lawyer, a course of study that requires substantial persistence, particularly given his blindness. Even while pursuing this field of study, Bocelli continued to sing at piano bars, but it was only when Bocelli allowed himself to be immersed in the pursuit of singing, "a passion he couldn't shake" (PBS, 2015), that he

found success. This example illustrates that the purported benefits of the combination of perseverance and passion originally proposed by grit researchers requires the adequate measurement of both components of grit.

In further understanding the role of passion, the current research highlights the importance of passion attainment, i.e., whether people experience desired levels of passion (see Chapter 1 of this dissertation). In prior research, passion has commonly been assessed using an adaptation of Vallerand et al.'s (2003) harmonious passion scale, which was originally developed to assess how individuals feel about activities that are "very dear to their heart" (Vallerand, Blanchard, et al., 2003, p. 758). However, individuals commonly assess whether they are experiencing desired levels of passion (Buckley et al., 1998; Major et al., 1995) and are guided by whether they have met this expectation (Podsakoff et al., 2007; Wanous, Poland, Premack, & Davis, 1992; Wilson et al., 1989). Indeed, a recent stream of research highlights that the experience of passion is guided by whether an individual attains or falls short of desired levels of passion and not by their absolute levels of harmonious passion (Jachimowicz, To, et al., 2018). Thus, we propose that the combination of perseverance and passion attainment will predict performance.

Study 1: Assessing the Role of Passion in Prior Studies

To begin investigating the impact of the combination of perseverance and passion in predicting performance, we first reviewed prior studies in which the grit scale was used, and performance measured. A literature search yielded 128 studies (N = 46,639; for more details on search and analyses, see Appendix B, Table S1, for list of studies included). Replicating prior research (Credé et al., 2017), we find a small but significant effect of perseverance, as measured by the grit scale, on performance (*estimate* = .14, *S.E.* = .02, $p < .001$; see also Fig. S1).

We hypothesized that in studies where participants were more likely to experience passion for a particular performance domain, the relationship between perseverance and performance would be stronger. To assess passion in prior research, three independent coders blind to the hypothesis of this study assessed whether the majority of participants in the study would find the performance domain personally important (*IRR* = .81), in line with prior theory and the definition of passion described above. For example, in a study of entrepreneurs starting their own companies (Mueller, Wolfe, & Syed, 2017), the majority of participants may consider the performance domain to be personally important. In contrast, college students taking a mandatory science class may consider the performance domain to be less personally important (Bazelais, Lemay, & Doleck, 2016).

Our analysis suggests that passion levels of a performance domain moderate the relationship between perseverance and performance. That is, we found that in studies where participants likely experienced greater passion for a performance domain, there was a stronger relationship between perseverance and performance (moderator analysis of the meta-analytic effect*: estimate* = .08, *S.E.* = .04, p = .04; see also Appendix B, Table S2 and Figure S2, for further information). This analysis thus provides preliminary support for our theory that passion moderates the relationship between perseverance and performance.

Study 2: Performance is Predicted by the Combination of Perseverance and Passion Attainment

We next conducted a field study with employees at a technology company. We predicted that perseverance, as measured by the Grit-S scale, would only relate to increased supervisor-rated performance when employees attained desired levels of passion. In contrast, we predicted that for employees who did not attain desired levels of passion, there would be no significant relationship between perseverance and performance.

We tested this hypothesis with data from a technology company (N = 422), where we asked employees to respond to survey measures of perseverance (as measured by the eight-item Grit-S scale) and passion attainment (with a previously developed and validated three-item scale, see also Jachimowicz, To, et al., 2018; Jachimowicz, Wihler, & Galinsky, 2018). We then matched employees' survey responses to supervisor-rated performance ratings. We subsequently ran additional analyses including various control variables (e.g., age, gender, tenure, motivation, and harmonious passion; see Appendix B for further information, and Table S3 for bivariate correlations).

Prior to testing our hypothesis, we assessed the distinctiveness of the constructs by conducting confirmatory factor analyses. We first loaded items of each construct onto their respective factor, and find that the fit-indices were acceptable (Schermelleh-Engel et al., 2003; with the exception of the *CFI*): $X^2(334) = 845.64$, *RMSEA* = .06, *CFI* = .92, *SRMR* = .08. We then compared this model to a model where we loaded all items from every measure on one common factor. This model fit the data worse: $X^2(350) = 3110.19$, *RMSEA* = .14, *CFI* = .55, *SRMR* = .12. Additionally, the fit of the first model was significantly better: $\Delta X^2 = 2264.55$, $\Delta df = 16$, $p < .001$. In addition, analyses reveal that the full Grit-S scale represents a single factor, which we label perseverance, and that this scale is distinct from the passion attainment measure (see Appendix B for these and additional CFAs).

Our hypothesis was that the interaction between perseverance and passion attainment predicts job performance (see Table S4 in Appendix B). Because supervisors assessed multiple employees, the data structure is nested; we therefore centered the variables and applied multilevel analyses (Hox, 2010; see Appendix B). As shown in Model 2, the interaction effect was both positive and statistically significant (*estimate* = .03, *S.E.* = .01, γ = .14, p = .02) and accounted for an additional 2% of variance in job performance. The highest job performance occurred when both perseverance and passion attainment were high,

as depicted in Figure 1. This finding was empirically supported through simple slopes analyses (see Appendix B).

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insert Figure 8 about here

We subsequently tested whether our results remain statistically significant when adding the control variables. As Table S4 shows, the interaction effect remains statistically significant in all models (Model 3 adding in gender, age, and organizational tenure: *estimate* = .03, *S.E.* = .01, γ = .16, *p* = .01; Model 4 adding in harmonious passion, prosocial, intrinsic, and extrinsic motivation: *estimate* = .03, *S.E.* = .01, γ = .16, *p* = .01; Model 5 adding in the interaction between perseverance and harmonious passion: *estimate* = .04, *S.E.* = .01, γ = .19, $p < .001$). The values of the simple slopes also remained the same. These results provide support for our hypothesis that the combination of perseverance and passion attainment predict performance.

Study 3: Immersion as one Mediator of the Relationship Between Perseverance and Passion on Performance

Our final study explored one mechanism through which the combination of perseverance and passion attainment would predict performance: by promoting immersion. We recruited 248 currently enrolled students at a private university in the United States and asked them to fill out the same measures of perseverance and passion attainment as in the prior study. We also asked students to upload their current grade transcript and used their Major GPA as a measure of their performance (see Appendix B for further information). In addition, we measured our hypothesized mediator—immersion—using three items adapted from the Utrecht Work Engagement Scale (Schaufeli et al., 2006). The items were, “When I am working on activities related to my courses, I forget everything else around me,” “I get

immersed in activities related to my courses," and "I get carried away working on activities related to my courses" (see Table S5 for bivariate correlations).

This study replicated our earlier results (see Appendix B for CFAs and additional analyses). Table S6 shows the analyses regressing the interaction of perseverance and passion attainment on performance. As shown in Model 2, the corresponding interaction effect was both positive and statistically significant (*estimate* = .18, *S.E.* = .06, $p = .001$), such that perseverance was related to higher performance at higher levels of passion attainment (+1 *SD*; *estimate* = .36, *S.E.* = .08, $p < .001$) but not at lower levels of passion attainment (-1 *SD*; *estimate* = -.01, *S.E.* = .09, $p = .91$).

We next tested for the mediation through immersion. To do so, we first regressed the interaction of perseverance and passion attainment on immersion and find a statistically significant interaction effect (*estimate* = .19, *S.E.* = .05, $p < .001$); perseverance was related to higher immersion only at higher levels of passion attainment (+1 SD; *estimate* = .31, *S.E.* = .08, $p < .001$) but not at lower levels of passion attainment (-1 SD; *estimate* = -.08, *S.E.* = .08, $p = .33$). Given the positive correlation between immersion and performance ($r = .36$, $p < .001$), we next tested for mediated moderation, with perseverance and passion attainment as the independent variables, immersion as the mediator, and performance as the dependent variable, using bias-corrected bootstrapping with 10,000 resamples to construct 95% confidence intervals for the conditional indirect effects (Hayes, 2013). We find that the 95% confidence interval of the mediated moderation excludes zero ([.002; .086]), demonstrating a significant indirect effect. Subsequent analyses reveal that the indirect path from perseverance to performance via immersion was statistically significant only when passion attainment was higher (+1 *SD*; 95% CI [.029; .173]) but not when passion attainment was lower (-1 *SD*; 95% CI [-.084; .025]). These results indicate that passion attainment significantly moderates the indirect effect of perseverance on performance through

immersion, such that at higher levels of passion attainment, the positive relationship between perseverance and immersion is statistically significant, resulting in higher performance. Given that the interaction of perseverance and passion attainment on performance remained statistically significant when including immersion (from *estimate* = .18, *S.E.* = .06, p = .001 to *estimate* = .13, *S.E.* = .05, p = .016), the relationship between the interaction of perseverance and passion attainment on performance travels in part through immersion.

Discussion

The relationship between grit and performance has created a firestorm of contradictory results. The current research proposed that this inconsistency has occurred because even though the definition of grit includes perseverance and passion, the grit measure solely reflects perseverance and does not adequately capture passion. Instead, we suggested that a combination of the Grit-S scale—which we propose captures perseverance alone—with a measure that assesses passion attainment would predict performance. Across a meta-analysis and two field studies, we provide support for this prediction: only the combination of perseverance and passion attainment predicted performance. In addition, we find that this relationship occurs in part through increased immersion. By adequately measuring both perseverance and passion attainment, the current research uncovers grit's predictive power.

The explicit connection to the passion literature is important because grit researchers have conceptually proposed that passion is essential for perseverance to have a positive effect on performance (Duckworth et al., 2007). The interactive effect of perseverance and passion attainment provides evidence that perseverance only propels employees forward when they experience desired levels of passion (Perrewé et al., 2014). We further advance prior literature by uncovering one underlying mechanism: the combination of high perseverance and high passion attainment increases performance by promoting the intensity of focus

individuals experience (Dumas & Smith, 2018; Ho et al., 2011; Schaufeli et al., 2006). Finally, the current studies also address prior calls to examine the effects of grit outside of scholastic performance (Credé et al., 2017).

The current research has limitations that provide opportunities for future research. The study designs were cross-sectional, which omits the possibility of investigating potential long-term effects of grit. In addition, the cross-sectional nature of our studies does not allow us to address concerns about reverse causality: it is possible that individuals who performed worse also reported lower passion attainment, changing their attitudes as a response to negative feedback regarding their competence (Wicklund & Brehm, 1968). This concern was addressed in Study 2 where supervisor-rated performance ratings, although collected immediately prior to the survey, were only disclosed to employees after the survey data collection was completed. Nonetheless, future research should further investigate the causal nature of the interactive effect of perseverance and passion attainment. Furthermore, the cross-sectional nature of Studies 2 and 3 does not exclude the occurrence of common method variance (CMV) for the independent variables. However, given that we studied the moderating effect of passion attainment on the relationship between perseverance and performance, the presence of CMV should have made it more difficult to find such effects (Siemsen, Roth, & Oliveira, 2010). Finally, future research may consider adapting the grit scale to a particular performance domain to increase its predictive capacity in that domain (e.g., work). The current grit scale currently assesses perseverance more generally, but subsequent investigations could explore the value of assessing more specific perseverance.

Our findings suggest that perseverance without passion attainment is mere drudgery, but perseverance with passion attainment propels individuals forward. By incorporating passion into the conceptualization and measurement of grit, future research may find that grit actually lives up to its hype.

CHAPTER 4:

The Gravitational Pull of Passion: When and How Expressing Passion Elicits Status Conferral and Support from Others

Richard Branson, Steve Jobs, and Oprah Winfrey have reached the highest echelons of success. Their achievements are often attributed to their extraordinary high levels of passion; indeed, popular discourse commonly describes successful individuals as paragons of passion (Branson, 2012; Isaacson, 2011; Winfrey, 2019). Academy Award-winning music composer A.R. Rahman stated this eloquently: "Success comes to those who dedicate everything to their passion in life." Richard Branson similarly recognized how passion helps people find the right path: "If you find what you are truly passionate about, then finding your career will not be too far away." These quotes highlight a more general belief: Being passionate for one's work is a pathway towards professional success.

Consistent with this perspective, prior literature on passion predominantly takes an intrapersonal perspective (Jachimowicz, Wihler, Bailey, et al., 2018), finding that individuals who are passionate for their work attain increased success by exhibiting higher levels of engagement (Vallerand, Blanchard, et al., 2003; Zigarmi et al., 2009), proactivity (Ho et al., 2011), and self-efficacy (Baum & Locke, 2004). The intrapersonal perspective suggests that the beneficial outcomes of passion stem from inherent characteristics that lie within passionate individuals. This feeds into the widely held belief, exemplified by the quotes above, that successful people have reached their lofty positions because of the passion that percolates inside of them.

The current research offers a complementary perspective on why passion may help individuals attain greater success. In contrast to previous research focused on the intrapersonal effects of passion, we take an interpersonal perspective and propose that

expressing passion for work stirs reactions and behaviors in others that contribute to the success of these individuals. Richard Branson recognized these interpersonal benefits of passion: "When you believe in something, the force of your convictions will spark other people's interest and motivate them to help you achieve your goals […] Passion, like a smile, is contagious. It rubs off on everyone around you and attracts enthusiastic people into your orbit" (Virgin, 2015). Expressing passion, Branson asserts, exerts a gravitational pull that brings supporters into one's orbit.

The omission of the interpersonal effects of passion in prior research is particularly striking given that many of the beneficial outcomes associated with passion for work, including increased perseverance and job satisfaction and reduced stress, are shaped by interpersonal factors as well as individual characteristics (Ajzen & Fishbein, 1977; Chiaburu & Harrison, 2008; Ryan, Mims, & Koestner, 1983). An interpersonal perspective on passion is especially relevant because observers can readily detect passion in others (Cardon et al., 2009a; X. P. Chen et al., 2009). We therefore propose that an interpersonal perspective of passion contributes to a more complete understanding for how passion for work helps people obtain greater success.

Our core idea is that others respect and admire individuals who express passion and, as a result, are eager to lend their time and support to them. That is, observers confer status on those who express passion and therefore invest in their success (Magee & Galinsky, 2008). These interpersonal effects of expressing passion are, however, contingent on several factors related to the expresser, perceiver, and context. To explore the interpersonal effects of passion for work, we conducted six studies that capture the contingent effects of this effect of expressing passion on status conferral. We first offer a broad overview of our research program and provide in-depth theory for each idea before reporting the studies that tested each one.

Conceptualizing Passion and its Expression

Prior research has found that passion is associated with unique physical manifestations related to outward expressions, including facial expressions, vocal tone, and body language (Chen et al., 2009; J. J. Li et al., 2017). That is, passion is readily observed by others, and its cues serve as a visible indicator of how passionate the expresser is (Curran et al., 2015; Smilor, 1997). After perceiving someone expressing passion for their work, observers are likely to infer that the expresser is passionate for their work (see, for example, Davis, Hmieleski, Webb, & Coombs, 2017; Galbraith, McKinney, DeNoble, & Ehrlich, 2014; Mitteness et al., 2010; Mitteness, Sudek, & Cardon, 2012).

We propose that expressions of passion will have important interpersonal consequences in observers. In particular, we suggest that observers admire and therefore confer status onto those who express passion. Feelings of admiration arise when people "display excellence in their achievements, actions, and skills" or "act with virtue or moral fortitude" (Sarapin, Christy, Lareau, Krakow, & Jensen, 2015, p. 98). People tend to believe that dedication toward a personally meaningful value is morally virtuous and therefore worthy of admiration (Kelan & Mah, 2014; Schlenker, Weigold, & Schlenker, 2008). Based on our definition of passion as "a strong feeling toward a personally important value/preference that sparks intentions and behaviors which express that value/preference" (Jachimowicz et al., 2018, p. 9981), we therefore propose that expressions of passion elicit admiration because it signals one's dedication to an important outcome (Rohra & Sharma, 2016), and the desire to pursue personally important beliefs (Schlenker et al., 2008). Indeed, dedicated pursuits of important beliefs have been found to be one important antecedent of admiration (Kelan & Mah, 2014), consistent with our idea that expressions of passion elicit admiration. More formally, we predict:

Hypothesis 1. Observers will confer status onto individuals who express passion.

We additionally propose that the status conferred onto individuals who express passion is likely to translate into greater support for those individuals. We define offering support as *engaging in behaviors that are aligned with the expressers' goals*. When admiring someone, individuals often opt to engage in behaviors that are aligned with the respected person's goals (Schindler, Paech, & Löwenbrück, 2015; Schindler, Zink, Windrich, & Menninghaus, 2013; van de Ven, Zeelenberg, & Pieters, 2011) and to act in their benefit (Cuddy, Fiske, & Glick, 2007). One frequent way individuals can advance these interests is by offering their help and support to those whom they admire (Cropanzano & Mitchell, 2005). Hence, we predict that individuals who are perceived as passionate for their work will be admired more by others, who in turn will be more likely to offer them their support. More formally, we therefore propose:

Hypothesis 2. Observers will offer their support to individuals who express passion.

As the above theory highlights, we specify that status conferral is a key mediator of the relationship between expressing passion for work and receiving support from others, such that:

Hypothesis 3. Status conferral will mediate the effects of expressing passion on offered support.

We also sought to provide discriminant validity for the interpersonal effects of passion from two other readily observable attributes that may also affect status conferral and, in turn, support from others: extraversion and authenticity. We chose these two attributes as comparisons because individuals who are passionate for their work often display high amounts of energy (extraversion) and display emotions consistent with their inner thoughts (authenticity) (Chen et al., 2009; Curran et al., 2015; Gielnik et al., 2015; Vallerand, Blanchard, et al., 2003). These comparisons allow us to show that perceptions uniquely

related to passion, rather than perceptions of these related attributes, produces admiration in others that inspires them to provide support.

While the expression of passion and its perception in observers are often closely correlated (Curran et al., 2015), we note that there are also nuanced exceptions. That is, it may be possible for individuals who do not genuinely experience passion to engage in behaviors that make it more likely that others perceive them as passionate (similar to the impression management literature, e.g., Goffman, 1959). Similarly, it may be possible for individuals who genuinely experience passion to not engage in behaviors others commonly associate with passion, and thus not be perceived as passionate by others. The focus of the theory and studies in the current research centers on the perception of passion in others. We note possibilities for future research in the General Discussion that further explore the nuanced differences when passion is not felt but expressed or felt but not expressed.

Contextual Moderators: When Expressing Passion Does Not Increase Status Conferral and Support

Prior research has established that the same behavior can often take on varying meanings depending on the context (George & Zhou, 2002; Van Kleef, 2009). Besides delineating both a mediating mechanism and discriminant validity, we also identify three conditions under which the status conferral and support benefits of expressing passion are reduced or even reversed.

One common driver of variation in perceptions is how appropriate an expression is deemed to be, or whether an expression is "correct for the situation and in correct proportion for the evoking circumstances" (Shields, 2005b, p. 7). Social conventions frequently guide the appropriateness of displays of particular expressions (Matsumoto, 1990, 1993). In order to obtain interpersonal benefits, individuals therefore have to be mindful of not just what they express, but when and how they manage their expressions (Saarni, 1999). We propose that

perceiving passion in others will increase admiration and offered support, but only when displays of passion are not seen as inappropriate, such as in situations where expressions of passion are perceived as violating norms (Matsumoto, 1990, 1993; Shields, 2005). More formally, we hypothesize:

> **Hypothesis 4.** The effect of expressing passion on status conferral and support is moderated by appropriateness, such that the effect of passion expression on status conferral and support decreases as appropriateness decreases.

Building on the notion that passion is directed toward a target, we explore whether observers no longer respect and admire the expression of passion in others when they disagree with the target of their passion. We base this prediction on prior findings that individuals are less likely to engage in prosocial behavior toward another person when they disagree with their opinions (Wagner, Hornstein, & Holloway, 1982). For example, strangers were more likely to help another person when they shared similar political attitudes than when these diverged (Hornstein, Masor, Sole, & Heilman, 1971). Similarly, people are more likely to mail an ostensibly lost envelope when they agreed with the contents of the envelope than when they disagreed with it (Sole, Marton, & Hornstein, 1975). We therefore propose that expressions of passion by others will only be admired when observers agree with the target of their passion. Consequently, we suggest that observers will not confer status and consequently will not offer their support to individuals who express their passion for a cause they disagree with. More formally, we predict:

> **Hypothesis 5.** The effect of perceiving passion in others on status conferral is moderated by agreement with the target of passion, such that the effect of perceiving passion on status conferral decreases as agreement with the target of passion decreases.

We also explored a context where expressions of passion may backfire and lead to *decreased* support from others. We propose that perceiving someone else as passionate becomes threatening when one is competing against that person (Johnson & Johnson, 1989; Murayama & Elliot, 2012; Pierce, Kilduff, Galinsky, & Sivanathan, 2013). That is, perceiving passion in a competitor can imperil an observer's own chances of success and may thus amplify the threat from a competitor. More precisely, we propose that when competing against someone who is perceived as passionate for their work, perceivers will reduce their support to them. Thus, passion can be a glue that binds others together, but it can also serve as a gasoline that inflames competitive feelings (Pierce et al., 2013).

> **Hypothesis 6.** The beneficial effects of perceiving passion in others reverse in competitive settings, such that perceiving passion in others in competitive settings reduces overall support offered.

Figure 9 summarizes our theoretical model. We predict that observers confer status and offer support to people they perceive as expressing passion. However, when that expression of passion is seen as inappropriate or when an observer disagrees with the cause of passion, then observers will no longer confer more status or offer more support to passion expressers. Finally, when passion expressions come from a competitor, that expression will be seen as threatening and decrease the support given to the passion expresser.

Insert Figure 9 about here

Empirical Overview and Theoretical Contributions

We conducted six studies to investigate the interpersonal effects of passion. Study 1 tested—in a field setting—whether entrepreneurs who express passion receive more support from investors; this study also offered discriminant validity from the related constructs of

extraversion and authenticity. Study 2 used experimental methods to test whether coworkers who express passion are conferred more status and, in turn, garner increased support. Studies 3a and 3b investigated whether expressing passion no longer leads to greater status conferral and support when that expression is deemed as less appropriate. Study 4 explored whether individuals who express passion no longer receive increased status conferral and no longer receive more support when observers do not agree with the cause of their passion. Finally, Study 5 documents a reversal of the prior effects in competitive contexts, exploring the extent to which individuals who express passion receive decreased support from competitors. All data and code to reproduce the analyses presented here are available on the Open Science Framework (https://osf.io/aku2j/).

Our research program offers several contributions. First, we extend the passion literature to the domain of interpersonal perception by documenting individuals' affective and behavioral reactions towards individuals who express passion. This contrasts with existing work focusing on the intrapersonal benefits of passion (Jachimowicz et al., 2018), and helps lay the foundation for future work on the interpersonal effects of passion. Indeed, prior scholars have noted the interpersonal effects of passion as an important and understudied area of research (Curran et al., 2015; Perrewé et al., 2014; Pollack, Ho, O'Boyle, & Kirkman, *in press*). Second, the current research also provides discriminant validity on the construct of passion in two ways; by demonstrating the effect of expressing passion on status conferral but not belongingness, and by identifying the interpersonal reactions toward others who are passionate above and beyond related constructs such as extraversion and authenticity. This finding moves the literature forward by answering calls for a better understanding of both what passion *is* and what passion *is not* (Perrewé et al., 2014). Third, we offer a concrete mechanism—observers' status conferral—for why observers are more willing to invest in those who are passionate for their work (Ng, Eby, Sorensen, & Feldman, 2005). This

contribution advances the passion literature because the underlying mechanisms producing the beneficial outcomes of passion are subject to ongoing debate (Perrewé, et al., 2014). Finally, we identify conditions under which the interpersonal benefits of passion for work are minimized and even backfire; our contingent model provides a framework for understanding when expressing passion may help or harm workplace outcomes.

Study 1: Expressing Passion Increases Support from Others

For an initial test of our hypothesis that expressing passion relates to increased support from observers, we collected data from entrepreneurs' pitches on the television show *Dragons' Den*. Individuals who take part in this show present to a panel of investors in order to solicit support for their venture. This context allowed us to investigate whether expressions of passion for work are related to increased support in a naturalistic setting.

