

Quiet Fires Fail to Impress: Introverted Expressions of Passion Receive Less Social Worth

Grace Cormier
Jon M. Jachimowicz

Working Paper 21-027



Quiet Fires Fail to Impress: Introverted Expressions of Passion Receive Less Social Worth

Grace Cormier
Harvard Business School

Jon M. Jachimowicz
Harvard Business School

Working Paper 21-027

Copyright © 2020 by Grace Cormier and Jon M. Jachimowicz.

Working papers are in draft form. This working paper is distributed for purposes of comment and discussion only. It may not be reproduced without permission of the copyright holder. Copies of working papers are available from the author.

Funding for this research was provided in part by Harvard Business School.

**Quiet Fires Fail to Impress:
Introverted Expressions of Passion Receive Less Social Worth**

Grace Cormier

Harvard Business School

gcormier@hbs.edu

Jon M. Jachimowicz

Harvard Business School

jjachimowicz@hbs.edu

Abstract

Thinking of passionate people typically brings to mind their vivacious expressions. Prior research has shown that such outward manifestations of passion are often met with increased admiration and support by others. But not everyone may express their passion so animatedly. Drawing on personality research, we argue that vivacious expressions of passion capture only a narrow set of passion expressions: those characteristic of *extraversion*. We suggest that passion is also expressed in ways more aligned with *introversion*. Based on emerging sociological perspectives, we subsequently propose that introverted expressions of passion are rewarded less social worth than extraverted expressions of passion. We provide empirical support across four studies with full-time employees ($N=1,060$), including a study of subordinate-supervisor pairs. Our theory and results highlight that interpersonal effects of passion depend on how passion is expressed, whereby those who express their passion extravertedly—but not introvertedly—are more likely to reach higher organizational echelons.

Keywords: passion, personality, support, social worth, ideal worker

IN A GENTLE WAY, YOU CAN SHAKE THE WORLD. — Ghandi

When thinking about those who express passion, we typically conjure images of fervor—Tom Hanks jumping on Oprah’s couch over his love of Katie Holmes, Winston Churchill’s powerful and booming oratory, or Alexandria Ocasio-Cortez’s bold and gregarious fight for equality. It is unlikely, however, that we call to mind Rosa Parks, who, though timid and shy, brought the “courage of a lion” to her activism work (Gore et al., 2009, p. 116); Stephen Curry, whose “quiet fire” fuels his play (Simmons, 2019); or Steven Spielberg, whose passion was expressed in solitude: “Rather than make friends... I would just go home and write my scripts and cut my films” (Shone, 2016). Though Parks, Curry, and Spielberg are arguably no less passionate than Hanks, Churchill, or Ocasio-Cortez, their more reserved expressions of passion feature less prominently. This suggests that the fervent expressions we readily associate with passion may lead us to overlook some of the most passionate individuals among us. In the current research, we ask: *Who* is excluded in this narrow conceptualization of animated passionate expressions, *how* are they impacted by this exclusion, and *why* are they excluded in the first place?

Consider that passion has been defined as “a strong feeling toward a personally important value/preference that sparks intentions and behaviors which express that value/preference” (Jachimowicz et al., 2019, p. 9980). In line with this definition, passionate employees have been described as those who show “strong and positive emotions towards their projects, who cannot stop thinking about their ideas, and who are busy mobilizing their resources to turn their ideas into reality” (Chen et al., 2009, p. 203). This definition highlights that expressions of passion include a wide range of affective, behavioral, and cognitive markers. Interestingly, prior research

predominantly focuses on outwardly visible markers of passion, including energetic body movement, rich body language, gestures, and animated facial expressions (Chen et al., 2009). Indeed, several studies of entrepreneurial pitches have emphasized that such vivacious expressions of passion marked by animated gestures are positively related to funding outcomes (e.g., Davis et al., 2017; Galbraith et al., 2014; Mitteness et al., 2012).

We suggest that these frequently used indicators of passion track closely with expressions that tend to overlap with behavioral manifestations of extraversion, i.e., acting in ways that attract attention through the outward expression of energy and emotion (Ashton et al., 2002). However, this prior focus in theory and measurement on more outwardly, extraverted expressions of passion may reflect only a narrow set of markers of passion, and exclude other more introverted expressions of passion (e.g., see also Grant et al., 2011). This is problematic, we propose, because this narrow emphasis on what it means to express one's passion may limit our understanding of the interpersonal effects of passion, and more specifically, how others view and respond to more reserved expressions of passion.

We begin our investigation by moving beyond extraverted expressions of passion that are the focus of existing conceptualizations. Drawing on personality research, we propose that passion is also expressed in ways that are more aligned with trait introversion, capturing markers of passion that are void of animated gestures and fervent expressions but that relay a more inward focus of energy and absorption. We subsequently bring in research and theory from emerging sociological perspectives of passion (e.g., Tobias Neely, 2020) to hypothesize that these introverted expressions of passion are valued less by others in comparison to extraverted expressions of passion. This line of work views the (extraverted) expression of passion as an emotional performance that signals dedication to work and adherence to cultural expectations of

passion expression (see also Rao & Tobias Neely, 2019; Reid, 2015; Stephens et al., 2014), leading those who express their passion extravertedly to be awarded with access to social resources such as status and support. Introverted expressions, on the other hand, are not aligned with extant cultural expectations and thus may not be rewarded with a similar level of social worth, with substantial implications for who rises to the top of organizational hierarchies.