We assessed our independent variable—the extent to which entrepreneurs expressed passion for work—by coding their expressive displays in the videos of their presentation. The dependent variable reflected whether entrepreneurs received support from at least one of the dragons, i.e., judges, on the show. In addition, we established the unique effects of passion by distinguishing passion from extraversion and authenticity.

Design

We collected data from the Canadian television show *Dragons' Den*, a show centering on entrepreneurs pitching their business ideas and products to a panel of five investors (also known as dragons). The show has been on their air since 2006 and was in the middle of its eighth season during data collection. At that time, 113 episodes had aired, for a total of 864 pitches. The setting is ideal for the current study because it includes entrepreneurs who express varying levels of passion seeking investment from the show's judges for their ventures. Given the labor-intensive nature of coding each pitch, we *a priori* chose a total planned sample size of 200.

Stimuli

Our stimuli consisted of 200 entrepreneurs who participated in *Dragons' Den*. We randomly picked those speakers from the 864 pitches made on the show at the time of data collection, using a random number generator. Two independent raters coded whether the dragons took the pitch seriously, and we excluded data from 23 speakers who were not taken seriously. The final data set for analysis included 177 participants (33% female).

Each pitch contained at least one entrepreneur who communicated with the panel of investors. Entrepreneurs talked about their company, product, and business plan, and explained why they needed the investment. We edited the clips to end after the pitch was done, but before judges responded with either an investment offer, or an explanation of why they would not invest. On average, pitches lasted 2:28 minutes (*SD* = 1:29 minutes).

Entrepreneurs' Passion

Five raters unaware of the study's hypothesis coded for expressions of passion using Chen et al.'s (2009) 6-item scale. The indicators in this previously developed and validated measure of expressions of passion are: "the speaker…" "has energetic body movement," "has rich body language," "shows animated facial expression," "is using gestures," "face lights up," and "talks with varied tone and pitch." A designated video player, developed specifically for this study, played each clip and automatically paused every 5s to allow for consistent coding. Once the clip paused, the raters coded the 5-second segment by placing check marks on a scoring sheet next to the indicators they observed during each segment (see Appendix C for the training manual, and for a screen shot of the observation sheet).

We averaged ratings of passion across all segments in each pitch to calculate the entrepreneurs' overall passion, which ranged from .25 to 3.20 (*M* = 1.70, *SD* = .60). To verify inter-rater reliability, we randomly assigned about half of the clips (47%, *N* = 83) to pairs of

raters. Interrater agreement was high, with an ICC(1) of .84, indicating substantial alignment between raters. The remaining 95 clips were subsequently randomly divided between coders.

Offered Support

The aim of the speaker's pitch is to convince the dragons to make an offer to invest in their company. Thus, the dependent variable in this study is whether at least one of the dragons made an offer of support. We did not choose whether or not a deal was closed because sometimes entrepreneurs rejected offers or deals were closed after the taping of the show (Canal, 2016), and we did not have access to outcomes that occurred after the taping of the show. We coded "1" if at least one of the dragons made an offer, and "0" when no offer was made. In total, 41% of the speakers received a least one offer from the dragons.[8]

Discriminant Validity: Extraversion and Authenticity

To establish discriminant validity and highlight the unique effect of passion, we recruited a separate sample of 891 participants through Amazon's Mechanical Turk to rate the videos on the extent to which entrepreneurs were perceived as extraverted and authentic. Following Koppensteiner (Koppensteiner, 2013), we aimed to collect 15 responses for each entrepreneur. Each participant was randomly assigned to watch and rate three clips. We dropped responses from 71 participants who did not watch the entire videos (based on the times when they started and ended the entire survey), for a final sample size of 820.

We measured perceptions of entrepreneurs' extraversion with the 20-item scale from Goldberg (1992). Participants rated their agreement with the statement "the speaker appears

[8] The data for this study was included in one of the author's dissertation, which comprised two additional dependent variables. The first variable, number of supporters, assessed how many dragons offered their support. We decided to exclude this variable as offers are not made in isolation: once one dragon makes an offer, other dragons may be dissuaded or persuaded to join as a result of that offer. Therefore, an entrepreneur who gets support from several investors is not necessarily more successful than an entrepreneur who gets support for a single investor. The second variable, average monetary support, assessed how much money dragons offered. We decided to exclude this variable for similar reasons that we excluded whether a deal was closed: the deal details (i.e., monetary amounts and shares) are frequently renegotiated after the show. For similar reasons, we also did not include proportion of amount requested as an outcome variable.

to be …" on a scale ranging from 1 (strongly disagree) to 7 (strongly agree) with items that included "talkative," "energetic," "active," and "vigorous." The average rwg(j) value, indicating the consensus between participants in ratings of the items in each measure (LeBreton & Senter, 2008), was .94, indicating high agreement between raters. The items were averaged to form a composite score (M = 5.11, SD = .69; α = .95).

We also assessed perceptions of entrepreneurs' authenticity with a six-item scale adapted from prior research (Côté, Hideg, & van Kleef, 2013; Grandey, Fisk, & Steiner, 2005). Participants rated their agreement on a scale ranging from 1 (strongly disagree) to 7 (strongly agree) with statements which included, "The speaker appears to be displaying emotions that she does not really feel inside," "The speaker is probably pretending or putting on an act during the pitch," and "The speaker seems to be faking how she feels." We reverse-scored responses, such that higher ratings denoted higher authenticity. An average rwg(j) of .84 indicates good agreement between raters. The items were averaged to form a composite score (M = 5.13, SD = .53; α = .92).

Control Variables

Gender and Ethnicity. There may be gender and ethnicity differences in both expressions of passion and receipt of support. For example, perhaps men express more passion and receive more support than women, which could create a spurious association between passion and support. We coded the speaker's gender as "1" when the pitcher was female (33%) and as "0" when the pitcher was male (67%). We coded the speaker's ethnicity as "0" when the pitcher was white (91%) and as "1" when the pitcher was not white (9%).

Industry. Expressing passion may be common in some industries and, in addition, products in some industries may be more likely to be supported, which could produce a spurious association between passion and support. Two independent raters coded the speaker's affiliated industry based on the Fama and French (1997) five industry classification

(FF05). Inter-rater agreement was acceptable ($\kappa = .63$), indicating consistency across raters (Landis & Koch, 1977). Discrepancies in classifications were resolved through discussion. Most pitches fell into the consumers category (75% of the pitches; coded as "0"), with small amounts in manufacturing (3%; coded as "1"), hi-tech (7%; coded as "2"), health (2%; coded as "3"), and others (13%; coded as "4").

Social Responsibility. Dragons may choose to invest in socially responsible companies because these social actions maximize their market value (Mackey, Mackey, & Barney, 2007), thus making the company more attractive to potential investors. In addition, entrepreneurs who worked on socially responsible products and ideas may be especially passionate. The same five raters who coded speakers' passion also coded whether speakers explicitly referred to their product or organization as socially responsible (8%) based on prior definitions of corporate social responsibility (Mueller, Hattrup, Spiess, & Lin-Hi, 2012).

Solo Entrepreneur vs. Team. We also coded for whether the pitch was given by a solo presenter, coded as "1" and the case for 63.27% of all pitches, or by more than one person, coded as "0."

Analysis Strategy

Prior to all analyses, we standardized all non-binary variables. Because the outcome variable was binary (support offered or not), we conducted hierarchical logistic regressions. The season in which speakers pitched their ideas may have introduced substantial variation. First, it may be the case that earlier seasons attracted more passionate presenters, who were willing to take the risk of presenting their products and ideas on television without knowing anything about the dragons they will present to or the show. The opposite is also conceivable, such that later seasons had more passionate presenters that already observed some of the reactions other entrepreneurs received from the dragons and were motivated to appear on the show.

Second, some of the investors changed throughout the seasons, which may have affected both entrepreneurs' expressions of passions and abilities to gain support. To control for these potential sources of variation, and because pitches and dragons were nested in season, we nested our analyses by season (but all results hold when excluding season as a nesting variable).

Insert Table 8 about here

Results

Table 8 shows the bivariate correlations of the study variables.

Association Between Entrepreneurs' Passion and Offered Support. We conducted hierarchical logistic regressions, nesting speakers within seasons, and regressed expressed passion on offered support. We found a statistically significant relationship (b = .404, SE = .164, p = .014; see Model 1, Table 9), such that higher ratings of passion were associated with a greater probability that the entrepreneur would receive an offer. That is, a one standard deviation increase in the expression of passion is associated with a 40.4% increase in the likelihood that the entrepreneur received funding.

The relationship between entrepreneurs' passion and offered support held in all model specifications, when we added, in a series of stepwise regression models, gender, ethnicity, industry, venture social responsibility, and number of entrepreneurs (b = .384, SE = .168, p = .023; Model 3, Table 9). The effects also held when controlling for perceived extraversion (b = .421, SE = .178, p = .018; Model 4, Table 9); the effect drops to marginal significance when additionally controlling for perceived authenticity (b = .348, SE = .183, p = .057; Model 5, Table 9). In addition, there was no statistically significant interaction between passion and extraversion (b = -.240, SE = .209, p = .251) or passion and authenticity (b

= .025, *SE* = .208, *p* = .906) on offered support, highlighting that it is the expression of passion, but not the combination of passion with related constructs, that lead to increased support. Finally, we do not find evidence for a curvilinear effect of expressing passion on offered support (*b* = -.207, *SE* = .151, *p* = .170), highlighting that the relationship between passion expression and offered support is positive and linear.

Insert Table 9 about here

Discussion

In a naturalistic field setting, we found that entrepreneurs' expressions of passion for their venture were related to increased offered support. This provides initial evidence for the interpersonal benefits of passion. In addition, the current study highlights the distinct effects of passion by delineating it from the related attributes of extraversion and authenticity.

Study 2: Expressing Passion Increases Status Conferral and Support from Others

In Study 1, investors were more likely to offer support to entrepreneurs that expressed passion in their pitches. To test the causal effect of passion and examine whether status conferral explains why passion increases observers' support, we next conducted a pre-registered experimental study.

We propose that this support travels through increased respect and admiration, two core components of status conferral (Magee & Galinsky, 2008). In identifying status conferral as one key pathway through which the beneficial interpersonal effects of passion transpire, we also seek to distinguish it from an alternative pathway associated with another fundamental need, belongingness. Both status and belongingness may increase whether a person offers their support to someone else (Anderson, Hildreth, & Howland, 2015; Den Hartog, De Hoogh, & Keegan, 2007; Schoenrade, Batson, Brandt, & Loud, 1986). However,

status reflects respect and admiration for individuals who express passion, whereas belongingness captures the degree to which a person is accepted by others, i.e., it has "psychological and emotional importance of a relationship" (Anderson et al., 2015, p. 576). For example, someone might experience high belongingness in a relationship with a friend, without necessarily respecting or admiring that person. We suggest that perceiving passion in others will increase conferred status, but not the relational value of belongingness, and thus that status conferral will uniquely mediate the effect of expressing passion on support from observers.

Method

Sample and Design. We pre-registered the study, sample size, exclusion criteria and analysis plan (http://aspredicted.org/blind.php?x=cs9dw2). We aimed to recruit 450 participants from Amazon's Mechanical Turk and expected 40 participants to fail one of the two attention checks. We were successful in recruiting 479 participants, and 37 failed one of the two attention checks, for a final sample size of 442 (M_{age} = 37.53, 47.18% female). Participants were randomly assigned to a one-factor (passion versus control) between-subjects design.

Passion Manipulation. Participants in both conditions read about a coworker they were having a conversation with, who varied in their levels of passion for their work. In the *passion* condition, their coworker was described as follows:

> During the conversation, you recall your coworker stating how important it is for him to engage in activities at work that reflect what is important to him. You specifically remember him saying "I feel excited that this job allows me to work on things that are significant to me." Clearly, he is passionate about his job.

In the *control* condition, their coworker was described as follows:

> During the conversation, you recall your coworker stating how he spent his morning. After waking up and going through his morning routine, he left early to try to reach work early. However, on his way to work he hit a lot of traffic on the local highway and, subsequently, he arrived just on time. Clearly, he cares about getting to work at a sensible time.

Status Conferral. Participants conferred status on their co-workers by expressing their admiration and respect for them on a 3-item measure (adapted from van de Ven, Zeelenberg, & Pieters, 2009; α = .85): "I admire my coworker," "I wish I could be like my coworker," "I hold my coworker in high regard." The scale ranged from 1 (strongly disagree) to 7 (strongly agree).

Offered Support. To assess participants' willingness to offer their coworker support, they were given the prompt, "Imagine your coworker comes to you for a work problem," and later asked, "How willing would you be to give him advice?", and "How willing would you be to help him?"; r = .85, on a scale of 1 (extremely unwilling) to 9 (extremely willing).

Belongingness. To rule out that the association from the passion condition to offered support is not driven by belonginess, we additionally measured this construct with three items, "I get along well with my coworker," "I feel connected to my coworker." "I feel close to my coworker" (α = .84). The scale ranged from 1 (strongly disagree) to 7 (strongly agree).

Results

Status Conferral. Participants in the *passion* condition (M = 5.49, SD = .93) conferred higher status on their coworker than participants in the control condition (M = 5.22, SD = 1.01; $t(440) = 2.95$, p = .003, d = .28; see Figure 10).

Insert Figure 10 about here

Offered Support. Participants in the *passion* condition (M = 7.91, SD = 1.16) were more likely to indicate they would offer their coworker support than participants in the control condition (M = 7.61, SD = 1.19; $t(440) = 2.69$, p = .007, d = .26).

Belongingness. Participants in the *passion* condition ($M = 5.33$, $SD = .97$) did not believe that their coworker had greater relational value than participants in the control condition ($M = 5.22$, $SD = 1.00$; $t(440) = 1.24$, $p = .215$, $d = .12$).

Mediation of Offered Support through Status Conferral. To examine whether the passionate coworker would receive more support because they were conferred higher status, we tested the significance of the indirect effect (i.e., the path through the mediator, status conferral), by constructing a bootstrapped bias-corrected confidence interval for the indirect effect (Imai, Keele, & Tingley, 2010). The confidence interval did not contain zero (95% CI = [.056; .270]; 10,000 bootstrapped iterations), indicating a statistically significant indirect effect. This effect remained statistically significant even when including belongingness as a control 95% CI = [.011; .090]; 10,000 bootstrapped iterations). These results indicate that participants were more likely to offer their support to a more passionate coworker because they respected and admired them, but not because they had greater relational value.

Discussion

Study 2 provides causal evidence that individuals who express passion receive greater support. In addition, the current study highlights one pathway—status conferral—through which passion increases offered support. Furthermore, this study ruled out an alternative pathway, belongingness, from expressing passion to receiving support from others.

Study 3: Status Conferral and Support is Moderated by Appropriateness

The same behavior can have different meanings in different contexts (George & Zhou, 2002; Van Kleef, 2009). One common driver of variation in perceptions is how appropriate an expression is deemed to be, or whether an expression is "correct for the situation and in correct proportion for the evoking circumstances" (Shields, 2005, p. 7). Social conventions frequently guide the appropriateness of displays of particular expressions (Matsumoto, 1990, 1993). In order to obtain interpersonal benefits, individuals therefore have

to be mindful of not just what they express, but when and how they manage their expressions (Saarni, 1999). For example, seeing someone else express irritability is perceived as more negative in an exchange relationship, where irritability is less consistent with the goals and norms of the relationship, in comparison to a communal relationship (Clark & Taraban, 1991). Similarly, when a lower-power negotiator's expression of anger is deemed inappropriate, perceivers tend to retaliate with competitive behavior (Van Kleef & Côté, 2007).

Similar conventions may guide when and how the expression of passion is appropriate. That is, individuals who express passion may not be admired and respected more if observers believe that the context does not warrant the expression of passion, or if the expression of passion itself does not follow conventional norms. Thus, individuals who express their passion inappropriately, or in an inappropriate context, may not be able to reap greater status and more support.

Study 3a: Support is Moderated by Appropriateness

To investigate whether individuals who express passion only receive greater support when their expression of passion is judged as appropriate, we return to our earlier *Dragons' Den* dataset from Study 1. We supplemented the dataset with codes for the appropriateness of entrepreneurs' expressions. This allowed us to examine whether passionate entrepreneurs received greater support when their expression of passion was appropriate but did not receive greater support when their expression was inappropriate.

Method

Stimuli. We used the same 177 video clips used in Study 1.

Entrepreneurs' Passion. We used the same coding for passion as described in Study 1.

Offered Support. We used the same measure as in Study 1 to capture whether at least one investor offered to invest in the pitcher's venture.

Appropriateness. To measure perceived appropriateness of the entrepreneurs' emotional displays, the same 820 participants recruited through Amazon's Mechanical Turk who rated extraversion and authenticity also rated the appropriateness of the speakers' emotional displays with five items, on a scale ranging from 1 (strongly disagree) to 7 (strongly agree). The items began with: "the speaker's emotional displays appear to be …" and were "appropriate to the situation," "reasonable for the situation," "as one would expect in the situation," "as required in the situation," and "relevant to the situation" (adapted from Van Kleef & Côté, 2007). Ratings were aggregated across raters for each video in order to create a composite score that represents the appropriateness of each entrepreneur's expressions (M = 5.17, SD = .67; α = .96). An average rwg(j) of .86 indicates high agreement between raters.

For example, coders rated one entrepreneurs' passion expression as appropriate when they explained why they had a personal connection to their pitch. Another appropriate expression of passion involved an entrepreneur taking the dragons' perspective and attempting to get them to understand why the entrepreneur was so passionate about this idea. As a contrasting example, coders rated one entrepreneur's expression of passion as inappropriate when their passionate expression interrupted the dragons' clarification questions. Another inappropriate expression of passion involved an entrepreneur making the dragons feel uncomfortable by directing their passionate expression toward that one dragon, while ignoring the other four.

Control Variables. We used the same control variables as in Study 1 (gender, ethnicity, industry, social responsibility, extraversion, and authenticity) and analyses were again nested within seasons.

Results and Discussion

As in Study 1, we standardized all non-binary variables prior to analyses. Bivariate correlations are presented in Table 8. We tested whether the appropriateness of the entrepreneurs' emotional displays moderates the relationship between entrepreneurs' passion and investors' support. We conducted hierarchical logistic regressions with entrepreneurs nested within seasons. We predicted support from passion, appropriateness, and their interaction, and find a statistically significant interaction (b = .735, SE = .329, p = .026; see Model 1, Table 10). Simple slopes analyses reveal that expressions of passion had a statistically significant and positive relationship with offered support when appropriateness was high (+1 SD; B = .95, SE = .35, p = .008; see Figure 11) but that there was no statistically significant relationship between expressions of passion and offered support when appropriateness was low (-1 SD; B = -.52, SE = .41, p = .21).

The interaction between entrepreneurs' passion and appropriateness on offered support held in all model specifications, when we added, in a series of stepwise regression models, gender and ethnicity (b = .730, SE = .329, p = .027; Model 2, Table 10), industry, venture social responsibility, and number of entrepreneurs (b = .801, SE = .331, p = .016; Model 3, Table 10), as well as perceived extraversion and authenticity (b = .748, SE = .331, p = .024; Model 4, Table 10). Additional analysis also reveals that there was no statistically significant interaction between extraversion and appropriateness (b = .108, SE = .217, p = .618) or between authenticity and appropriateness (B = -.309, SE = .293, p = .292) on received support. These results suggest that appropriateness modifies the effects of expressing passion in particular.

Insert Table 10 and Figure 11 about here

Study 3a revealed a boundary condition of the relationship between expressions of passion and offered support. Expressing passion was associated with a higher likelihood of financial support by investors only when entrepreneurs' expression of passion was deemed appropriate. When entrepreneurs' expression of passion was deemed as inappropriate, expressing passion was not associated with a higher likelihood of support.

Study 3b: Moderation by Appropriateness

To establish causal evidence for the moderation by appropriateness, we next conducted an experimental study where we manipulated both expressions of passion and the appropriateness of that expression. We reasoned that jobs often come with roles and expectations (Dierdorff & Morgeson, 2007), some of which may include (or actively exclude) expressions of passion. To this extent, we expected that an employee's job would determine whether expressions of passion are considered appropriate, and therefore that the interpersonal benefits of passion would be bounded by job type.

We conducted a pilot study with 64 participants from MTurk (M_{age} = 33.21, 46.4% male) where we asked participants to provide open-ended responses, which revealed that two jobs which are similar in their nature—accountants and consultants—vary in the perceived appropriateness of expressing passion for work. For example, a participant in this pilot study stated that: "accountants should remain stoic and emotionless" while another participant mentioned that: "accountant[s] should not show a degree of passion that affects his job as he is to remain objective and non-biased." In contrast, participants in the pilot study indicated that expressing passion was more appropriate for consultants, with one participant writing: "I think if I were to hire a consultant, I would want them to be passionate about what they were advising me to do -- I would want them to be so sure of their ideas that they were passionate about them" while another mentioned: "I do believe that it is common for a consultant to

express passion at work. I believe that consultants should love what they do and be experts in their field."

To provide quantitative evidence that expressing passion is more appropriate for consultants than accountants, we asked an additional sample of 89 participants from MTurk (M_{age} = 35.97, 49.8% male) to rate the appropriateness of expressing passion for either consultants or accountants on the following item, rated on a scale of 1 (strongly disagree) to 7 (strongly agree): "To what extent do you agree with the following statement: For a consultant [an accountant], expressing passion is very appropriate. That is, for the kind of work consultants [accountants] do — such as producing detail-oriented, objective reports — it is commonly expected of consultants [accountants] to express passion at work." A *t*-test revealed that participants believed that it is more appropriate for consultants (M = 5.53, SD = 1.03) than accountants (M = 4.70, SD = 1.33; $t(87) = 3.31$, $p = .001$, $d = .70$) to express passion.

Because expressing passion is seen as more appropriate for consultants than accountants, we predicted a stronger association between expressing passion and receiving support for consultants than for accountants. In addition, we also measured status conferral as a mediator to test a mediated moderation model, whereby expressing passion increases support through increased status conferral for consultants more so than for accountants.

Method

Sample and Design. A total of 201 full-time employees located in the United States (M_{age} = 35.97, 49.8% male) were recruited via Amazon's Mechanical Turk. Participants were randomly assigned to a 2 (passion: high, neutral) by 2 (appropriateness via job type: consultant, accountant) between-participants design.

Appropriateness Manipulation. We manipulated the appropriateness of expressions of passion by varying the job type. To do so, we varied whether a coworker in a scenario was

described as an accountant or a consultant. No other aspect of the job description varied between both conditions. The text read:

> Imagine that you are **an accountant [a consultant]** at a large multi-national company. You work on client projects that can often last several months. During this time, you frequently work at the client's offices and collaborate with employees of the client company. Your company usually gets hired in order to produce reports that help shape the company's future direction.
>
> It's the beginning of the workweek and you're having a conversation with Mark, one of your coworkers who is also **an accountant [a consultant]** at your company. Mark has been working with you on your current project for the last few months. He plays an important role in shaping the report the client asked for.

Passion Manipulation. Similar to Study 2, we manipulated passion by altering the coworkers' description as follows:

> In the time that you and Mark have worked together, you have often noticed that Mark tends to express himself **more reserved** [**fairly passionately**]. At several client meetings you and Mark attended, Mark was commonly **fairly soft-spoken [aptly passionate]**. Indeed, when Mark recently presented some of the key findings of the report to the client, Mark expressed himself **relatively distantly [with a lot of passion]**.

Status Conferral. We assessed status conferral with the same three-item scale as in Study 2 ($\alpha = .91$).

Offered Support. To assess whether participants offered their coworker support, we used the same two-item scale as in Study 2 ($r = .77$).

Manipulation Check for Appropriateness. To further provide evidence that expressing passion is less appropriate for accountants than consultants, participants were asked at the end of the study to rate their agreement with the following statement (depending on their condition): "For **an accountant [a consultant]**, expressing passion is very appropriate. That is, for the kind of work **accountants [consultants]** do, it is commonly accepted of **accountants [consultants]** to express passion at work" on a scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Results

Manipulation Check. We first tested whether participants believed it was less appropriate for accountants to express passion than for consultants. As expected, and consistent with our pilot study, expressing passion was rated as less appropriate for accountants (M = 3.85, SD = 1.52) than for consultants (M = 5.33, SD = 1.10; $t(199) = 7.90$, $p < .001$, $d = 1.11$).

Offered Support. We then tested whether offered support varied as a function of both passion and appropriateness. An ANOVA revealed a statistically significant two-way interaction, $F(1, 197) = 4.72$, $p = .031$. Subsequent analyses reveal that passionate accountants (M = 5.22, SD = 0.96) received less support than passionate consultants (M = 5.77, SD = 1.04), $t(197) = 2.73$, $p = .007$, $d = .39$ (see Figure 12). Expressing passion drew more support for employees in jobs in which it is appropriate to express passion, and less support for employees in jobs in which it is inappropriate to express passion. However, for coworkers who were not described as passionate, there was no statistically significant difference between accountants (M = 5.07, SD = .93) and consultants (M = 5.00, SD = 1.14; $t(197) = .35$, $p = .727$, $d = .05$).

Insert Figure 12 about here

Status Conferral. We next tested whether status conferral varied as a function of both passion and appropriateness. An ANOVA revealed a statistically significant two-way interaction, $F(1, 197) = 9.08$, $p = .003$. Passionate accountants (M = 4.46, SD = 1.04) were admired and respected less than passionate consultants (M = 5.34, SD = .89), $t(197) = 4.53$, $p < .001$, $d = .65$. However, for coworkers who were not described as passionate, there was no statistically significant difference between accountants (M = 3.92, SD = 1.13) and consultants (M = 3.97, SD = .80), $t(197) = .25$, $p = .802$, $d = .04$.

Mediated Moderation on Offered Support. Finally, we examined the indirect effect from the interaction to offered support through status conferral. We find that the indirect effect of the interaction between job type and passion condition on offered support through status conferral was significant (95% CI = [.057; .378]; 10,000 bootstrapped iterations). That is, passion was more strongly related to offered support through status conferral when the coworker was described as a consultant ([.273; 1.000]) than when the coworker was described as an accountant ([.011; .300]).

Discussion

Study 3b provides further causal evidence that the interpersonal benefits of passion for work are not attained when the expression of work passion is deemed inappropriate. Taken together, Studies 3a and 3b establish an important boundary condition of expressions of passion for work: when perceivers believe that the expression of passion is inappropriate, they admire those who express passion less, and as a result, are less likely to support them.

Study 4: Status Conferral is Moderated by Agreement with the Target

An additional factor that we propose moderates the interpersonal effects of expressing passion concerns the focus of that passion. More specifically, we suggest that status conferral to passion expressers is contingent on agreeing with their cause. Disagreeing with the cause of their passion may impede the development of feelings of admiration that expressing passion normally elicits.

Method

Sample and Design. We pre-registered the study, sample size, exclusion criteria and analysis plan (http://aspredicted.org/blind.php?x=2wx774). We aimed to recruit 450 participants from Amazon's Mechanical Turk and expected 50 participants to meet our exclusion criteria. We were successful in recruiting 458 participants, and 52 met our

exclusion criteria, for a final sample size of 406 (M_{age} = 38.18, 49.14% female). Participants were randomly assigned to a one-factor (passion versus control) between-subjects design.

Passion Manipulation. In both conditions, participants first read the following text:

> Imagine you were hired by an international mid-sized company about two years ago. So far, you have done an excellent job, and you think you are very capable at your job. It's the beginning of the workweek and you're having a conversation with one of your coworkers. This coworker is well known to be highly skilled at their job. As a result, they are typically seen as competent.
>
> During the conversation, your coworker talks to you about a presentation he is scheduled to give to senior management next week. In the presentation, he is proposing that the company invest in carbon offsets, i.e., that it invests in environmental causes to neutralize the carbon emissions arising from their work.

In the *passion* condition, participants were additionally told:

> In your interaction with him, it becomes evident that your coworker is extremely passionate about pro-environmental causes. You specifically remember him saying "I am so excited that this job allows me to work on things that matter so much to me."

In contrast, in the *control* condition, participants were instead told:

> In your interaction with him, it becomes evident that your coworker believes that this is the most cost-efficient way to meet required environmental guidelines. You specifically remember him saying "I think that this investment makes the most business sense for the company."

Status Conferral. We measured the extent to which participants admired and respected their coworker with the same three-item scale as in Study 2 (e.g., "I admire my coworker"; van de Ven et al., 2009; $\alpha = .83$).

Political Identification. Prior research has found that political ideology is closely associated with pro-environmental attitudes and behaviors (Weber & Stern, 2011). We therefore measured agreement with the target through participants' political attitudes with the stem, "Generally speaking, I see myself as…" with a scale ranging from 1 (A strong Republican) to 7 (A strong Democrat). Participants could also select "N/A" to indicate they do not fall on the political spectrum and were subsequently removed from the analyses (as pre-registered; and similar to Campbell & Kay, 2014).

Results and Discussion

We tested whether the interaction of passion condition and political identification predicted status conferral and find a statistically significant interaction effect (B = .144, SE = 049, p = .003; see Figure 13).

Insert Figure 13 about here

To illustrate the nature of the interaction, Table 11 presents the effect of the passion condition at each whole-number value of political identification (the "floodlight approach"; (Spiller, Fitzsimons, Lynch Jr, & McClelland, 2013). When participants identified as Republican (i.e., values ranging between 1-3), the passion condition has no statistically significant effect on status conferral. However, as participants identified as Democrat (i.e., values ranging between 5-7), the passion condition has a statistically significant and positive effect on status conferral.

Insert Table 11 about here

Study 4 reveals that status conferral is contingent on observers agreeing with the target of the expressers' passion. Expressions of passion did not increase observers' admiration when they disagreed with their target of passion.

Study 5: Expressing Passion for Work Backfires in Competitive Contexts

Our final study explored a context where expressions of passion may backfire and lead to *decreased* support from others: zero-sum competitions (Johnson & Johnson, 1989; Murayama & Elliot, 2012; Pierce et al., 2013). We propose that expressing passion backfires in zero-sum settings because when observers perceive passion in others, they are likely to

infer that the expresser is dedicated in their pursuit of something that is personally important to them (Kelan & Mah, 2014; Schlenker et al., 2008). This dedication—in a zero-sum context—may harm one's potential success and create perceptions of threat regarding one's chances of winning. Hence, in contexts where there is competition, individuals perceived as passionate for their work may receive less support from others. That is, passion can be a glue that binds others together, but it can also serve as a gasoline that inflames competitive feelings (Pierce et al., 2013). We therefore tested whether being perceived as passionate can backfire when competing against others and receive even less support from those competitors.

Method

Participants and Design. We recruited 380 full-time employees in the United States (M_{age} = 36.43, 51.84% female) via MTurk. Participants were randomly assigned to one cell in a two-by-two design, where we varied context (cooperation, competition) and coworker passion (neutral, high).

All participants read a scenario describing that they have been working in a company for a few years and are under consideration for a promotion. Participants were told that as part of their role, they were asked to review a project proposal by one of their coworkers. If they recommend this project, it is very likely that their coworker will receive funding for it. If they choose not to recommend this project, it is very likely that their coworker will not receive funding for it.

Context Manipulation. We manipulated whether participants were competing against their coworker by changing the information participants received. In the *cooperation* condition, participants received a text which read:

> You and Bryce are not competing for a promotion. Because Bryce is in a different department, both of you can be promoted. For that reason, you are not at all worried that Bryce is also under consideration for a promotion this year. If Bryce's project

> succeeds, this is good for you, because it benefits the company. His success won't alter your chances of being promoted.

In contrast, in the *competition* condition, participants received a text which read:

> You and Bryce are competing for a promotion. Even though Bryce is in a different department, only one of you can be promoted. For that reason, you are very worried that Bryce is also under consideration for a promotion this year. If Bryce's project succeeds, this is bad for you, because that means you will not get the promotion you desire.

Passion Manipulation. We additionally altered how the coworker was described. In both the *control* and the *passion* condition, participants read the following text:

> He has been with M&N the same amount of time as you, and as a result, is also under consideration for a promotion this year. You think that you are a little more deserving of a promotion because you are somewhat more competent than Bryce.

Participants in the *passion* condition additionally received the following text:

> In addition, you know that Bryce is extremely passionate for his work; the small amount he lacks in competence, he more than makes up for with his very high passion for work.

Offered Support. We assessed whether participants would offer their coworker support by asking them to respond to the following question on a scale ranging from 1 (extremely unlikely) to 7 (extremely likely): "How likely are you to recommend Bryce's project to senior management for funding?".

Results

We tested whether the context and passion manipulations interact to predict offered support. An ANOVA revealed a statistically significant 2-way interaction ($F(1, 376) = 20.26$, $p < .001$). Consistent with prior studies, we found that within cooperative contexts, passionate coworkers were offered more support ($M = 5.54$, $SD = 1.10$) than neutral coworkers ($M = 4.97$, $SD = 1.36$), $t(376) = 3.07$, $p = .002$, $d = .32$. Further, as expected, when the context was competitive, passionate coworkers received less support ($M = 3.33$, $SD = 1.42$) than neutral coworkers ($M = 3.95$, $SD = 1.28$), $t(376) = 3.29$, $p = .001$, $d = .34$ (see Figure 14).

Insert Figure 14 about here

In competitive contexts passionate individuals were less likely to receive support. Expressions of passion became threatening when they came from a competitor, and individuals chose to reduce their support for these passionate competitors.

General Discussion

Six studies tested the contingent interpersonal effects of expressing passion for work. Study 1 used entrepreneurial pitches in a field setting to test whether individuals who express passion have an increased probability of receiving financial support. This study also offered discriminant validity of expressing passion from extraversion and authenticity. Study 2 provided empirical support for one mechanism underlying the passion expression → receiving support relationship: those who express passion are admired more and conferred higher status. Studies 3 and 4 examined boundary conditions under which the interpersonal benefits of passion for work are tempered. Studies 3a and 3b found that when the expression of passion for work was deemed inappropriate, perceivers did not confer status and subsequently did not support individuals who express passion. Study 4 finds that the status conferred onto the expressers of passion depend on observers' agreement with the cause of that passion. Finally, Study 5 documented a negative interpersonal outcome of work passion: in competitive contexts, expressions of passion become a threat and lead people to support passionate competitors less.

Theoretical Implications

The current research makes three primary contributions. First, this work responds to calls for a more holistic view of passion for work (Perrewé et al., 2014) by considering how passionate individuals attain professional success. We proposed an interpersonal perspective

that highlights how expressing passion leads to increased status conferral and support from others. In so doing, we extend prior research on passion which has emphasized that the beneficial effects of passion for work transpire due to intrapersonal characteristics (Jachimowicz et al., 2018), often focusing on engagement and perseverance (Curran et al., 2015; Duckworth et al., 2007; Vallerand et al., 2003; Zigarmi et al., 2009). Although these studies have significantly advanced our understanding of how passion helps individual achieve success, this intrapersonal perspective has not captured how passion can breed success through interpersonal processes. Instead, we proposed and found evidence that the success of individuals who are passionate is multiply determined, traveling through both intrapersonal and interpersonal pathways. Indeed, the interpersonal effects of passion are sizable: a prior meta-analysis finds that the intrapersonal effects of passion on objective performance have a Cohen's *d* of .20 (Curran et al., 2015). This is comparable to the effect of the passion expression on offered support in our Study 2 (*d* = .26).

Second, our studies distinguish the effects of expressing passion from related constructs, thus highlighting the unique benefits that expressing passion confers. Our findings therefore help provide discriminant validity for the expression of passion, while ruling out alternative explanations related to similar but distinct constructs. In particular, whereas prior research has focused on providing discriminant validity by contrasting the intrapersonal experience of passion (e.g., to intrinsic motivation; Birkeland & Buch, 2015; Marsh et al., 2013; Perrewé et al., 2014; Zigarmi et al., 2009), the current research contrasts the interpersonal expression of passion for work with other interpersonally related constructs of perceived extraversion and authenticity. This nuanced distinction sheds additional clarity on the definition and nomological network of passion, aiding the identification of what passion is and is not—a topic of debate amongst scholars in this field (Perrewé et al., 2014). We also identified that the effects of expressing passion affect one fundamental need, status, but not

another fundamental need, belonging. While both status and belonging increase whether a person offers their support to another person (Anderson et al., 2015), our finding that the interpersonal effects of expressing passion travel through status conferral, but not through belongingness, provide further insight into the mechanism underlying how passion leads to beneficial outcomes.

Third, we identify that the interpersonal benefits of expressing passion are not universal; rather, its influence is contingent on a variety of factors across the observer, the expresser, and the context. For example, we find that the interpersonal effects of passion are based both on the appropriateness of the expression of passion, as well as the perceiver's agreement with the target of the expresser's passion. Similarly, we highlight that expressing passion can lead to negative outcomes. The very reasons we admire those who express passion in cooperative contexts can become threatening in zero-sum contexts because a competitor's expression of passion harms one's own chances of succeeding. While prior research on passion primarily focusses on its positive consequences (e.g. Chen et al., 2009; Wolf et al., 2016), the current research extends these findings by identifying potential contexts where expressing passion can backfire to harm an individuals' ability to succeed.

Future Directions and Limitations

A broader contribution of our research program is that it helps provides a basis for future research that further investigates the consequences of expressing passion. For example, subsequent research in this domain could examine whether interpersonal processes of passion also trigger intrapersonal ones in observers. Individuals who express passion may also shape observers' own self-regulation and motivation (Ryan et al., 1983), such that expressions of passion inspire observer's own goal pursuit (Sweetman, Spears, Livingstone, & Manstead, 2013), or even lead observers to imitate the goals of individuals who express passion (Milyavskaya, Ianakieva, Foxen-Craft, Colantuoni, & Koestner, 2012). Given that passion is

readily recognized by others (Cardon et al., 2009; Chen et al., 2009), these sparks are likely to be more common than previously appreciated.

In our last study, we find that expressing passion can produce negative reactions in competitive contexts. However, it is possible that expressing passion may even have negative consequences in some cooperative contexts. For example, the admiration and respect prompted by expressions of passion may lead to more lenient ethical standards (LaFrance & Hecht, 1995), such that individuals who are perceived as passionate are granted more moral credit. They may thus be more allowed to engage in counter-normative conduct, including unethical behavior. Likewise, excessive levels of admiration and respect can lead observers to suppress their emotional expression, which can be taxing for them (Menges, Kilduff, Kern, & Bruch, 2015). Future research could therefore further examine the negative consequences of expressing passion and may investigate how those in turn impact the observer.

The current investigation focusses on expressions of passion within a work context, but individuals can express passion toward a wider variety of targets, such as hobbies, relationships, and other activities (Bonneville-Roussy, Lavigne, & Vallerand, 2011; Curran et al., 2015; Mageau et al., 2009; Vallerand et al., 2003). Although the majority of the jobs selected in this study are more benign in terms of their social acceptability (e.g., entrepreneurs and consultants), it stands to reason that expressions of passion in less acceptable domains may not spark admiration and respect from others. For example, one can imagine that expressing passion for one's work as a janitor will elicit different reactions than expressions of passion for one's work as a nurse, even if both are expressed in the same context (e.g., a hospital). Hence, one potential fruitful direction could examine how expressions of passion in socially stigmatized jobs influences perceivers' admiration and support (Ashforth & Kreiner, 1999).

We assume passionate individuals actually express their passion, and that others are accurate in perceiving passionate displays. To the first point, future research could examine the interpersonal consequences of faking or hiding passion. That is, individuals may engage in behaviors to be seen as passionate by others, even if they are not genuinely passionate for a particular target. If perceivers view others' expressions of passion as genuine, then our theory and findings would predict that the beneficial interpersonal consequences would transpire, given that the boundary conditions previously outlined are met. However, perceivers may recognize that an expresser is not genuine in their passion for a target, which could lead to negative interpersonal outcomes (Rogers, Zeckhauser, Gino, Norton, & Schweitzer, 2017). For example, individuals who are caught faking their passion may be seen as cunning and subsequently be punished more by others. To the second point, we note the possibility that individuals may genuinely experience passion, but not express it in a way that is readily recognizable by others (Cardon et al., 2009; Chen et al., 2009). Our theory and findings would predict that if expressions of passion are not identified by observers, then the beneficial interpersonal consequences would not transpire. Future research could further explore, for example, which individual and contextual characteristics determine whether expressions of passion are identified as such.

Future research could also explore how expressions of passion intersect with charisma, defined as a "symbolic leader influence rooted in emotional and ideological foundations" (Antonakis, Fenley, & Liechti, 2011, p. 376). While expressions of passion and charisma likely correlate as they share similar affective elements, charisma—in contrast to passion—is commonly associated with leadership positions (Agle, Nagarajan, Sonnenfeld, & Nagarajan, 2006; Conger & Kanungo, 1987; Fanelli & Misangyi, 2006; Jacquart & Antonakis, 2015). Further studies could investigate, for example, whether the appeal of charisma in leaders is further enhanced by expressing passion.

Lastly, future work could expand on our empirical findings. First, our studies do not measure whether the increased support devoted to individuals who express passion also leads to their increased success. However, meta-analyses have shown that receiving help and advice are crucial components of success (Ng et al., 2005). We hope that future research further investigates how the increased support given to individuals who express passion contributes to their success. Second, in all but two of our studies (Studies 1 and 3a), our measure of support was scenario-based, such that participants do not incur a cost for offering their willingness to offer support, and therefore provides a constraint to external validity. We encourage future research to further investigate the interpersonal benefits of expressing passion with measures that capture actual support, i.e., where offering support requires time, effort, and opportunity. For example, future laboratory research could investigate individuals' investment of time or resources (such as a proportion of a bonus payment) to help confederates who express high or low amounts of passion. Further, future field studies could investigate employees' investment of time and effort to help coworkers who express different degrees of passion. Third, we only measure one mechanism for the interpersonal benefits of expressing passion, status conferral, while ruling out an alternative mechanism, belongingness. Like most reliable effects, there are likely additional pathways which future research can examine. For example, those who express passion can be seen as more motivated and supporters will believe their investment is more likely to pay off.

Fourth, the current research reports studies conducted in the United States and Canada, where passion is a highly admired attribute. It is likely that perceptions of passion vary throughout different cultures (Jachimowicz & McNerney, 2015), which may have subsequent implications for how observers react to those who express passion. Fifth, while the entrepreneurial pitches in Studies 1 and 3a represent a fruitful research context (Kanze, Huang, Conley, & Higgins, 2018), they are limited in that they do not capture passion

expressions as they may occur in the workplace, but instead in a (televised) setting. Indeed, future research should explore how passion is expressed by employees in day-to-day work settings. We also cannot rule out the possibility that the Dragons' Den producers edited the pitches in such a way as to show segments of more passion expression in more successful pitches than in less successful pitches. We do, however, note that this is highly unlikely, given that our coding was on the pitch itself, not the subsequent Q&A. Sixth, future research should also further disentangle perceptions of passion in others from competency assessments (Cuddy, Glick, & Beninger, 2011; Freedman & Phillips, 1985) to further pinpoint the unique path through which expressing passion may lead to reduced overall support in zero-sum competitions. Finally, we encourage future research to explore how passion is inferred from other behaviors beyond physical expressions; for example, subsequent studies could investigate whether the engagement in long work hours, or other types of persistence lead to the perception of passion by observers, and whether similar beneficial interpersonal effects transpire.

Conclusion

The present research has offered an interpersonal understanding for why passionate individuals achieve success. People who achieve the highest levels of success are often said to have attained their lofty status because of how passionate they are for their work. This sentiment is both exactly right and only half of the story; it captures the intrapersonal effects of passion, describing how it infuses individuals with energy and perseverance. But this perspective omits the interpersonal status conferral and support that expressing passion can inspire in others. The current research suggests one additional reason why passionate individuals are successful: when others perceive them as expressing passion, they are more likely to be admired and respected by and receive support from them. However, these expressions of passion are contingent on several factors that rest within the person expressing

passion, the observer perceiving passion, and the context that passion is expressed in. Passionate individuals thus do not become successful on their own—their passion for work makes it more likely others will help them along the way.

GENERAL DISCUSSION AND CONCLUSION

This Dissertation aimed to theoretically, methodologically, and empirically advance a dynamic perspective on passion. Chapter 1 explored a dynamic perspective of passion through long-term changes in passion over time, investigating how employees pursue their passion. I found that employees differ in their lay beliefs about how passion is pursued, such that some employees believe that passion is pursued by engaging in activities that reflect that they care about (i.e., holding a *Values* lay belief), while others believe that passion is pursued by engaging in activities that provide a positive affective experience (i.e., hold a *Feelings* lay belief). Across three correlational and experimental studies, I found that employees who hold a *Values* lay belief were more successful in their pursuit of passion and subsequently less likely to quit their job, in comparison to employees who endorsed a *Feelings* lay belief. These findings support a dynamic perspective of passion by highlighting the long-term changes passion can undergo over time.

Chapter 2 explored a dynamic model of passion by investigating the short-term changes of passion over time, i.e., the extent to which passion varies from day to day. I proposed that variation in daily passion levels were systematic, and that this variation possessed both discriminant and predictive validity. Across a longitudinal event sampling study with 526 employees, I find that increased passion variability, particularly frequent low passion days relative to the mean, is associated with worse evaluative outcomes, such as increased emotional exhaustion and lower job satisfaction. In contrast, I find that increased passion variability, particularly high passion days relative to the mean, is associated with increased motivation, such as increased determination and performance. These findings support a dynamic perspective on passion by highlighting the consequences of short-term variations of passion.

In Chapter 3, I applied a dynamic perspective of passion to address shortcomings in how passion is measured in prior research. Specifically, prior studies have found that the relationship between grit—defined as passion and perseverance—and performance is beset by contradictory evidence. I proposed and found that one reason why the evidence is mixed is because the measurement of grit has focused on perseverance and failed to capture passion's dynamic nature. Indeed, two studies I found that the combination of perseverance (as assessed through the grit scale) and a scale which explicitly incorporates passion's dynamic nature is robustly associated with increased performance. These studies highlight the value of a dynamic approach to passion in resolving prior mixed evidence linking grit to performance.

Finally, in Chapter 4, I adopt a dynamic perspective on passion at the interpersonal level. Prior evidence exploring the link between expressions of passion and beneficial outcomes have been mixed. I proposed that this evidence is mixed because previous studies have failed to take into account the social dynamics of expressions of passion, i.e., the context in which passion is expressed, as well as the characteristics of the expresser and observer. That is, while on the whole observers confer status on and are subsequently more willing to offer those who express passion their support, these findings are qualified by several factors: observers admire those who express passion less when their passion is judged as inappropriate, or when they disagree with the target of expresser's passion; the admiration of passion in others can even backfire when observers are competing against expressers, lowering overall levels of support. These findings therefore establish the important role that a dynamic perspective to passion plays at the interpersonal level as well.

Theoretical and Empirical Implications

This dissertation makes several contributions that establish a dynamic perspective of passion within the organizational behavior literature.

Short- and Long-Term Variations in Passion. The first overarching contribution of this dissertation is to highlight that alongside prior research focusing on a static perspective, passion may also be subject to both short- and long-term change processes. This view connects research on passion with a broader tradition exploring variability in affect, self-esteem, and personality (Eid & Diener, 1999; Fleeson, 2004; Fleeson & Leicht, 2006; Houben, Van Den Noortgate, et al., 2015; Kernis & Waschull, 1995; Kernis et al., 1993), and brings forward theoretical connections to research on the hedonic treadmill (Diener et al., 2006; Frijda, 1988), affective forecasting (Gilbert & Ebert, 2002; Wilson & Gilbert, 2003, 2005), job crafting (Berg et al., 2010; Wrzesniewski & Dutton, 2001), self-affirmation (Cohen & Sherman, 2014; Sherman & Cohen, 2006; Steele, 1988), and uncertainty management (van den Bos & Lind, 2002).

These theoretical and empirical connections provide the foundational web that the dynamic view of passion proposed in this current dissertation rests on. Within this framework, variation in passion over time is both a dependent variable, exploring when and how passion varies over time; as well as an independent variable, investigating when and how changes in passion over time are related to consequential outcomes. The studies presented here, for example, highlight that long-term variation of passion is predicted by employees' lay beliefs, i.e., whether employees pursue their passion by engaging in behaviors that reflect what they care about or behaviors that reflect positive affective experiences (Chapter 1).

Relatedly, Chapter 2 highlights that short-term variation in passion is not always associated with negative outcomes, but that the relationship between short-term passion variability depends on the valence of passion's variance, i.e., whether employees frequently experience levels of passion that are lower than their average, and which is associated with negative outcomes, or whether employees frequently experience levels of passion that are

higher than their average, and which is associated with favorable outcomes. These findings illustrate the usefulness of a dynamic approach to passion: In addition to providing a more complete account of employees' experience of passion, understanding the variation of passion over time can help resolve existing empirical and theoretical tensions, and more thoroughly establishes the study of passion within the organizational behavior literature.

Social Dynamics. The current research also highlights the importance of considering variations pertaining to the perceiver, expresser, and environment when exploring the interpersonal effects of passion. Prior research investigating how expressions of passion influence perceiver's perceptions have primarily adopted a static perspective, and have neglected to consider how personal and situational dynamics influence the way that expressions of passion are interpreted and understood. Indeed, the current dissertation (in particular, Chapter 4) highlights that expressions of passion do not occur in isolation but are instead part of a broader social fabric. This perspective situates passion within the broader context of social emotions (Hareli & Rafaeli, 2008; Hareli & Weiner, 2002; Tangney & Fischer, 1995) and their interplay within organizations (Barsade & O'Neill, 2014; Knight, Menges, & Bruch, 2018).

Measurement Considerations. In addition, the current dissertation also highlights important measurement considerations that future research needs to both incorporate and address. Commonly used measures, such as the harmonious passion scale (Vallerand, Blanchard, et al., 2003) or the entrepreneurial passion scale (Cardon et al., 2013), may not adequately capture an employee's experience of passion for their work. The chapters in this dissertation highlight the need for precise and thoughtful measurements of passion, which can include the passion attainment scale (see Chapters 1 and 3) or measures of passion at the daily level (see Chapter 2). In addition, future research should include related but distinct

measures to passion to highlight the unique effects of passion, and provide further precision to the study of passion within the organizational behavior literature.

Future Directions

This dissertation highlights four streams of research that future investigations could undertake to further advance our understanding of passion. First, future research could adopt a dynamic perspective at a variety of time-scales, ranging from both short-term (e.g., task-by-task or day-by-day) to longer-term time-scales (e.g., over months or years), to explore similarities and differences in the underlying processes of how passion varies. For example, research could answer questions such as, "why do employees fall out of passion?," "what factors influence whether employees are able to maintain their levels of passion?," "when and how can employees regain their passion after they have fallen out of passion" or "what is an organization's role in helping their employees pursue, maintain, and regain their levels of passion?". In so doing, research could provide both a theoretically novel and practically relevant perspective to employees' pursuit and experience of passion for their work.

Second, future research could explore passion at multiple levels of analysis. In this dissertation, I focus on the intrapersonal (Chapters 1-3) and interpersonal (Chapter 4) effects of passion, but passion may also have important implications at the team- and organizational level, as well as interactions between different levels of analysis. For example, relationships between individuals—such as subordinates and supervisors—may be influenced by varying levels of passion. Similarly, varying levels of passion within and across team may lead to changes in team dynamics, including in conflict, cooperation, competition, and rivalry (Kilduff, Galinsky, Gallo, & Reade, 2016; Pierce et al., 2013). These dynamic interplays within and across levels of analyses may provide an important research stream to better understand how passion manifests throughout organizational levels.

Third, while prior research has predominantly focused on the beneficial effects of passion, future studies could also further explore the dark side of passion. For example, because of its' close link to identity, varying levels of passion are particularly detrimental to employees' views of themselves (see Chapter 2). This may influence employees' likelihood of engaging in counterproductive or even unethical work behaviors (Kouchaki & Desai, 2015). In addition, higher levels of passion may also be associated with self-inflated views, as passion becomes strongly internalized into a persons' sense of self and becomes a reference point for self-evaluations. Thus, higher levels of passion may reduce employee's likelihood of seeking out negative information and increasing the likelihood of seeking out information that confirms their self-view. Likewise, passion may also be associated with intrapersonal emotional and interpersonal relational costs. As a result, a more thorough investigation of the negative effects of passion could provide a much-needed counterpoint to the predominantly positive view of passion currently present in the literature (Pollack et al., *in press*).

Finally, future research could also further investigate the antecedents of passion and its' variability. While the current research explores the role of lay beliefs (Chapter 1), situational and organizational characteristics as well as interpersonal aspects could influence how passion develops, changes, and is maintained over time. For example, subsequent studies could explore when and how employees internalize the pursuit of passion, and how the different lay beliefs on how passion is pursued are formed (e.g., extending Chapter 1). Future research could also explore the attributions employees make to their varying levels of passion over time, and how different attributions are either helpful or harmful in their maintenance of passion levels (e.g., extending Chapter 2). Likewise, future studies could investigate how passion in others inspire employees' interest in pursuing their passion, as well as how others can help support a focal employee's pursuit of passion (e.g., extending

Chapter 4). These type of studies could further supplement our understanding of how passion is developed and pursued.

Conclusion

Across four chapters, the research presented here extends prior static conceptualizations of passion by highlighting that passion can vary at both the short- and long-term, that these variations are predicted by lay beliefs and their psychological and social capital, and have important implications for employees' career decisions, job evaluations, and job performance. This dynamic view of passion has implications for how passion is measured, which resolves prior studies that have been beset by contradictory findings. In addition, these dynamics of passion also occur at the interpersonal level, evident through the varied ways in which expressions of passion influence outcomes depending on factors that are present at the expresser, observer, or situation level.

Taken together, this dissertation highlights that passion's dynamic nature is an understudied, organizationally relevant, and fruitful topic for future research. While some of the questions that motivated this dissertation at the outset have been answered through this inquiry, the research process has also raised many more new questions. I look forward to answering these and related questions in the future.

TABLE 1

Examples of Coded Quotes from Graduation Speeches (Chapter 1)

Theme	Example
***Feelings* Lay Belief**	
You pursue your passion by…	
… making work feel like leisure.	"I didn't need to think about it. I knew what intellectual passion felt like — because I'd felt it here, at Princeton — and I wanted to feel it again."
… working on things you are excited about.	"Passion is the ability to get excited about something."
… never being bored at work.	"Eventually find what you love to do, and pour yourself into it. You do not want to dread driving to work every day."
***Values* Lay Belief**	
You pursue your passion by…	
… identifying aspects that allow the expression of one's values	"I know many of you are still searching; this is OK. It is a process that takes time and significant life experience and it may take a few more years for you to find the thing that will be your life-long passion."
… finding activities at work that are meaningful	"You have to give meaning to your life. And to do so, you have to embrace with passion the things that you believe in, and that you are fighting for."
… dedicating time to engage in significant work activities	"It is absolutely essential that you ask yourself what it is that you really care the most about? What are your passions? It is actually easier than it sounds because when we are truly following our hearts we are tapped into our deepest passions in life."

TABLE 2

Study 1: Means, Standard Deviations, and Correlations (Chapter 1)

	Variable	M	SD	1	2	3	4	5	6	7	8
1	Gender	0.47	0.50								
2	Age	35.81	11.19	.01							
3	*Feelings*	4.41	1.39	-.04	-.07						
4	*Values*	5.49	1.00	.04	-.02	.43**					
5	Passion Attainment	4.57	1.52	.09	.02	.11	.56**				
6	Turnover Intentions	3.27	1.79	.08	.01	-.13	-.49**	-.63**			
7	Intrinsic Motivation	4.47	1.87	-.08	-.08	.28**	.59**	.49**	-.67**		
8	Meaningfulness	4.33	1.80	-.13	-.06	.25*	.52**	.44**	-.63**	.87**	
9	Neoclassical Calling	4.14	1.58	-.12	-.06	.24*	.51**	.48**	-.63**	.89**	.90**

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

TABLE 3

EFA Factor Loadings of Work Passion Pursuit Lay Belief Scale (Chapter 1)

	EFA Factor Loadings	
Item	***Feelings***	***Values***
1. "… to make my work leisurely"	.81	.08
2. "… to feel like I never work a day in my life"	.63	.17
3. "… to never be bored at work"	.59	.28
4. "… to identify aspects of my work that allow me to express my values"	.18	.88
5. "… to trust myself to find work activities that are meaningful to me"	.22	.87
6. "… to dedicate time to engage in work activities that reflect what is significant to me"	.18	.77

TABLE 4

CFA Factor Loadings of Work Passion Pursuit Lay Belief Scale (Chapter 1)

Item	CFA Factor Loadings			
	Feelings	***Values***	**Intrinsic Motivation**	**Neoclassical Calling**
1. “to make my work leisurely.”	.87			
2. “to feel like I never work a day in my life.”	.61			
3. “to never be bored at work.”	.59			
4. “to identify aspects of my work that allow me to express my values.”		.88		
5. “to trust myself to find work activities that are meaningful to me.”		.92		
6. “to dedicate time to engage in work activities that reflect what is significant to me.”		.79		
7. “Why are you motivated to do your work? … because I enjoy the work itself.”			.97	
8. “Why are you motivated to do your work? … because it’s fun.”			.93	
9. “Why are you motivated to do your work? … because I find the work engaging.”			.95	
10. “Why are you motivated to do your work? … because I enjoy it.”			.98	
11. “The work I do feels like my calling in life.”				.92
12. “It sometimes feels like I was destined to do the work I do.”				.91
13. “The work I do feels like my niche in life.”				.95
14. “I am definitely the sort of person who fits in my line of work.”				.78
15. “My passion for the work I do goes back to my childhood.”				.77
16. “I was meant to do the work I do.”				.90

Note. Standardized factor loadings are shown.

TABLE 5

Regression Models from Study 1 (Chapter 1)

	Model 1	**Model 2**
Intercept	7.92*** (.74)	7.59*** (.75)
Feelings	-.18† (.10)	-.19† (.10)
Values	.95*** (.14)	.74*** (.17)
Intrinsic Motivation		.03 (.17)
Meaningfulness		-.08 (.17)
Neoclassical Calling		.30 (.21)
Adj. R^2	.32	.36

Notes. Outcome Variable: Passion Attainment; $n = 93$; † $p < .10$; *** $p < .001$.

TABLE 6

Study 2: Means, Standard Deviations, and Correlations (Chapter 1)

	Variable	M	SD	1	2	3	4	5	6	7
1	Gender	0.41	0.49							
2	Age	31.90	7.58	-.12**						
3	Tenure	55.20	97.04	-.05	.28**					
4	*Feelings*	5.59	1.00	-.02	-.03	.00				
5	*Values*	6.28	0.76	.00	.03	.04	.54**			
6	Passion Attainment	4.66	1.52	.01	.05	.05	-.05	.07*		
7	Turnover Intentions	2.94	1.81	.03	-.08*	-.06	-.06	-.13**	-.61**	
8	Actual Turnover	0.09	0.29	.00	-.07*	-.03	-.04	-.03	-.07*	.12**

Notes. Tenure is measured in months. * $p < .05$; ** $p < .01$

TABLE 7

Bivariate Correlations of Study Variables (Chapter 2)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Passion Variability																	
2. Positive Passion Variance	.64***																
3. Negative Passion Variance	.67***	.08															
4. Positive Affect Variability	.64***	.37***	.44***														
5. Negative Affect Variability	.42***	.31***	.24***	.47***													
6. Average Passion	-.32***	-.55***	.00	-.06	-.16***												
7. Average Positive Affect	-.30***	-.41***	-.05	-.15***	-.18***	.81***											
8. Average Negative Affect	.17***	.19***	.04	.06	.49***	-.24***	-.23***										
9. Emotional Exhaustion	.29***	.29***	.13**	.16***	.35***	-.44***	-.42***	.43***									
10. Job Satisfaction	-.26***	-.38***	-.03	-.09	-.25***	.62***	.55***	-.31***	-.69***								
11. Job Performance	.08	.07	.04	.06	-.05	.07	.13**	-.30***	-.10	.06							
12. Determination	.06	-.04	.08	.09	.16***	.27***	.26***	.14**	.17***	.03	.18***						
13. Organizational Identification	-.18***	-.27***	-.05	.02	-.06	.58***	.51***	-.09*	-.33***	.54***	.06	.25***					
14. Job Control	.07	-.02	.10*	.12**	-.08	.24***	.22***	-.16***	-.22***	.33***	.10*	.13**	.35***				
15. Social Support	-.04	-.16***	.05	.10*	-.06	.47***	.38***	-.25***	-.38***	.48***	.19***	.11*	.48***	.38***			
16. *Feelings* Lay Belief	-.08	-.17***	.01	.00	.00	.24***	.24***	-.02	-.01	.12*	-.03	.07	.21***	.19***	.12**		
17. *Values* Lay Belief	-.03	-.12**	.03	.07	-.01	.35***	.35***	-.16***	-.14**	.18***	.17***	.23***	.34***	.27***	.29***	.48***	
18. SES	-.08	-.05	-.15***	-.04	-.09*	.08	.08	-.11**	-.14**	.14**	.01	.07	.15***	.21***	.11*	.04	.08

Note. *** $p < .001$, ** $p < .01$, * $p < .05$

TABLE 8

Study 1 and Study 3a: Means, Standard Deviations, and Correlations of Variables

(Chapter 4)

Variable	1	2	3	4	5	6	7	8	9	10
1. Speaker's Passion										
2. Season	.10									
3. Female Speaker	.16*	-.01								
4. Non-White Speaker	.00	.02	.15*							
5. Industry	-.04	.00	-.14	.01						
6. Single Presenter	-.07	-.08	.04	.16*	-.07					
7. Socially Responsible	.02	.17*	-.09	-.03	-.06	-.06				
8. Extraversion	.30***	.09	.12	.01	.03	.01	-.06			
9. Authenticity	.15*	-.09	.20**	-.04	-.05	-.02	.05	-.01		
10. Appropriateness	.14	.17*	.09	-.15	.04	-.13	.08	.42***	.36***	
11. Received Offer	.19*	.11	.02	-.10	.01	-.16*	.16*	.02	.31***	.49***

Note. * < .05, ** < .01

TABLE 9

Study 1: Receiving Dragon's Offer Predicted by Speaker's Passion (Chapter 4)

	Model 1	Model 2	Model 3	Model 4	Model 5
(Intercept)	-.39 (.16)*	-.34 (.19)	-.19 (.32)	-.20 (.32)	-.14 (.33)
Speaker's Passion	.40 (.16)*	.40 (.16)*	.38 (.17)*	.42 (.18)*	.35 (.18)+
Female Speaker		.06 (.34)	.06 (.36)	.05 (.36)	-.20 (.39)
Non-White Speaker		-.83 (.62)	-.65 (.64)	-.67 (.64)	-.53 (.67)
Industry: Manufacturing			-1.90 (1.36)	-2.12 (1.38)	-1.84 (1.32)
Industry: High Tech			-.01 (.63)	-.03 (.63)	-.03 (.65)
Industry: Health			1.33 (1.18)	1.33 (1.19)	1.19 (1.24)
Industry: Other			.03 (.49)	.04 (.49)	.13 (.52)
Socially Responsible			1.62 (.71)*	1.63 (.71)*	1.50 (.72)*
Single Presenter			-.46 (.34)	-.43 (.34)	-.47 (.36)
Extraversion				-.13 (.18)	-.09 (.19)
Authentic					.65 (.19)***
AIC	238.59	240.61	241.65	242.38	230.95
BIC	248.12	256.49	276.59	280.43	272.17
Log Likelihood	−116.30	−115.31	−109.83	−109.19	−102.47
Num. obs.	177	177	177	177	177
Num. groups: Season	8	8	8	8	8

Notes. Speaker's passion predicts receiving an offer in all models, over and above the related but distinct constructs of extraversion and authentic. Reference group for Industry is Consumers, the largest group. + < .10, * < .05, ** < .01, *** < .001.

TABLE 10

Study 3a: Receiving Dragon's Offer Predicted by Speaker's Passion and Appropriateness

(Chapter 4)

	Model 1	Model 2	Model 3	Model 4
(Intercept)	-.68 (.20)***	-.62 (.24)**	-.51 (.39)	-.63 (.42)
Speaker's Passion	.22 (.20)	.22 (.20)	.21 (.21)	.38 (.23)
Appropriateness	1.79 (.33)***	1.78 (.33)***	1.70 (.33)***	2.06 (.41)***
Speaker's Passion *x* Appropriateness	.73 (.33)*	.73 (.33)*	.80 (.33)*	.75 (.33)*
Female Speaker		-.13 (.41)	-.20 (.43)	-.20 (.46)
Non-White Speaker		-.30 (.76)	-.17 (.81)	.20 (.84)
Industry: Manufacturing			-1.37 (1.46)	-2.30 (1.55)
Industry: High Tech			-.15 (.76)	.03 (.78)
Industry: Health			1.60 (1.26)	1.69 (1.28)
Industry: Other			-.18 (.57)	-.06 (.58)
Socially Responsible			1.40 (.86)	1.35 (.88)
Single Presenter			-.30 (.40)	-.22 (.42)
Extraversion				-.90 (.30)**
Authenticity				.03 (.24)
AIC	183.49	187.20	193.06	186.75
BIC	199.34	209.40	234.27	234.31
Log Likelihood	−86.74	−86.60	−83.53	−78.38
Num. obs.	177	177	177	177
Num. groups: Season	8	8	8	8

Notes. Speaker's passion predicts receiving an offer but only when it is the expression is deemed appropriate. Reference group for Industry is Consumers, the largest group. * < .05, ** < .01, *** < .001

TABLE 11

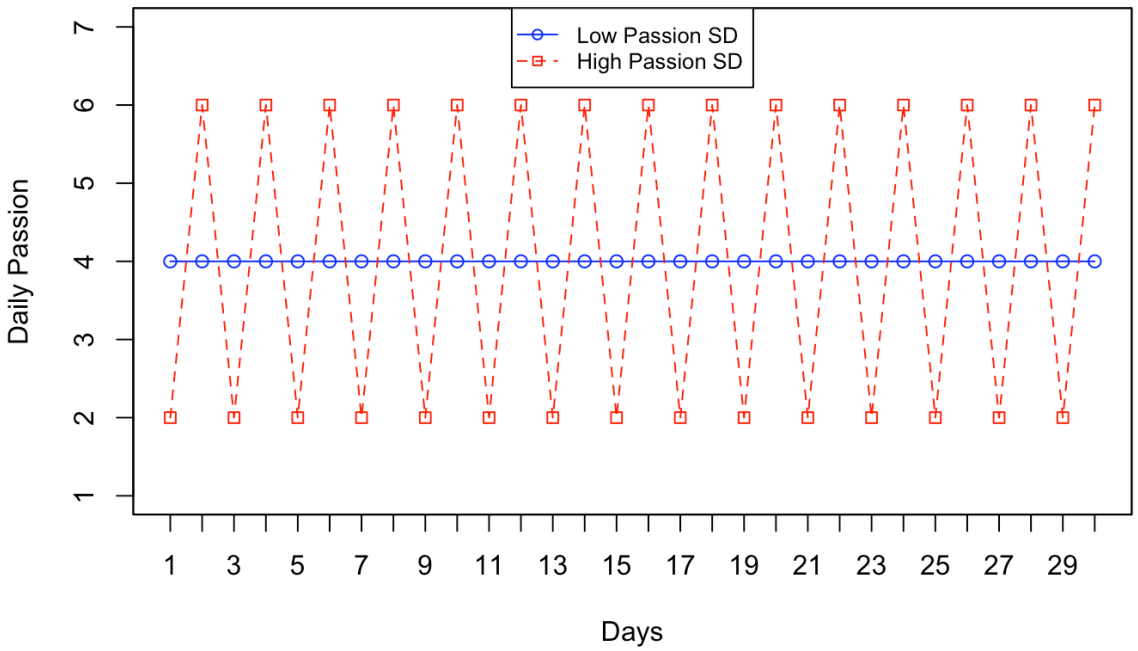
Study 4: The Effect of the Passion Condition on Admiration as a Function of Political Identification (Chapter 4)

Political Identification	*b*	*SE*	*t*	*p*	95% Lower CI	95% Higher CI
1 (Strongly Republican)	-.244	.190	-1.287	.199	-.618	.129
2	-.101	.150	-.673	.502	-.395	.194
3	.043	.116	.370	.712	-.186	.272
4	.187	.097	1.921	.055	-.004	.378
5	.330	.101	3.283	< .001	.133	.528
6	.474	.125	3.796	< .001	.229	.720
7 (Strongly Democrat)	.618	.161	3.842	< .001	.302	.934

Note. Political Identification was measured on a scale ranging from 1 (Strongly Republican) to 7 (Strongly Democrat).

FIGURE 1

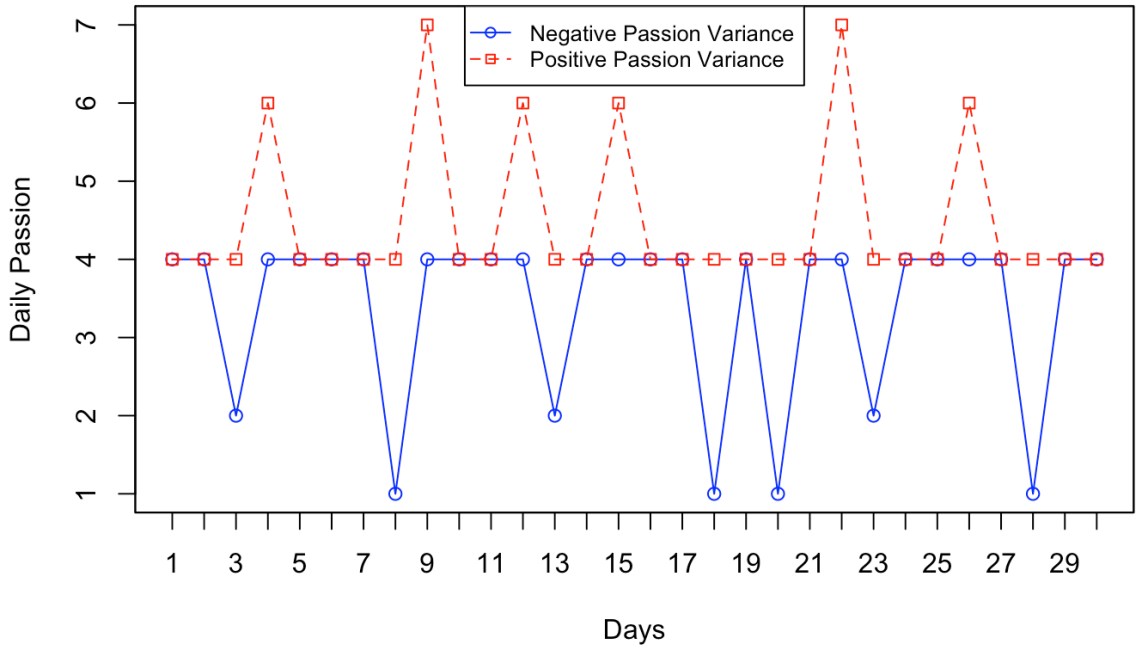
Similar Passion Mean but Different Passion Variability (Chapter 2)



Note. Two graph depicts two simulated participants. The red dotted line depicts a participant who has higher passion variability. The blue solid line depicts a participant who has lower passion variability.

FIGURE 2

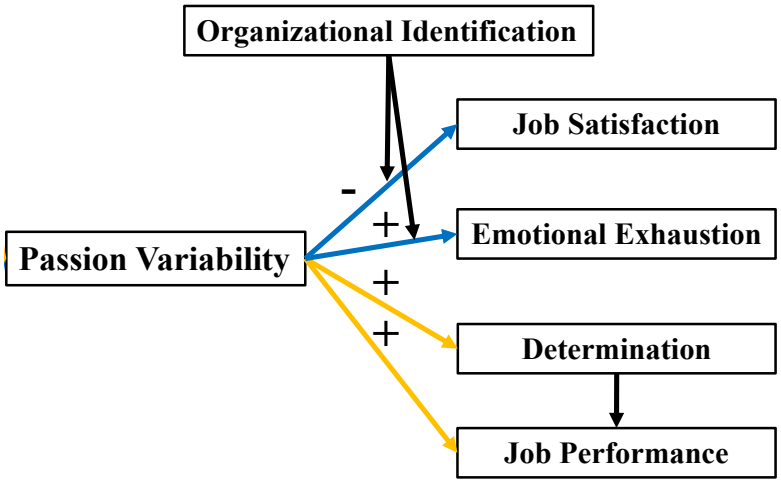
Similar Passion Variability but Different Passion Variance (Chapter 2)



Note. Two graph depicts two simulated participants. The red dotted line depicts a participant who has higher positive passion variance. The blue solid line depicts a participant who has higher negative passion variance.

FIGURE 3

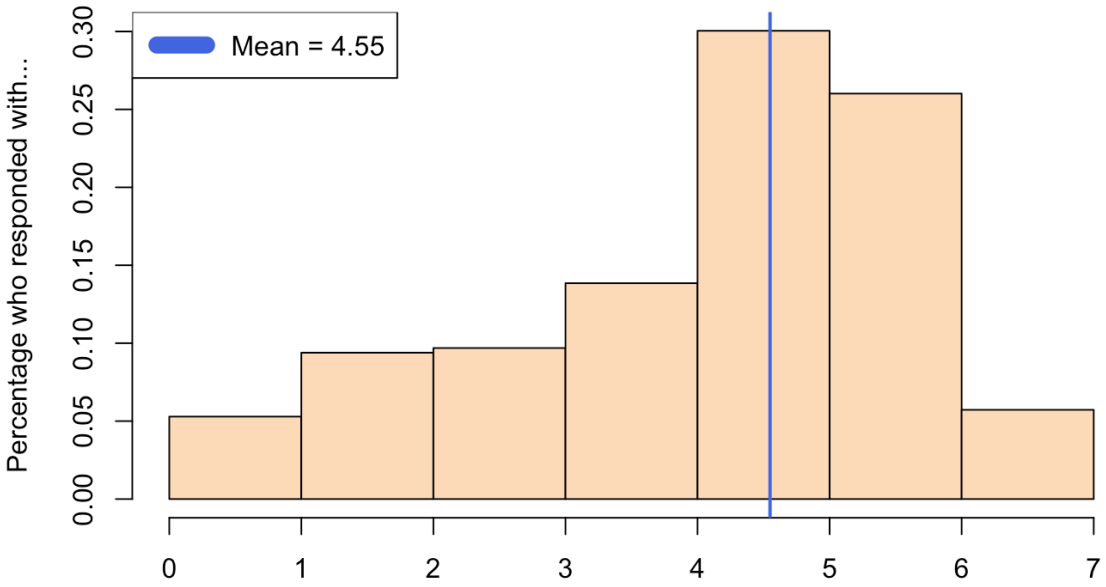
Consequences of Passion Variability (Chapter 2)



Note. This figure depicts the consequences of passion variability, over and above (i.e., controlling for) average levels of passion, and positive and negative affect mean and variability. The illustration further distinguishes between positive and negative passion variance, here depicted in yellow and blue respectively. Arrows depict a relationship between two variables, whereas the color of the arrow further highlights whether the effect is driven by positive or negative passion variance. Signs (+ or -) depict the direction of the hypothesized relation.

FIGURE 4

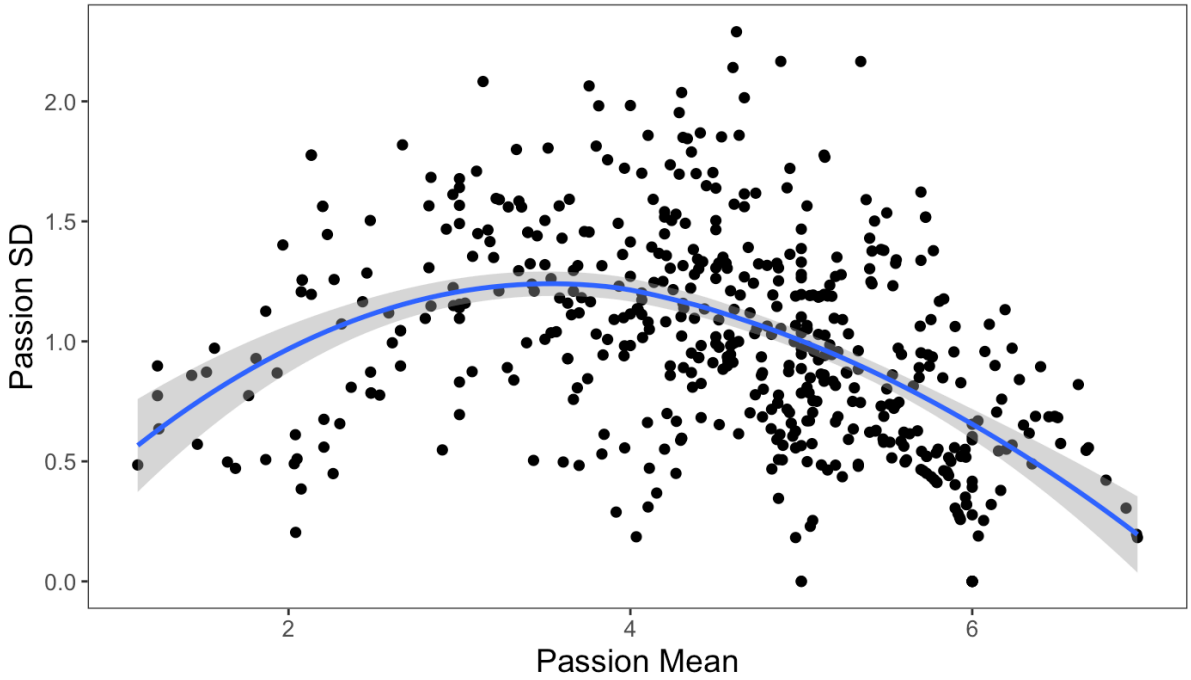
Levels of Daily Passion Across the Sample (Chapter 2)



Note. Distribution of daily passion levels across the sample. Bars represent proportion of responses within each level. Blue line reflects mean levels of passion across all responses.

FIGURE 5

U-Shaped Relationship Between Passion Mean and Passion Variability (Chapter 2)

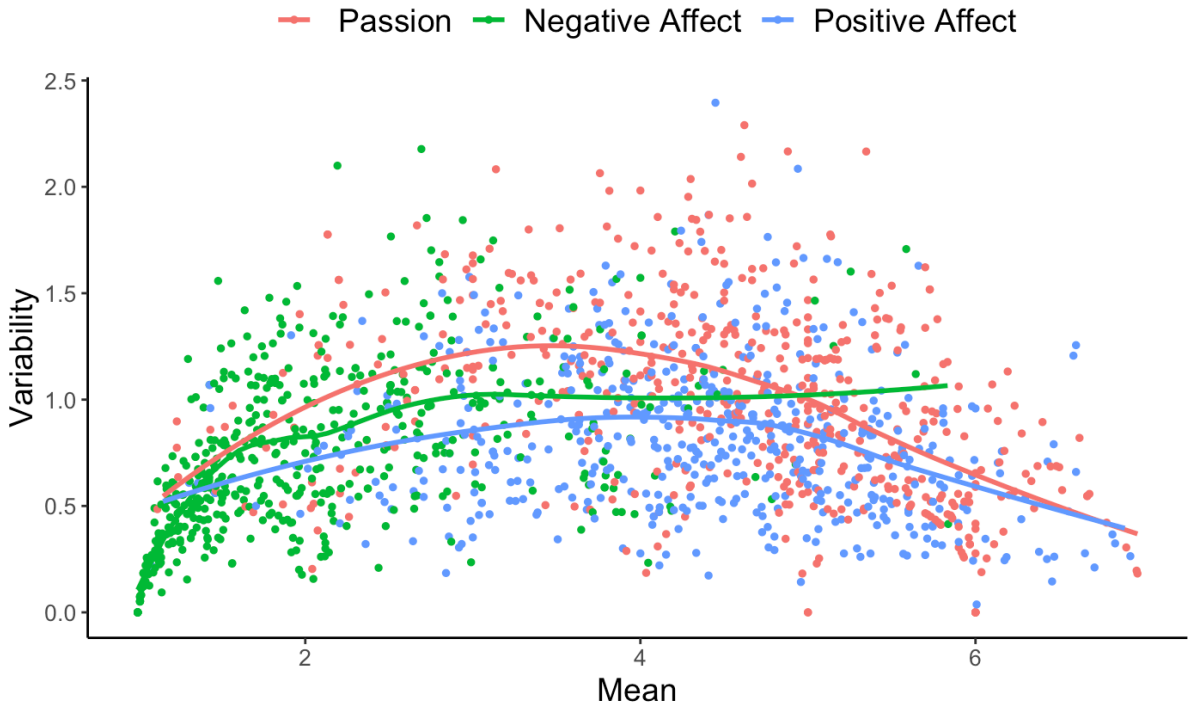


Note. Passion mean and variability are correlated in an inverse u-shaped fashion. Shaded areas reflect 95% confidence interval.

FIGURE 6

Relationship between Average and Variability for Passion, Positive, and Negative Affect

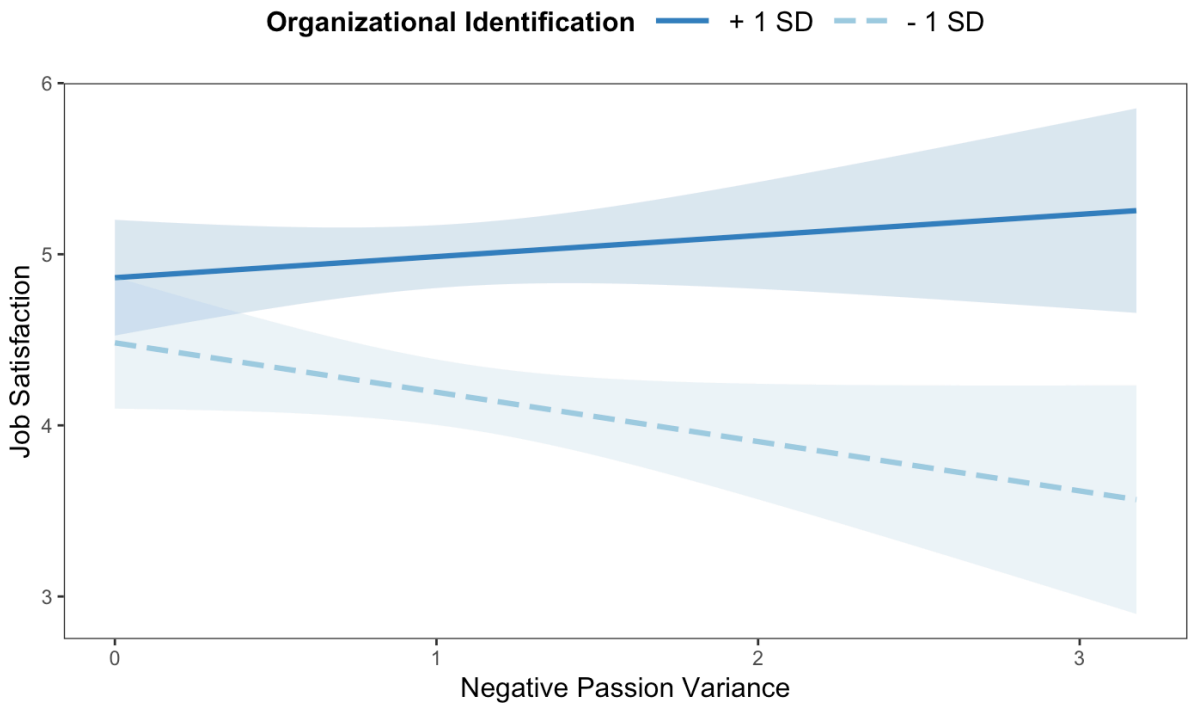
(Chapter 2)



Note. Plot depicts the relationship between average and variability for passion, positive affect, and negative affect. Passion and positive affect share a similar shape (inverted u-shape relationship), though average levels of variability are higher for passion. Negative affect tends to have a logarithmic relationship between mean and variability, likely the case because of response clustering around the floor (i.e., 1).

FIGURE 7

Job Satisfaction Predicted by the Interaction between Negative Passion Variance and Organizational Identification (Chapter 2)



Note. The effect of negative passion variance on job satisfaction is qualified by organizational identification, such that higher negative passion variance is only related to lower job satisfaction when organizational identification is low but not high.

FIGURE 8

Study 2: Passion Attainment Moderates the Relationship Between Perseverance and Performance (Chapter 3)

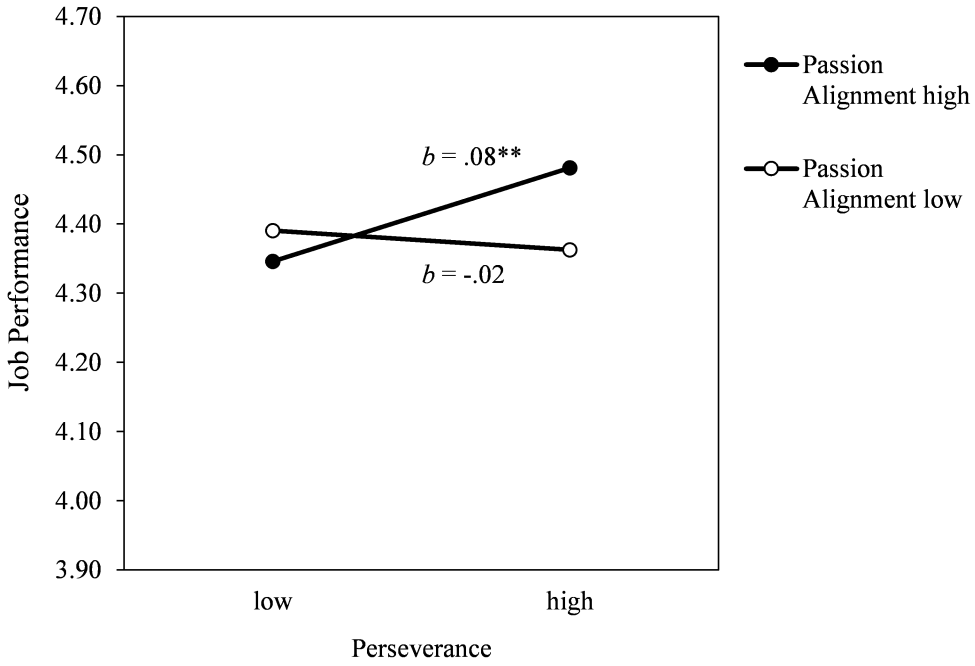
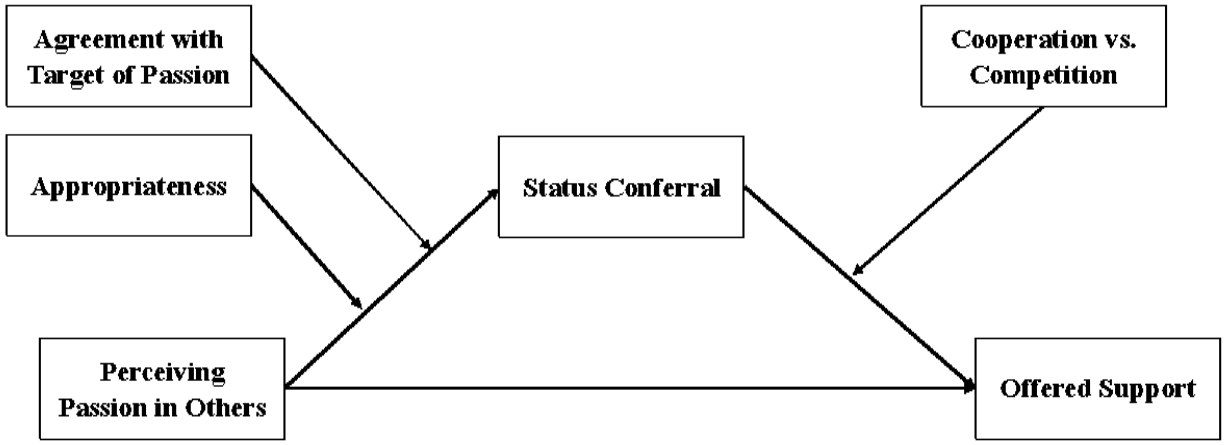


FIGURE 9

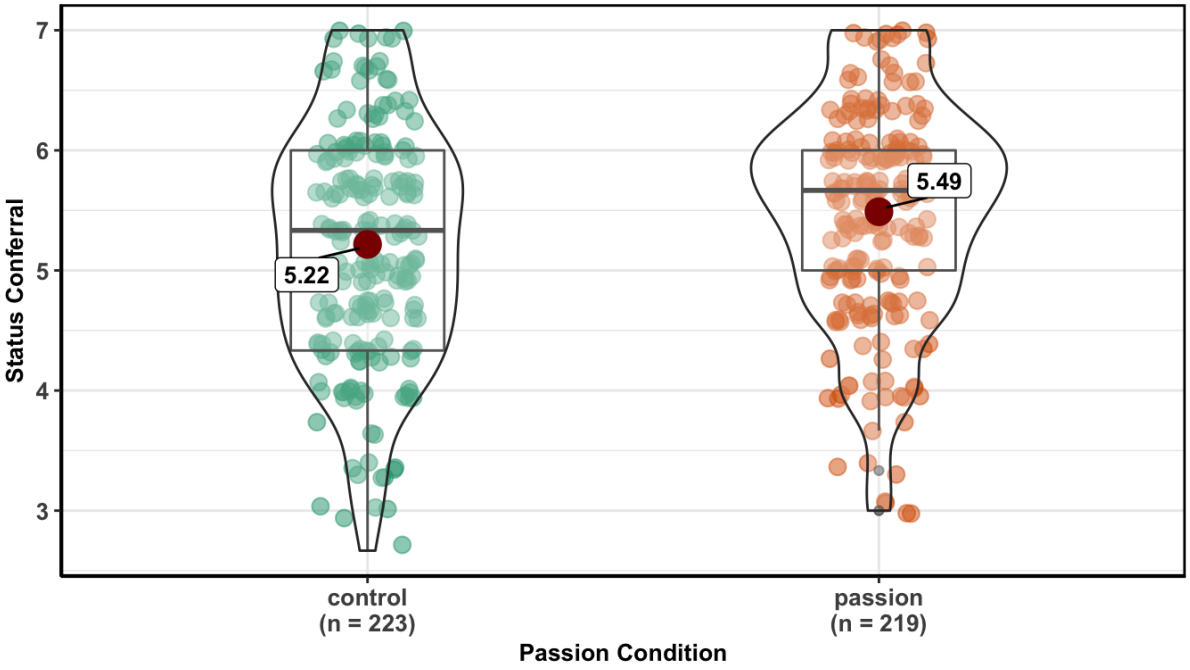
Theoretical Model (Chapter 4)



Note. Our model predicts that observers offer support to individuals they perceive as expressing passion because they confer status on those individuals. However, when an expression of passion is seen as inappropriate or when an observer doesn't agree with the cause of passion, then observers will no longer confer more status or offer more support to passion expressers. Finally, when passion expressions come from a competitor, that expression will be seen as threatening and decrease the support given to the passion expresser.

FIGURE 10

Study 2: Status Conferral by Passion Condition (Chapter 4)

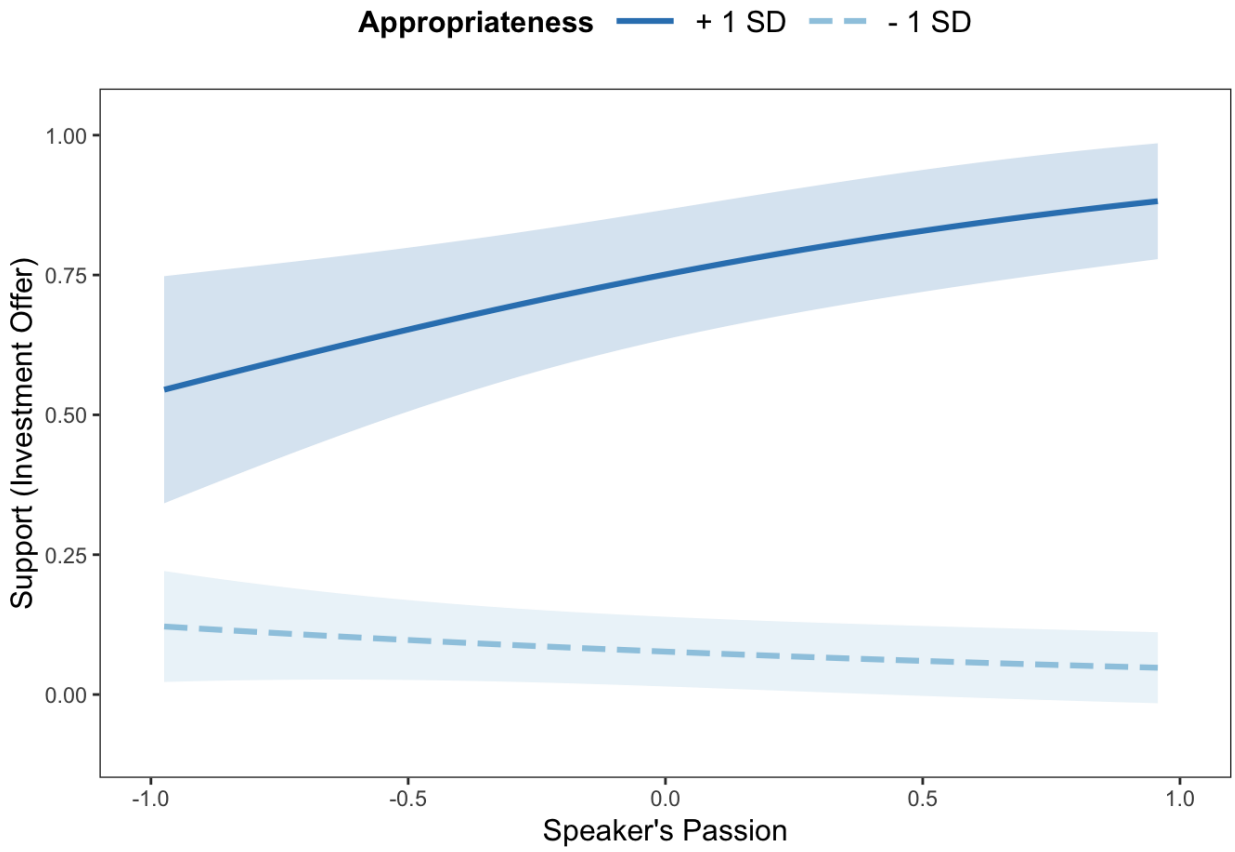


Note. Figure reflects box-violin plot. Red dot reflects mean, and the lines around colored dots reflect the distribution of values. Observers confer higher status to those who expression passion.

FIGURE 11

Study 3a: Receiving Dragon's Offer Predicted by Speaker's Passion and Appropriateness

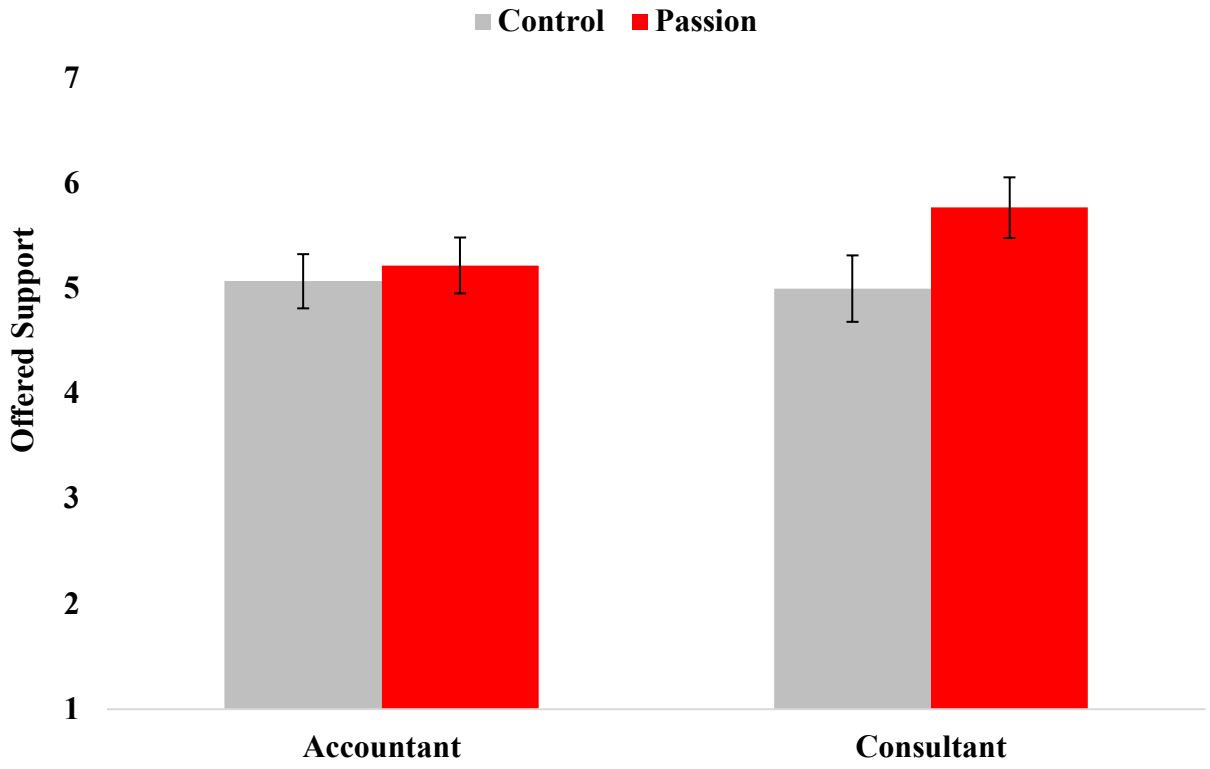
(Chapter 4)



Note. Expressing passion is associated with increased support only when perceivers deem it appropriate. When the expression of passion is inappropriate, expressing passion is not associated with increased support. Shaded areas reflect 95% confidence intervals.

FIGURE 12

Study 3b: Offered Support Predicted by Coworker Passion and Job Type (Chapter 4)

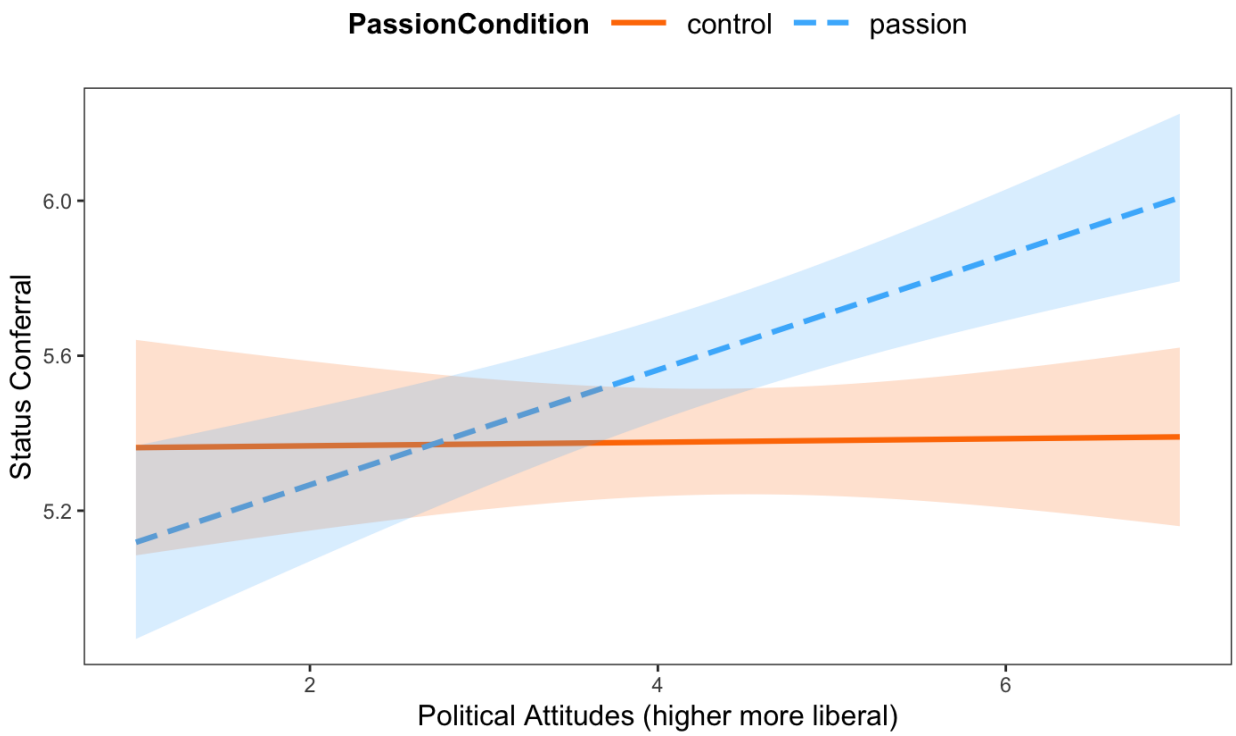


Note. Error bars denote 95% Confidence Intervals. Expressing passion is associated with increased support only when the job type is deemed appropriate, i.e., for consultants but not accountants.

FIGURE 13

Study 4: Status Conferral as a Function of Passion Condition and Political Identification

(Chapter 4)

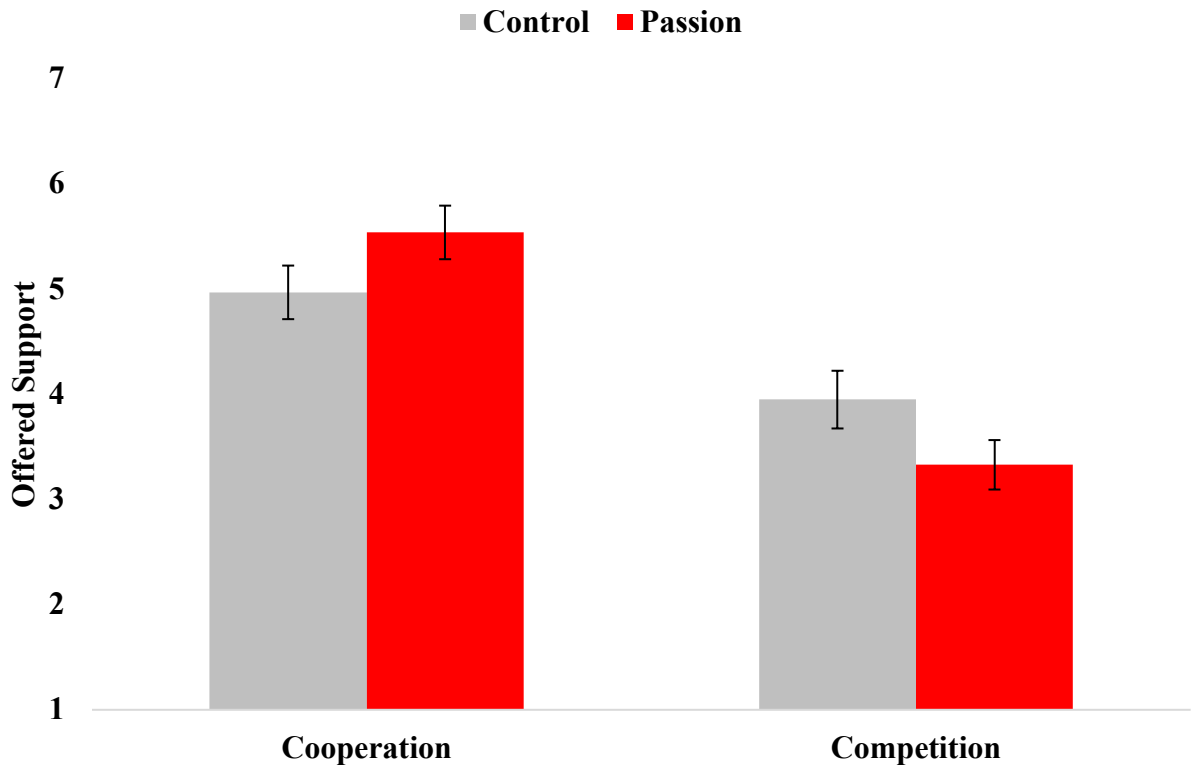


Note. Shaded area denotes 95% Confidence Intervals. Higher levels of passion are associated with increased admiration when perceivers agree with the target of the expresser's passion.

FIGURE 14

Study 5: Offered Support Predicted by the Interaction of Context and Coworker Passion

(Chapter 4)



Note. Error bars denote 95% Confidence Intervals. In cooperative contexts, higher levels of passion increases support. In competitive contexts, higher levels of passion reduce support.

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Appendix A:

Supplementary Information for Chapter 1

Manipulated Text for *Feelings*

How do I become more passionate for what I do?

It takes guts to look deep inside of yourself and find the things that make you happy. Where should you look? You first must have some idea of what you enjoy. Ask yourself: "what desires do I find enjoyable?" Everyone has hobbies, of course, but try to look deeper at the things that provide your life with happiness. How will you know when you are doing things you are passionate about? Usually, it is quite easy. One moment you are talking in hopes of finding a topic of great interest. The next you find yourself talking and don't want to stop, and then you realize why: because it's so much fun for you. The rule of passion is simple: the mind cannot stop thinking about what makes it happy. Once you have a better idea of what you like doing, you can start looking for more opportunities to work on things that you enjoy. Perhaps you could speak to your manager about working on tasks that reflect what is fun for you. Perhaps you could create more of those opportunities yourself. The important point is thus: you need to have a strong desire to work on things you enjoy, and make sure you set aside time each day to do what makes you happy. Indeed, this is what I did, and now, I finally feel passion for my work – it's the best feeling in the world.

Manipulated Text for *Values*

How do I become more passionate for what I do?

It takes guts to look deep inside of yourself and find the things that strongly reflect your values. Where should you look? You first must have some idea of what your values are. Ask yourself: "what desires do I find meaningful?" Everyone has hobbies, of course, but try to look deeper at the things that provide your life with meaning. How will you know when you are doing things you are passionate about? Usually, it is quite easy. One moment you are talking in hopes of finding a topic of great interest. The next you find yourself talking and don't want to stop, and then you realize why: because it represents something that you personally value. The rule of passion is simple: the mind cannot stop thinking about what it finds important. Once you have a better idea of what your values are, you can start looking for more opportunities to work on things that you personally value. Perhaps you could speak to your manager about working on tasks that reflect what is meaningful to you. Perhaps you could create more of those opportunities yourself. The important point is thus: you need to have a strong desire to work on things you care about, and make sure you set aside time each day to work on things that you personally value. Indeed, this is what I did, and now, I finally feel passion for my work – it's the best feeling in the world.

Appendix B:

Supplementary Information for Chapter 3

Study 1

Inter-rater Reliability

We calculated inter-rater reliability using Fleiss' Kappa. Our coding strategy met the qualifications for this test because our raters were independent, the ratings were mutually exclusive, and all raters reviewed and rated every sample in our set. The test statistic of the Fleiss' Kappa test indicated a high degree of reliability between our three coders (*IRR* = .81). Disagreements were discussed and resolved in subsequent coding review sessions.

Test for Publication Bias

We estimated the extent of publication bias in the literature, anticipating that there may be a file-drawer problem, where studies without significant effects are not submitted for publication. The extent to which this has occurred is testable by creating a funnel plot where the treatment effect is plotted against the power of the studies, and symmetry is compared to evaluate where potentially missing studies would fall (see Figure S3 and S4). Each black dot represents an existing study, and each white dot indicates a missing study. Based on this analysis, we find evidence for small publication bias in our sample (Duval & Tweedie, 2000).

Outlier Tests

To test for outliers in our sample, we followed procedures outlined by Viechtbauer and Cheung (Viechtbauer & Cheung, 2010). Reviewing the variety of tests in Figure S5, there is variation between the tests on which studies could be considered outliers. This is not surprising, as there is significant variation in the sample characteristics, including sample size and location.

For instance, there are a few studies with a high Cohen's *d*, indicating a high degree of influence, but these same studies do not have a high hat-value, or the fitted values of those studies are not significantly different from the value reported. We followed the guidance of Light and Pillemer (Light & Pillemer, 1984), returning to these papers to re-examine the contexts of the studies to determine if they should be excluded. We did not find sufficient reason to discount the results, and thus included all studies in our analyses.

Study 2

Confirmatory Factor Analyses

We assessed the distinctiveness of the constructs (i.e., perseverance, passion attainment, harmonious passion, and all motivations) by conducting confirmatory factor analyses. In the first model, items of each construct loaded onto their respective factor (grit scale items loaded on both sub-components, which in turn loaded on a higher-order factor of perseverance). The fit-indices were acceptable (4; with the exception of the *CFI*): $X^2(334) = 845.64$, *RMSEA* = .06, *CFI* = .92, *SRMR* = .08. Next, we compared this model to a model where we loaded all items from every measure on one common factor. This model fit the data worse: $X^2(350) = 3110.19$, *RMSEA* = .14, *CFI* = .55, *SRMR* = .12. Additionally, the fit of the first model was significantly better: $\Delta X^2 = 2264.55$, $\Delta df = 16$, $p < .001$.

To further assess the distinctiveness of perseverance, passion attainment, and intrinsic motivation, we conducted additional confirmatory factor analyses. In the first model, items of perseverance, passion attainment, and intrinsic motivation loaded on their respective factor. In general the model fit was acceptable (excluding the *CFI*): $X^2(85) = 249.07$, *RMSEA* = .07, *CFI* = .94, *SRMR* = .06. In the second model, the items of perseverance and intrinsic motivation

loaded together on one factor. The model fit ($X^2(89) = 884.32$, *RMSEA* = .15, *CFI* = .70, *SRMR* = .13) was significantly worse: $\Delta X^2 = 635.25$, $\Delta df = 4$, $p < .001$. Finally, in the third model, the items of passion attainment and intrinsic motivation loaded together on one factor. Again, the model fit ($X^2(87) = 478.68$, *RMSEA* = .10, *CFI* = .85, *SRMR* = .08) was significantly worse: $\Delta X^2 = 229.61$, $\Delta df = 2$, $p < .001$.

In addition, we also evaluated whether passion attainment and harmonious passion are distinct constructs. In the first model, items of passion attainment and harmonious passion loaded on their respective factor. The model fit ($X^2(26) = 91.99$, *RMSEA* = .08, *CFI* = .97, *SRMR* = .03) was good or acceptable (*RMSEA*). Next, we combined both factors and the model fit ($X^2(27) = 324.49$, *RMSEA* = .16, *CFI* = .86, *SRMR* = .08) was significantly worse compared to the first model: $\Delta X^2 = 232.50$, $\Delta df = 1$, $p < .001$. In sum, these results let us conclude that both perseverance as well as passion attainment are distinct constructs which can be differentiated from intrinsic motivation as well as harmonious passion.

Variable Centering

In multi-level analyses researchers have two options of centering: while grand mean centering allows for easier interpretation of coefficients (Kreft, de Leeuw, & Aiken, 1995), group mean centering is mostly used to estimate context effects, eliminating the effects of between-group variance for the centered predictor variable (Enders & Tofighi, 2007). Since we are interested in the absolute effects of perseverance and passion attainment on job performance, not the relative effect compared to a respective group, we grand mean centered all variables before computing the interaction terms and entering variables into the regression model.

Correlation Table

Table S3 presents the means, standard deviations, correlations, and internal consistency reliability estimates for all variables. Neither perseverance, passion attainment, harmonious passion, nor the motivations were correlated with job performance ($-.07 < r < .02$, all *ns.*). The non-significant direct predictors of performance are not surprising given several previous studies (Birkeland & Buch, 2015; Grant, 2008; Grant, Nurmohamed, Ashford, & Dekas, 2011). More relevant for the current investigation, these correlations suggest that perseverance might have a more complex relationship with performance (Credé et al., 2017).

Simple Slopes Analyses

When passion attainment was high (1 *SD* above the mean), perseverance was positively related to job performance ($B = .08$, *S.E.* = .03, $p < .001$). However, when passion attainment was low (1 *SD* below the mean), the relationship was not statistically significant ($B = -.02$, *S.E.* = .03, $p = .55$). In addition, we computed regions of significance (Preacher, Curran, & Bauer, 2006) that indicated a significant relationship between perseverance and job performance for values of passion attainment above 5.27 (.09 *SD* above the mean). Therefore, when employees attained desired levels of passion, higher levels of perseverance as measured through the grit scale were positively associated with supervisor-rated performance. In contrast, when employees lacked the passion they desired, higher levels of perseverance were not associated with increased supervisor-rated performance.

Study 3

Confirmatory Factor Analyses

We assessed the distinctiveness of the constructs (i.e., perseverance, passion attainment, harmonious passion, and all motivations) by conducting confirmatory factor analyses. In the first

model, items of each construct loaded onto their respective factor (grit scale items loaded on both sub-components, which in turn loaded on a higher-order factor of perseverance). The fit-indices were acceptable (Schermelleh-Engel et al., 2003): $X^2(307) = 544.29$, *RMSEA* = .06, *CFI* = .95, *SRMR* = .06. Next, we compared this model to a model where we loaded all items from every measure on one common factor. This model fit the data worse: $X^2(324) = 2776.49$, *RMSEA* = .18, *CFI* = .44, *SRMR* = .15. Additionally, the fit of the first model was significantly better: $\Delta X^2 = 2232.20$, $\Delta df = 17$, $p < .001$.

To further assess the distinctiveness of perseverance, passion attainment, and intrinsic motivation, we conducted additional confirmatory factor analyses. In the first model, items of perseverance, passion attainment, and intrinsic motivation loaded on their respective factor. In general the model fit was acceptable (excluding the *CFI*): $X^2(85) = 221.37$, *RMSEA* = .08, *CFI* = .93, *SRMR* = .07. In the second model, the items of perseverance and intrinsic motivation loaded together on one factor. The model fit ($X^2(89) = 712.87$, *RMSEA* = .17, *CFI* = .67, *SRMR* = .15) was significantly worse: $\Delta X^2 = 491.50$, $\Delta df = 4$, $p < .001$. Finally, in the third model, the items of passion attainment and intrinsic motivation loaded together on one factor. Again, the model fit ($X^2(87) = 525.10$, *RMSEA* = .14, *CFI* = .77, *SRMR* = .10) was significantly worse: $\Delta X^2 = 303.73$, $\Delta df = 2$, $p < .001$.

In addition, we also evaluated whether passion attainment and harmonious passion are distinct constructs. In the first model, items of passion attainment and harmonious passion loaded on their respective factor. The model fit ($X^2(13) = 40.43$, *RMSEA* = .09, *CFI* = .97, *SRMR* = .05) was good or acceptable (*RMSEA*). Next, we combined both factors and the model fit ($X^2(14) = 356.45$, *RMSEA* = .31, *CFI* = .64, *SRMR* = .16) was significantly worse compared to the first model: $\Delta X^2 = 316.02$, $\Delta df = 1$, $p < .001$. In sum, these results let us conclude that both

perseverance as well as passion attainment are distinct constructs which can be differentiated from intrinsic motivation as well as harmonious passion.

Correlation Table

Table S5 presents the means, standard deviations, and correlations for all variables. Both perseverance and passion attainment, harmonious passion, nor the motivations were correlated with job performance ($-.07 < r < .02$, all *ns.*).

Figure S1

Forest Plot of Main Effect of Perseverance on Performance

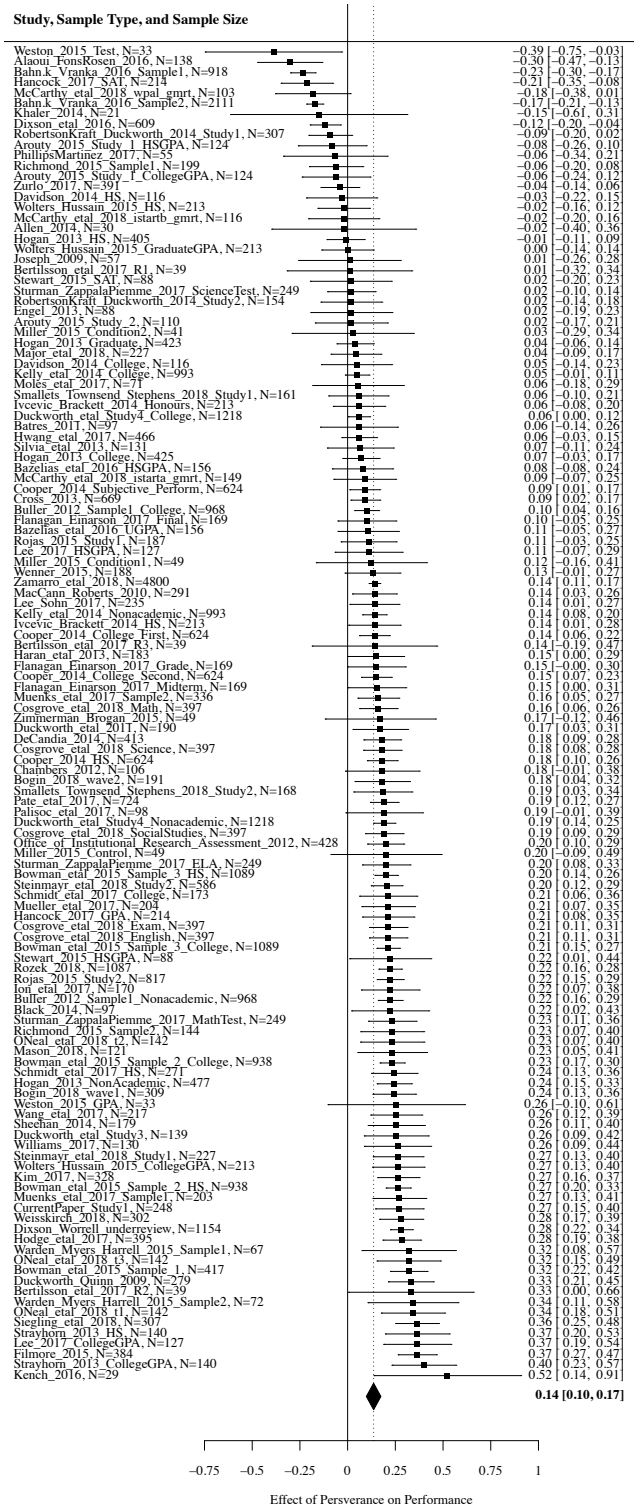


Figure S2

Forest Plot of the Relationship Between Perseverance and Performance by Passion for the Performance Domain

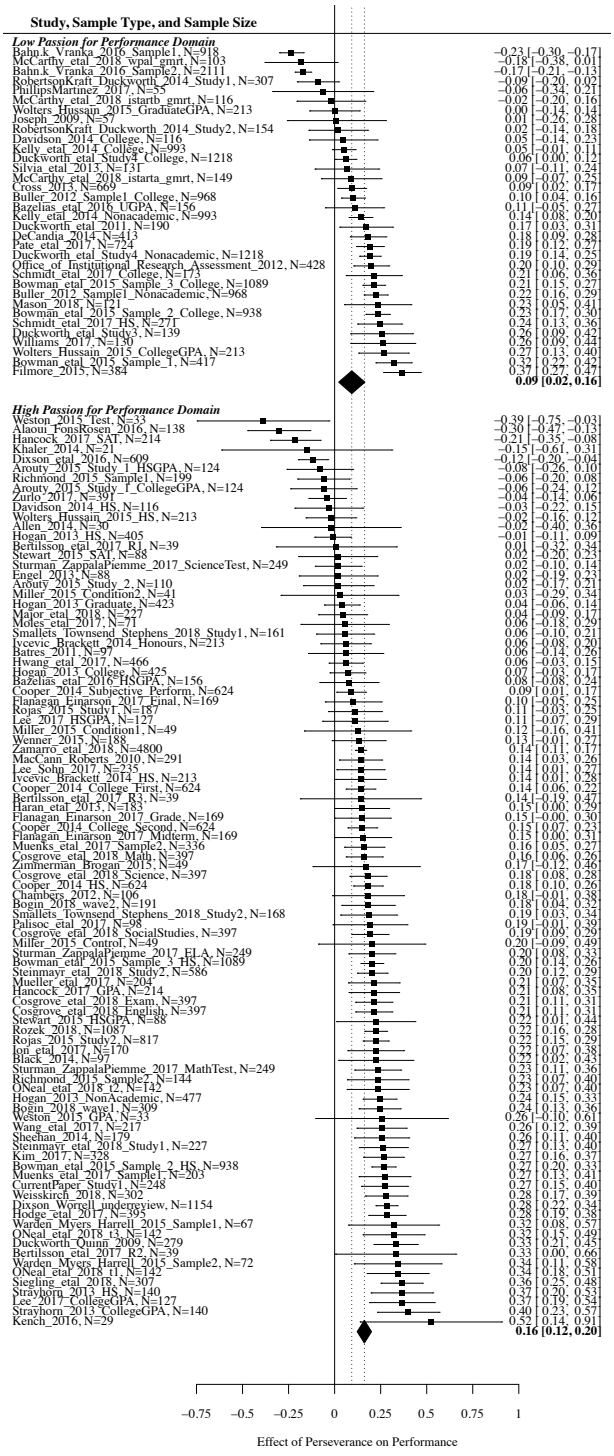
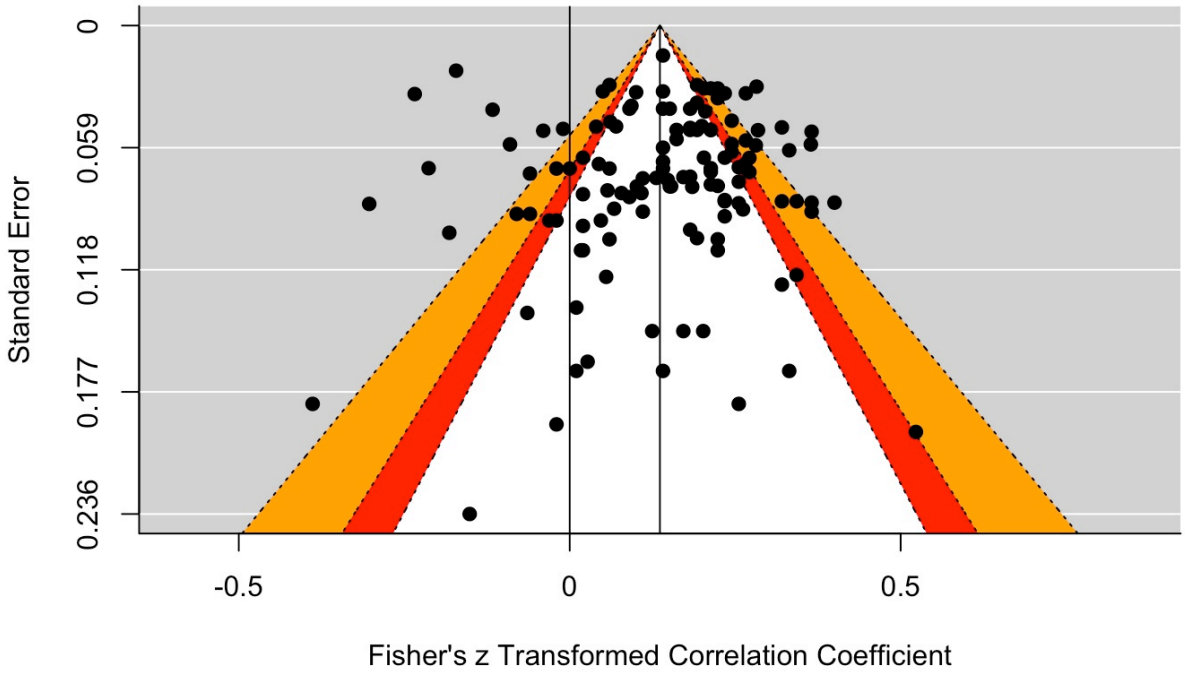


Figure S3

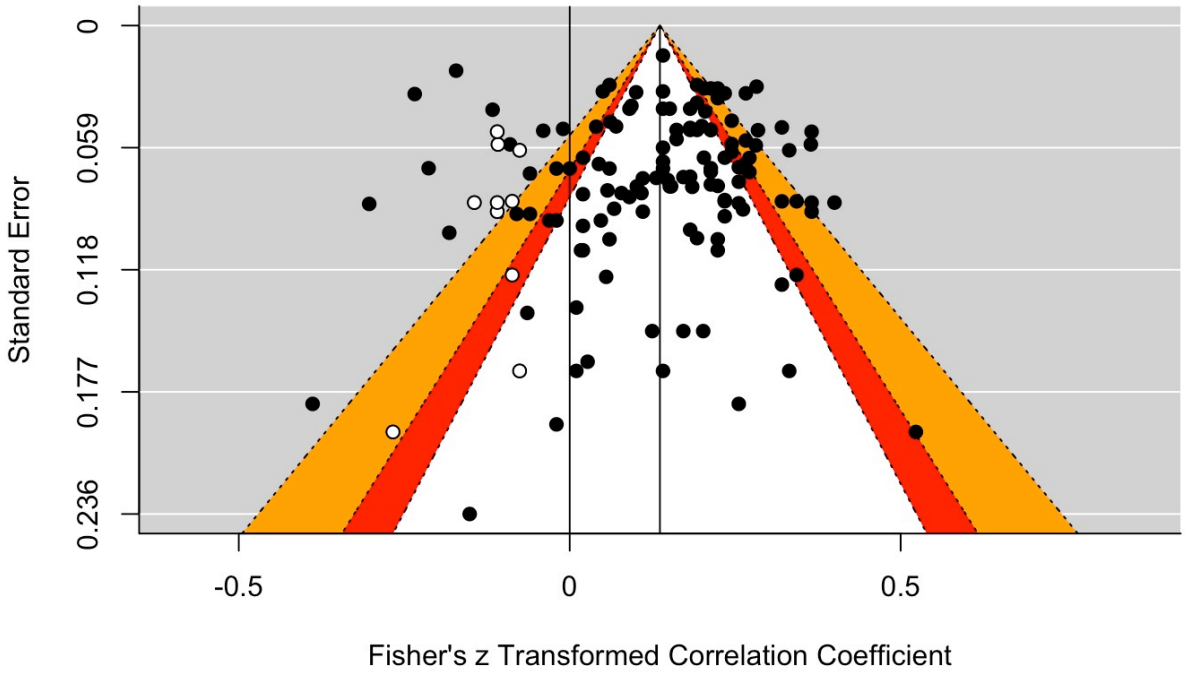
Funnel Plot of Individual Effect Sizes



Notes: Each black dot represents an effect size. Higher-powered studies are located higher, and lower-powered studies are located lower. Along the x-axis is the effect size, with the black line in the middle representing the average effect size. The plot should ideally resemble a pyramid with scatter that arises as a result of sampling variation. The sections of the pyramid represent various confidence level intervals, with the innermost white inner portion of the pyramid representing a 90% confidence interval, middle section representing 95%, and outer section representing a 99% confidence interval.

Figure S4

Trim-and-Fill Plot



Notes: Each black dot represents a study. The white dots represent missing studies. The black line in the middle represents the average effect size.

Figure S5

Outlier Tests

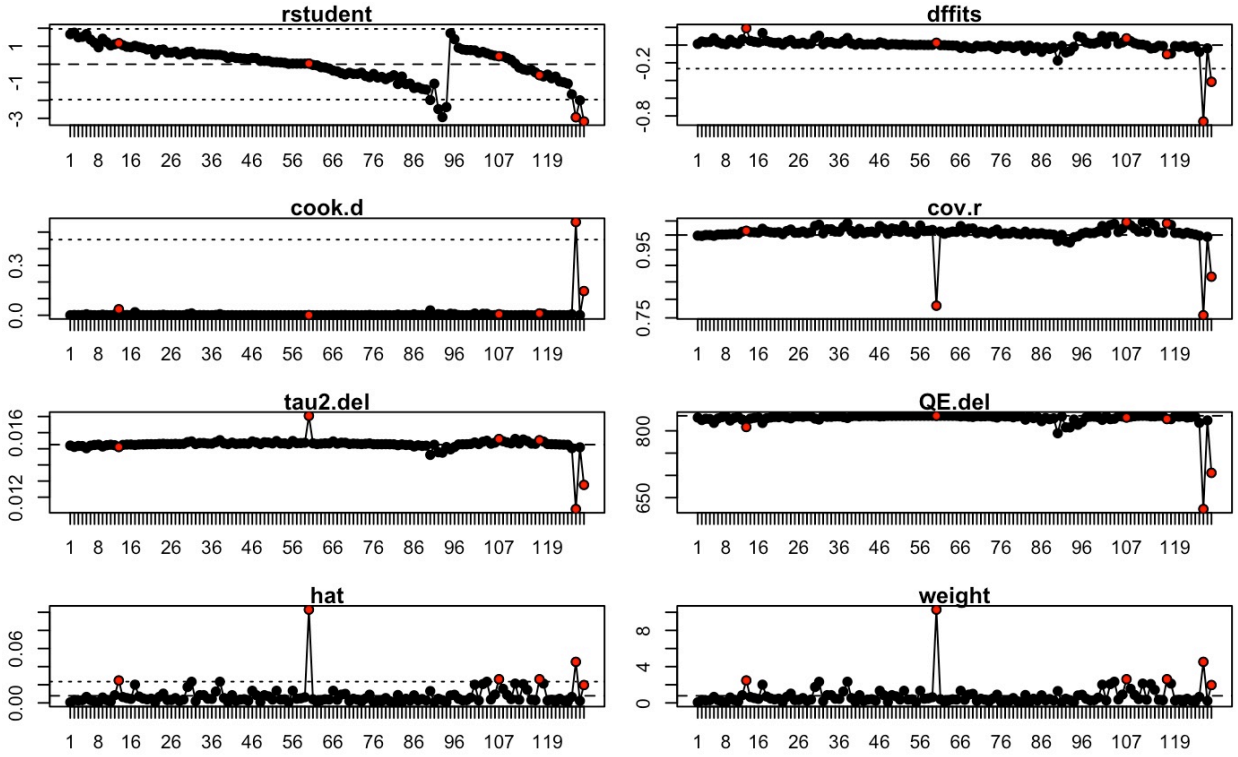


Table S1

Summary of All Studies Included in the Meta-Analysis

Authors	DV Type	Majority Passionate (1 = yes)	*N*	r
Alaoui & Fons-Rosen (2016)	Performance - Task	1	138	-.29
Allen (2014)	Academic - College	1	30	-.02
Arouty (unpublished doctoral dissertation) - Study 1	Academic - College	1	124	-.06
Arouty (unpublished doctoral dissertation) - Study 1	Academic - Noncollege	1	124	-.08
Arouty (unpublished doctoral dissertation) - Study 2	Academic - Noncollege	1	110	.02
Bahník & Vranka (2016)	Academic - College	0	918	-.23
Bahník & Vranka (2016)	Academic - College	0	2111	-.17
Batres (2011)	Academic - College	1	97	.06
Bazelais et al. (2016)	Academic - College	1	156	.11
Bazelais et al. (2016)	Academic - Noncollege	0	156	.08
Bertilsson et al. (2017)	Performance - Task	1	39	.01
Bertilsson et al. (2017)	Performance - Task	1	39	.32
Bertilsson et al. (2017)	Performance - Task	1	39	.14
Black (2014)	Academic - College	1	97	.22
Bogin (Unpublished doctoral dissertation)	Academic - College	1	309	.24
Bogin (Unpublished doctoral dissertation)	Academic - College	1	191	.18
Bowman et al. (2015) - Sample 1	Academic - College	0	417	.31
Bowman et al. (2015) - Sample 2	Academic - Noncollege	0	938	.26
Bowman et al. (2015) - Sample 2	Academic - College	1	938	.23
Bowman et al. (2015) - Sample 3	Academic - Noncollege	0	1089	.20
Bowman et al. (2015) - Sample 3	Academic - College	1	1089	.21
Buller (Unpublished doctoral dissertation)	Academic - College	0	968	.10
Buller (Unpublished doctoral dissertation)	Nonacademic	0	968	.22
Chambers et al. (2012)	Academic - College	1	106	.18

Cooper (Unpublished master's thesis)	Academic - Noncollege	1	624	.18
Cooper (Unpublished master's thesis)	Academic - College	1	624	.14
Cooper (Unpublished master's thesis)	Academic - College	1	624	.15
Cooper (Unpublished master's thesis)	Academic - College	1	624	.09
Cosgrove et al. (2018)	Academic - Noncollege	1	397	.21
Cosgrove et al. (2018)	Academic - Noncollege	1	397	.21
Cosgrove et al. (2018)	Academic - Noncollege	1	397	.16
Cosgrove et al. (2018)	Academic - Noncollege	1	397	.18
Cosgrove et al. (2018)	Academic - Noncollege	1	397	.19
Cross (2013)	Academic - College	0	669	.09
Current Paper (2018)	Academic - College	1	248	.27
Davidson (2014)	Academic - Noncollege	0	116	-.30
Davidson (2014)	Academic - College	1	116	.05
DeCandia (2014)	Academic - Noncollege	0	413	.18
Dixson & Worrell (under review)	Academic - Noncollege	1	1154	.28
Dixson et al. (2016)	Academic - Noncollege	1	609	-.12
Duckworth & Quinn (2009)	Academic - Noncollege	1	279	.32
Duckworth et al. (2007) - Study 3	Academic - College	0	139	.25
Duckworth et al. (2007) - Study 4	Academic - College	0	1218	.06
Duckworth et al. (2007) - Study 4	Nonacademic	0	1218	.19
Duckworth et al. (2011)	Nonacademic	0	190	.17
Engel (Unpublished doctoral dissertation)	Academic - College	1	88	.02
Fillmore (2015)	Academic - Graduate	0	384	.35
Flanagan & Einarson (2017)	Academic - College	1	169	.15
Flanagan & Einarson (2017)	Academic - College	1	169	.10
Flanagan & Einarson (2017)	Academic - College	1	169	.15
Hancock (2017)	Academic - College	1	214	.21
Hancock (2017)	Performance - Test	1	214	-.21
Haran et al. (2013)	Performance - Task	1	183	.15

Hodge et al. (2017)	Academic - College	1	395	.28
Hogan (Unpublished doctoral dissertation)	Academic - Noncollege	1	405	-.01
Hogan (Unpublished doctoral dissertation)	Academic - College	1	425	.07
Hogan (Unpublished doctoral dissertation)	Academic - Graduate	1	423	.04
Hogan (Unpublished doctoral dissertation)	Nonacademic	1	477	.24
Hwang et al. (2017)	Academic - College	1	466	.06
Ion et al. (2017)	Performance - Job	1	170	.22
Ivcevic & Brackett (2014)	Academic - Noncollege	1	213	.14
Ivcevic & Brackett (2014)	Academic - Noncollege	1	213	.06
Joseph (Unpublished doctoral dissertation)	Nonacademic	0	57	.01
Kelly et al. (2014)	Academic - College	0	993	.05
Kelly et al. (2014)	Nonacademic	0	993	.14
Kench (Unpublished doctoral dissertation)	Academic - Noncollege	1	29	.48
Khaler (2014)	Academic - College	1	21	-.15
Kim (Unpublished doctoral dissertation)	Academic - College	1	328	.26
Lee (Unpublished doctoral dissertation)	Academic - Noncollege	1	127	.11
Lee (Unpublished doctoral dissertation)	Academic - College	1	127	.35
Lee & Sohn (2017)	Academic - College	1	235	.14
MacCann & Roberts (2010)	Academic - Noncollege	1	291	.14
Major (unpublished data)	Academic - College	1	227	.04
Mason (2018)	Academic - College	0	121	.23
McCarthy et al. (2018) - Sample 1	Performance - Test	0	149	.09
McCarthy et al. (2018) - Sample 2	Performance - Test	0	116	-.02
McCarthy et al. (2018) - Sample 3	Performance - Test	0	103	-.18
Miller (Unpublished master's thesis) - Study 2	Performance - Task	1	49	.20
Miller (Unpublished master's thesis) - Study 2	Performance - Task	1	49	.12
Miller (Unpublished master's thesis) - Study 2	Performance - Task	1	41	.03
Moles et al. (2017)	Performance - Sport	1	71	.06
Mueller et al. (2017)	Performance - Job	1	204	.21

Muenks et al. (2017) - Sample 1	Academic - Noncollege	1	203	.27
Muenks et al. (2017) - Sample 2	Academic - College	1	336	.16
O'Neal et al. (2018)	Academic - Noncollege	1	142	.33
O'Neal et al. (2018)	Academic - Noncollege	1	142	.23
O'Neal et al. (2018)	Academic - Noncollege	1	142	.31
Office of Institutional Research & Assessment (2012)	Academic - College	0	428	.20
Palisoc et al. (2017)	Academic - Graduate	1	98	.19
Pate et al. (2017)	Academic - Graduate	0	724	.19
Phillips-Martinez (Unpublished doctoral dissertation)	Academic - Noncollege	0	55	-.06
Richmond (2015) - Sample 1	Academic - College	1	144	.23
Richmond (2015) - Sample 2	Academic - College	1	199	-.06
Robertson-Kraft & Duckworth (2014) - Study 1	Academic - College	0	154	.02
Robertson-Kraft & Duckworth (2014) - Study 2	Academic - College	0	307	-.09
Rojas (Unpublished doctoral dissertation) - Study 1	Academic - College	1	187	.11
Rojas (Unpublished doctoral dissertation) - Study 2	Academic - College	1	817	.22
Rozek (2018)	Academic - Noncollege	1	1087	.22
Schmidt et al. (2017)	Academic - College	0	173	.21
Schmidt et al. (2017)	Academic - Noncollege	0	271	.24
Sheehan (Unpublished doctoral dissertation)	Academic - Noncollege	1	179	.25
Siegling et al. (under review)	Academic - College	1	307	.35
Silvia et al. (2013)	Performance - Task	0	131	.07
Smallets et al. (unpublished) - Study 1	Perforance - Task	1	161	.06
Smallets et al. (unpublished) - Study 2	Perforance - Task	1	168	.18
Steinmayr et al. (2018) - Study 1	Academic - Noncollege	1	225	.26
Steinmayr et al. (2018) - Study 2	Academic - Noncollege	1	586	.20
Stewart (Unpublished doctoral dissertation)	Academic - Noncollege	1	88	.02
Stewart (Unpublished doctoral dissertation)	Academic - Noncollege	1	88	.22
Strayhorn (2013)	Academic - Noncollege	1	140	.35
Strayhorn (2013)	Academic - College	1	140	.38

Sturman et al. (2017) - Study 2	Academic - Noncollege	1	249	0.20
Sturman et al. (2017) - Study 2	Academic - Noncollege	1	249	0.23
Sturman et al. (2017) - Study 2	Academic - Noncollege	1	249	0.02
Wang et al. (2017)	Academic - Noncollege	1	217	0.25
Warden et al. (2015) - Sample 1	Academic - College	1	67	0.31
Warden et al. (2015) - Sample 2	Academic - College	1	72	0.33
Weisskirch (2018)	Academic - College	1	302	0.27
Wenner (2015)	Nonacademic	1	188	0.13
Weston (2015)	Academic - Noncollege	1	33	0.25
Weston (2015)	Academic - Noncollege	1	33	-0.37
Williams (Unpublished doctoral dissertation)	Academic - College	0	130	0.26
Wolters & Hussain (2015)	Academic - College	0	213	0.26
Wolters & Hussain (2015)	Academic - Noncollege	0	213	-0.02
Wolters & Hussain (2015)	Academic - Graduate	1	213	0.00
Zamarro et al. (2018)	Performance - Task	1	4800	0.14
Zimmerman & Brogan (2015)	Academic - College	1	49	0.17
Zurlo (2017)	Academic - College	1	391	-0.04

Table S2

Moderator Analysis of Passion for Performance Domain on the Relationship Between Perseverance and Performance

Effect	*b*	*SE*	*z*	*p*
Intercept	.13	.08	1.63	.10
Passion for Performance Domain	.08	.04	2.07	.04
Year of Study	-.00	.01	-.39	.69
Journal Type - *Unpublished*	-.06	.04	-1.52	.13
Journal Type - *Psychology*	.02	.06	.32	.75
Journal Type - *Education*	-.02	.05	-.41	.68
Observations	128			
R^2	.168			

Note: Passion for Performance Domain is a binary variable where 1 = a study where a majority of participants likely found the outcome to be personally important, and 0 = a study where a minority of participants likely found the outcome to be personally important. Journal Type was a categorical variable with four binary variables, one for unpublished papers which did not appear in peer-reviewed journals, one for psychology journals, one for education variables, and one for all other journal types. The comparison group is other journal types.

Table S3

Means, Standard Deviations, and Correlations of Study 2 Variables

		M	*SD*	1	2	3	4	5	6	7	8	9	10
1	Gender	1.40	0.49										
2	Age	30.96	6.99	-.12*									
3	Organizational Tenure (in years)	3.69	2.88	-.15**	.53**								
4	Prosocial Motivation	6.55	0.76	-.04	.10*	.05	*(.85)*						
5	Intrinsic Motivation	5.73	1.28	-.07	.15**	-.02	.37**	*(.88)*					
6	Extrinsic Motivation	3.88	1.69	.01	-.02	.03	-.04	-.19**	*(.83)*				
7	Harmonious Passion	5.49	1.28	-.09	.13**	.03	.28**	.69**	-.26**	*(.90)*			
8	Perseverance	5.62	0.89	.06	.22**	.11*	.24**	.28**	-.27**	.32**	*(.73)*		
9	Passion Attainment	5.12	1.69	-.00	.13**	.00	.16**	.54**	-.38**	.56**	.39**	*(.82)*	
10	Job Performance (supervisor-rated)	4.39	0.52	.01	-.13**	-.16**	-.01	-.00	-.07	.02	.02	-.03	*(.98)*

Note. $N_{employee}$ = 422, $N_{supervisor}$ = 85, Gender (1 = male, 2 = female); *$p < .05$; **$p < .01$.

Table S4

Study 2: Multilevel Regression Analyses of Supervisor-Rated Job Performance

	Job Performance (supervisor-rated)									
	Model 1		Model 2		Model 3		Model 4		Model 5	
	Est. (s.e.)	γ	Est. (s.e.)	γ	Est. (s.e.)	γ	Est. (s.e.)	γ	Est. (s.e.)	γ
Intercept	4.41 (.04)**		4.40 (.05)**		4.40 (.05)**		4.40 (.05)**		4.40 (.05)**	
Perseverance	.03 (.02)	.07	.03 (.02)	.09	.04 (.02)	.11*	.04 (.02)	.10^{+}	.03 (.02)	.10^{+}
Passion Attainment	.01 (.01)	.05	.01 (.01)	.06	.01 (.01)	.07	.01 (.02)	.03	.01 (.02)	.05
Perseverance *x* Passion Attainment			.03 (.01)	.14*	.03 (.01)	.16**	.03 (.01)	.16*	.04 (.01)	.19**
Age					-.01 (.00)	-.13	-.06 (.00)	-.13	-.01 (.00)	-.12
Gender					-.03 (.04)	-.05	-.03 (.04)	-.04	-.03 (.04)	-.04
Organizational Tenure					.00 (.00)	.02	.00 (.00)	.02	.00 (.00)	.03
Harmonious Passion							-.01 (.02)	-.05	-.01 (.01)	-.03
Prosocial Motivation							-.01 (.02)	-.03	-.02 (.02)	-.04
Intrinsic Motivation							.01 (.02)	.05	.01 (.02)	.05
Extrinsic Motivation							-.02 (.01)	-.11	-.02 (.01)	-.12^{+}
Perseverance *x* Harmonious Passion									-.02 (.01)	-.08
R^2		.01		.03^{+}		.05^{+}		.06*		.07*
ΔR^2				.02*		.01		.01		.01
AIC		354.79		348.37		349.51		353.02		355.18

Note. $N_{employee}$ = 422, $N_{supervisor}$ = 85; γ = standardized parameter estimates in the multilevel regression model; +p <.10, *p < .05; **p < .01.

Table S5

Means, Standard Deviations, and Correlations of Study 3 Variables

		M	*SD*	*1*	*2*	*3*	*4*	*5*	*6*
1	Major GPA	3.53	0.47						
2	Perseverance	4.41	0.86	.27**					
3	Passion Attainment	3.86	1.49	.26**	.28**				
4	Age	21.66	4.75	.07	.01	-.03			
5	Gender	1.71	0.47	-.03	-.04	.02	-.16*		
6	Year of Study	0.32	0.47	-.03	.00	-.06	-.02	.08	
7	Major	0.46	0.50	-.03	.03	-.13*	-.08	.04	-.07

Note. $N = 248$, Gender (1 = male, 2 = female); Year of Study (1 = junior, all other 0), Major (1 = Science, 0 = Humanities); *$p < .05$;

**$p < .01$.

Table S6

Study 3: Major GPA Predicted by Perseverance and Passion Attainment

	Model 1	Model 2	Model 3	Model 4	Model 5
(Intercept)	-.000	-.051	-.272	-1.252*	-1.257*
	(.060)	(.061)	(.379)	(.539)	(.540)
Perseverance	.208**	.217***	.215***	.174**	.255
	(.063)	(.062)	(.062)	(.061)	(.211)
Passion Attainment	.204**	.174**	.177**	.060	.064
	(.063)	(.062)	(.062)	(.069)	(.071)
Perseverance *x* Passion Attainment		.183***	.180**	.140*	.154*
		(.055)	(.055)	(.054)	(.065)
Age			.013	.011	.012
			(.013)	(.012)	(.013)
Gender			-.031	-.037	-.036
			(.127)	(.123)	(.123)
Harmonious Passion				.113	.111
				(.067)	(.067)
Prosocial Motivation				-.061	-.059
				(.044)	(.044)
Intrinsic Motivation				.160*	.159*
				(.075)	(.075)
Extrinsic Motivation				-.003	-.004
				(.044)	(.044)
Perseverance *x* Harmonious Passion					-.018
					(0.046)
R^2	.109	.148	.152	.217	.217
Adj. R^2	.102	.137	.134	.187	.184
RMSE	.948	.929	.930	.902	.903

Note. *$p < .05$, **$p < .01$, ***$p < .001$

Appendix C

Supplementary Information for Chapter 4

Overview

This research centers on the behaviors of people who pitch their ideas. We are interested in learning how pitchers' presentations and expressions relate to listeners' decisions to support the idea. To that end, this study involves coding of video clips from the show *Dragons' Den*.
As an RA on this project, your job will be to code the clips based on a coding scheme that will be detailed in this manual. Following the guidelines for research involving this type of methodology, you will be one of several RAs who will code the clips. Each of us will code the clips **independently**, and the experimenter will compare the codes. The idea behind this is to make sure that we do not miss anything important and that there is overall agreement between raters (experimenter and RAs) on what was seen in the clips. We will start by going over the coding sheets and code 1 video together, we will then discuss our coding and clarify any questions that you may have. Then, we will each code 5 videos separately and after that we will meet to compare and discuss any additional questions and deal with any problems that may arise. If needed, we will repeat that final step.

The Clips

The clips you will code were randomly selected from the 8 seasons of *Dragons' Den* Canada. The show centers on aspiring entrepreneurs (speaker) who pitch their business concepts and products to a panel of five Canadian business moguls ('dragons') in order to convince them to invest in their ideas and products. The clips are in an FLV format (Flash Video). Each clip depicts an interaction between an entrepreneur (or several entrepreneurs from the same company) and the panel. There are several pitches in each episode. In order to keep track of different clips, each file is named after the season, episode, and pitch number based on the format: S0_E__.__, where 'S' denotes 'season, ' 'E' denotes 'episode, ' and the number after the period (.) represents the pitch number. For example, a pitch that aired in season 1, episode 2, and was the 6th pitch in that episode is labeled as **S01E02.06**.
When you code the clips, it is important to pay attention to the clip's name, as will be described later.

The Dragons

Each season the entrepreneurs present their ideas to a panel of five dragons; these dragons stay for the entire duration of the season, with some dragons staying on the show throughout all 8 seasons, and some staying on for a shorter duration.

Dragon's Picture					
Dragon's Name	**Kevin O'Leary**	**Jim Treliving**	**Robert Herjavec**	**Arlene Dickinson**	
Seasons	1-8	1-8	1-6	2-8	
Dragon's Picture					
Dragon's Name	**Jennifer Wood**	**Laurence Lewin**	**Brett Wilson**	**Bruce Croxon**	**David Chilton**
Seasons	1	1-2	3-5	6-8	7-8

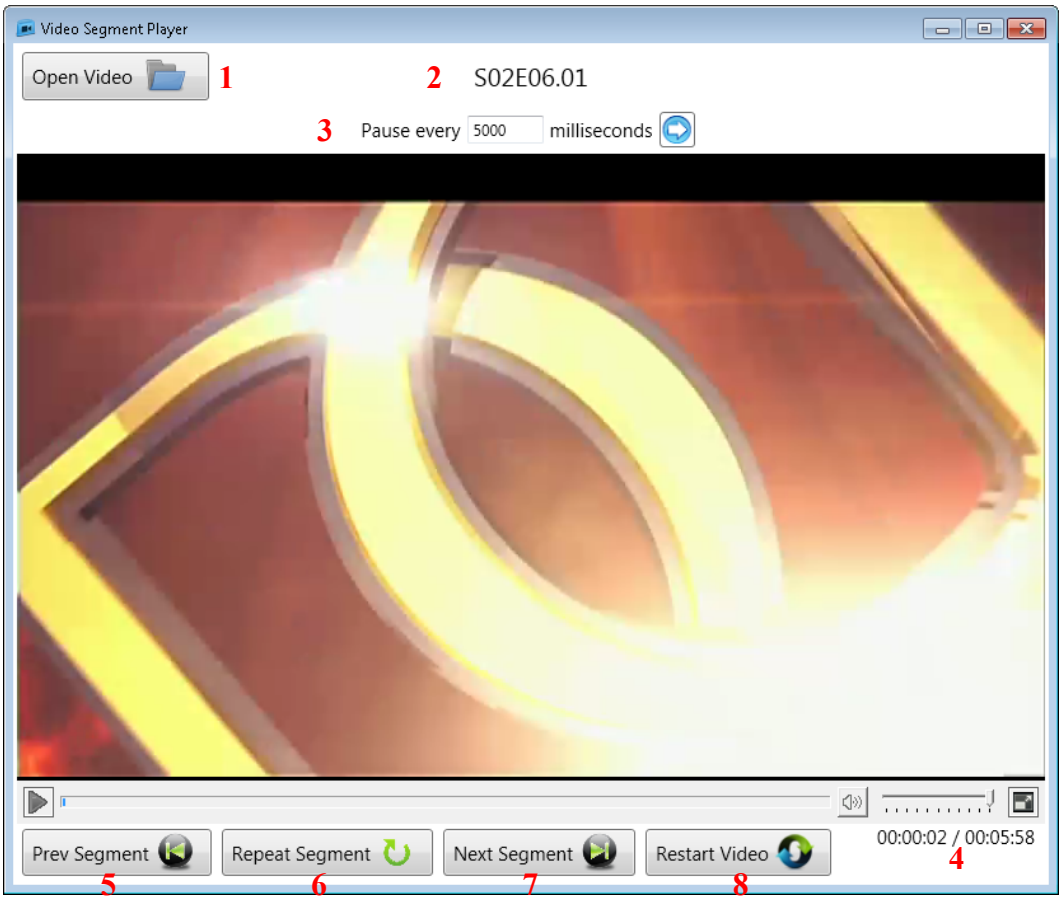
Coding Scheme & Coding Tools

Coding the clips will be done on your computer, by using two programs: VLC Media Player and Video Segment Player. VLC is a free program that can be downloaded from here. Video Segment Player is a program that was developed for this research specifically. You will use each program for different parts of the coding scheme, as will be described below.

Coding Every 5 Seconds

Video Segment Player

Video Segment Player is a program that was developed for this research specifically. I will send you the relevant files separately. For Video Segment Player to run properly on your computer, you may be asked to update or install .NET (a computer language and environment used by programmers). Your computer will prompt you in case you will need to do so. This is very safe, and will not result in any problems to your computer. The program Video Segment Player uses the VLC platform, which means that you will also need to install VLC for this phase. Video Segment Player was created to automatically pause the clip every 5 seconds. It is fairly simple and easy to use. See the descriptions below:



1. Once you open the program, or when a video that has been playing in the program has been put on 'pause' you can click on the 'open video' button to choose the next video you would like to play.
2. Once a video has been opened, the file's name will appear at the top center of the screen. Similar to other programs that show you the file's name, you cannot change the text that appears there. However, unlike other in programs, you can select the text and copy it. This would be helpful, and will save time and mistakes, when you will enter the clip's name into the coding sheets.
3. The default in this program is to pause automatically every 5 seconds (5000 milliseconds). Theoretically you can change the amount of time the program can play the clip before pausing, but you should NOT do so, unless otherwise instructed by the experimenter. It is important to keep the same time-frame for all clips and for all raters.
4. Once a video is loaded into the program, you will see how much time has passed from the beginning of the video and how long the video is. In the snapshot you see above, the clip was manually stopped after 2 seconds, and the clips' overall duration is 5 minutes and 58 seconds.
5. You can playback the previous segment by clicking on the 'prev segment' icon. This is very helpful when you want to review sections of the clip that you have already seen. It is advised to click this icon in order to go back to previous sections in the clip because it moves in the 5-seconds segments that you will be coding in. By using this icon you will be able to make sure that you are coding the exact same 5-seconds segments.

6. You can also replay the current segment over-and-over again in case you want to revisit what you have just observed. This is a useful tool in 5-seconds segments that are packed with a lot of information.
7. Similar to the previous two options, the 'next segment' icons allows you to move forward in the video using the 5-seconds segments. This may be useful in situations where you had to stop coding in the middle of a clip and are reloading it. Instead of trying to find the exact second to restart from, you can click on this icon until you reach the relevant segment in the video.
8. Just as the name suggests, this icon will restart the video and will play it from the beginning.

Expressions Coding Sheet

You will not code everything we are interested in in this study using the Video Segment Player and the 5-seconds timeframe. Rather, you will code the speaker's and the dragons' expressions every 5 seconds. You will code all other variables during Phase 2, while using the VLC Media player (see later).

Although you will use the same coding sheet to code the speaker and dragons' expressions, we want you to first play the video and only code the speaker's expressions up until the point indicated on the your observation sheets. Once you finish coding the speaker's expressions, you will replay the clip in Video Segment Player and code each of the dragons' expressions.

While playing the video, pay close attention to the facial expressions, hand gestures, body movements, and tone of voice of the individuals on the screen. The program should stop every 5 seconds and you will need to code what have happened in those 5 seconds on the Expressions Coding Sheet. You will need to circle or check the relevant boxes. If needed, watch the segment again to make sure that you have not missed anything.

Here is a snapshot of what the Expressions Coding Sheet looks like:

A

Raters Group 1 **Clip S01E02.06** ***p. #1/5*** ☐ Dragons did NOT take presentation seriously First Q asked by panel ____:____

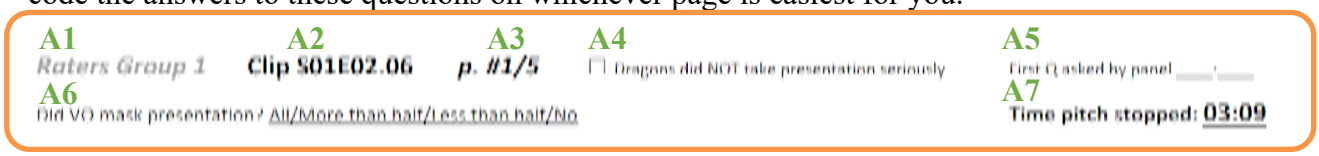
Did VO mask presentation? All/More than half/Less than half/No **Time pitch stopped: 03:09**

Segment 1: 00:00-00:04	Segment 2: 00:05-00:09	Segment 3: 00:10-00:14
Person Rated: _____	Person Rated: _____	Person Rated: _____
☐ voice over masked speech	☐ voice over masked speech	☐ voice over masked speech
☐ didn't have a chance to talk, listened to dragons	☐ didn't have a chance to talk, listened to dragons	☐ didn't have a chance to talk, listened to dragons
☐ speaker off camera	☐ speaker off camera	☐ speaker off camera
Global Expressions	**Global Expressions**	**Global Expressions**
☐ The person had energetic body movements	☐ The person had energetic body movements	☐ The person had energetic body movements
☐ The person had rich body language	☐ The person had rich body language	☐ The person had rich body language
☐ The person showed animated facial expression	☐ The person showed animated facial expression	☐ The person showed animated facial expression
☐ The person used gestures	☐ The person used gestures	☐ The person used gestures
☐ The person's face lit up when he/she or he talked	☐ The person's face lit up when he/she or he talked	☐ The person's face lit up when he/she or he talked
☐ The person talked with varied tone and pitch	☐ The person talked with varied tone and pitch	☐ The person talked with varied tone and pitch

B

Component A

At the top of each page you will see a few questions that relate to the overall clip. You should code the answers to these questions on whichever page is easiest for you.



A1. Indicates which group of raters is in charge of coding this clip. You will be randomly assigned to a group.

A2. The name of the clip you are coding, in the format S__E__.__.

A3. To keep things organized, I added the total number of sheets you use to code one clip. There are 9 squares (3 rows and 3 columns) on each page, and each represents a 5-seconds segment (in the above snapshot you only see the top row – 3 first blocks – of a page). This means that you will need 1 page to code 45 seconds, and 5 pages to code 3 minutes and 9 seconds. The clips' duration ranges between 30 seconds and 12 minutes (although the pitch stops before the end of the clip, so you will not code the whole 12 minutes), which means that you will have somewhere between 2 and 40 sheets for each clip.

A4. Did the dragons take the presentation/pitch seriously?

- Did the dragons mock the speaker?
- Did the dragons allow the speaker to present his/her idea, or did they cut him/her off?

– if the answer to these questions is YES, indicate so and check box A3.

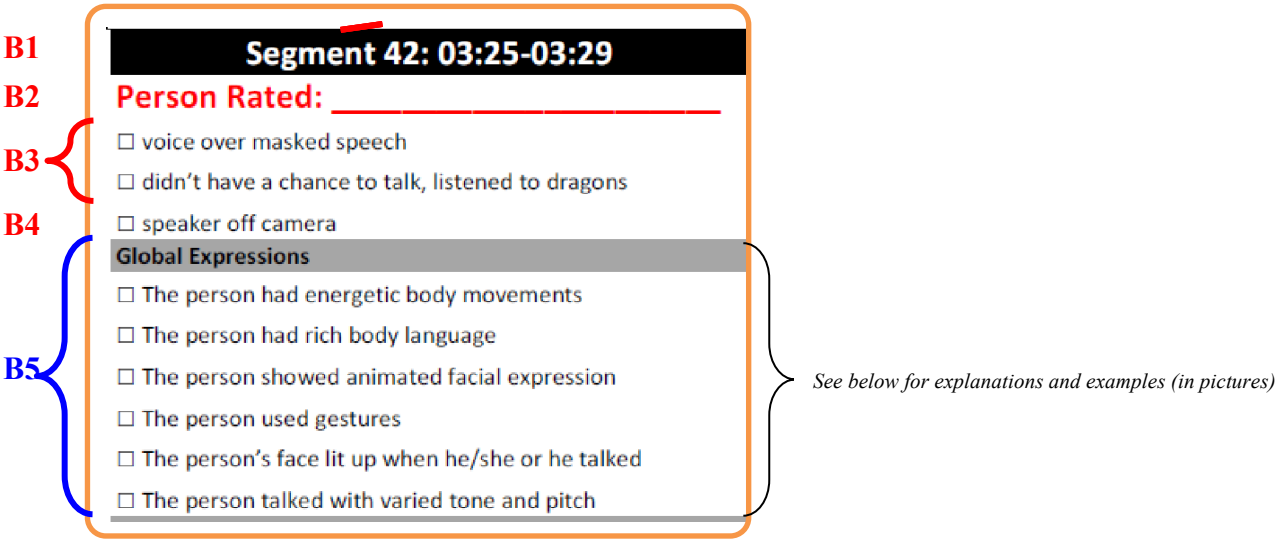
A5. When (in minutes and seconds) did the dragons ask the first question?

A6. In some clips, the show's host uses voice-over (VO) to describe things the producers decided to cut from the footage the audience sees. Sometimes, it is just a short sentence. Other times, it is a long monolog that carries for the majority of the clip. Please indicate if the VO masks all / more than half / less than half / none of the pitch.

A7. This part indicates the time in the clip when you need to stop coding the emotional expressions of the speaker and the dragons. In the example above, you can see that the coders need to stop coding at 03:09 minutes (i.e., segment 38). Stop coding the emotional expressions of the presenter and dragons based on the time indicated in A6 for each of the clips.

Component B

Each page has 9 blocks on it, with the same coding scheme in each. Each block is dedicated to a single 5-seconds segment.



B1. There is an indication at the top of each block for which segment it is. The one presented here is segment 42, which covers the 5000 milliseconds between 03:25 and 03:29 (inclusive). For a quicker coding, the sheets include the time of the clip you will code in each segment (indicated in A7). Make sure to check what area A7 says and stop coding the expressions after you reached the time in the clip.

B2. Coding the speakers' and dragons' expressions on the same sheets will help save a lot of paper and also help to keep track of everything. However, this means that you need to keep track of whose behaviour you are coding. The quickest and easiest way to keep track is to use different pen-colors for each individual. At the B2 space, you should write the name of the person in the relevant pen-color.

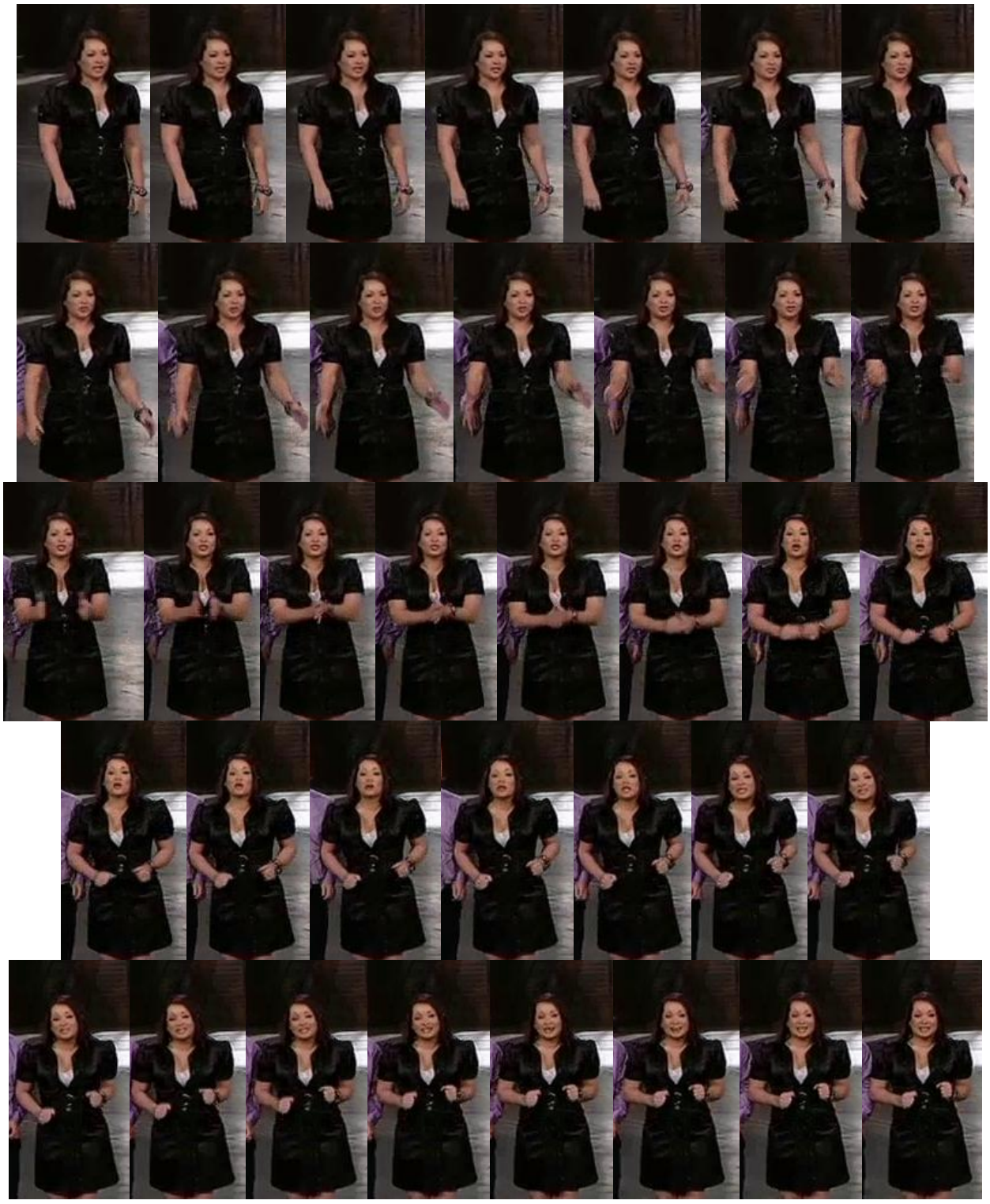
B3. Check one of these boxes if the VO covered the speech, or if speaker couldn't talk because he/she listened to the dragons. In such cases, you will not be able to code for the speaker's voice (last option in B5, see below) but will be able to code for the speaker's face, hands, and body gestures.

B4. Speaker is not seen on screen, and you cannot code for the speaker's face, hands, and body gestures. However, you may still be able to code the speaker's vocal expressions.

B5. Check the boxes that describe the speaker/dragon showed on screen. It is very possible that you will check more than one, since each describes a different type of expression.

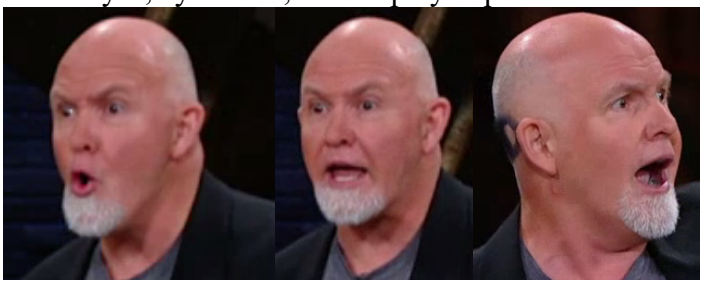
B5a. Examples of *energetic body movements*

Although it is hard to see *movement* in a series of stills-photos, look at the series of pictures below, which displays the body movement of the speaker during 1.5 seconds. Notice the movement of the shoulders and hands. In the clip, you can see she is moving very quickly, and energetically.



B5b. Examples of *rich body language*
People use their entire body to talk: face, hands, arms, etc. It is a bit similar to B5a, since the above example also includes a rich body language. But this also differs from the above, since it does **not** state that the posture or body expression involves *movement* or *high energy*.

B5c. Examples of *animated facial expression*
People 'talk' with their eyes, eyebrows, and display expressions with their whole face



OR


OR


B5d. Examples of *person using gestures*


OR


B5e. Examples of *face lighting up*

Example of Coders' Observation Sheet (Study 1)

Raters Group 1 **Clip S01E02.06** ***p. #1/5*** ☐ Dragons did NOT take presentation seriously First Q asked by panel ____:____

Did VO mask presentation? All/More than half/Less than half/No **Time pitch stopped: 03:09**

Segment 1: 00:00-00:04	Segment 2: 00:05-00:09	Segment 3: 00:10-00:14
Person Rated: _____	**Person Rated:** _____	**Person Rated:** _____
☐ voice over masked speech	☐ voice over masked speech	☐ voice over masked speech
☐ didn't have a chance to talk, listened to dragons	☐ didn't have a chance to talk, listened to dragons	☐ didn't have a chance to talk, listened to dragons
☐ speaker off camera	☐ speaker off camera	☐ speaker off camera
Global Expressions	**Global Expressions**	**Global Expressions**
☐ The person had energetic body movements	☐ The person had energetic body movements	☐ The person had energetic body movements
☐ The person had rich body language	☐ The person had rich body language	☐ The person had rich body language
☐ The person showed animated facial expression	☐ The person showed animated facial expression	☐ The person showed animated facial expression
☐ The person used gestures	☐ The person used gestures	☐ The person used gestures
☐ The person's face lit up when he/she or he talked	☐ The person's face lit up when he/she or he talked	☐ The person's face lit up when he/she or he talked
☐ The person talked with varied tone and pitch	☐ The person talked with varied tone and pitch	☐ The person talked with varied tone and pitch