Prevalence of Passion in Contemporary Workplaces

Passion for work is an increasingly prevalent narrative in contemporary workplaces. Popular books and articles on passion for work espouse its importance for organizations (“Reawakening Your Passion for Work”; Boyatzis et al., 2002), explore how to cultivate passion for work (“A Passion for Work: Our Lifelong Affair”; Stevens, 1992) and delineate how to use passion to accelerate one’s career (“What Color is Your Parachute?”; Bolles, 1970). Indeed, passion has become increasingly valued among employers (Gershon, 2017; Neely, 2020; Reid, 2015; Rivera, 2015; Wolf et al., 2016) who view passion as a signal of employees’ dedication and investment in their work as well as their ability to excel (Kim et al., 2020; Rao & Tobias Neely, 2019; Reid, 2015; Sharone, 2013). In turn, having passionate employees is often considered a crucial aspect of running a successful business (e.g., Hagel et al., 2013; Whitehurst, 2016).

Employers’ perceptions of passionate employees are not unfounded. On the whole, meta-analyses reveal a small but robust relationship between passion and job performance (Pollack et al., 2020). Indeed, passion for work has been associated with a number of positive outcomes, including affective outcomes such as increased positive affective and reduced burnout (Curran et al., 2015); behavioral outcomes like increased task engagement (Ho et al., 2011; Ho & Astakhova, 2018); and cognitive outcomes, such as increased job satisfaction (Vallerand et al.,

2010), higher job control (Lavigne et al., 2014), and an increased sense of belonging (Stenseng et al., 2015). These effects extend to the interpersonal level, with prior work finding that individuals who are perceived as passionate by others receive more status and social support (Jachimowicz et al., 2019), more financial resources (Davis et al., 2017), and are also viewed as having more potential (Mittiness et al., 2012). Taken together, prior research suggests that passion influences both intrapersonal and interpersonal outcomes and has wide-reaching effects.

Extraversion Shapes How Passion Is Expressed

While passion prompts behaviors that express it to others, we suggest that how passion is expressed is a function of people's personality, more specifically, their levels of extraversion. We ground this prediction in the density distribution view of personality, which suggests that personality traits are comprised of distributions of behavior (Fleeson, 2001), such that the frequency and intensity with which individuals enact a given set of behaviors is influenced by how strongly they lean towards a given trait. Importantly, this view suggests that while goals may guide the direction of behavior, traits guide the expression of behavior (McCabe & Fleeson, 2012; Winter et al., 1998). Individuals with different trait profiles may thus hold similar goals but express goal-directed behavior in ways that are concordant with their underlying traits. Despite sharing similar goals, individuals can express goal-directed behavior in fundamentally different ways that in turn have important social consequences.

This approach informs our understanding of the variety of ways in which passion is expressed by individuals and rewarded by those who perceive it at work. Interestingly, prior research has predominantly followed Chen and colleagues' (2009) conceptualization of expressions of passion as more extraverted behavioral manifestations (e.g., see Davis et al., 2017; Galbraith et al., 2014; Mittiness et al., 2012). That this, these studies have used outwardly

expressed enthusiasm—marked by vociferousness and the use of animated facial expressions and gestures—as a proxy for passion. For example, Clarke and colleagues (2019) conceptualized passion expression as conveyed enthusiasm, and manipulated expressions of passion by having actors behave in ways that outwardly expressed their enthusiasm through their energy level, voice tone, spatial movement, and facial expressions. Similarly, Li and colleagues (2017) operationalize passion as the outward expression of enthusiasm, with items like “appears enthusiastic about the project idea” and “is able to convey his or her enthusiasm for the project idea.”

Such extraverted expressions of passion may not, however, capture the whole spectrum of how passion is expressed. Prior research finds that extraversion is positively related to emotional expressiveness (Riggio & Riggio, 2002), i.e., that extraverted individuals, who are often sensation-seeking, energetic and draw social attention, accurately and frequently communicate their emotions through a variety of channels, including facial expressions and body language (John & Srivastava, 1999; Riggio & Riggio, 2002). Their more introverted counterparts, however, tend to be more socially reserved, withdrawn, and introspective, and may not communicate their emotions through such outward manifestations. Underlying these differences is the notion that extraverts often operate at higher levels of arousal, whereas introverts prefer lower levels of arousal (Geen et al., 1985). This arousal is communicated through facial expression and body language, which opens the possibility that introverts may express their passion not through animated facial expressions and rich body language—which involve high levels of arousal—but in less attention-grabbing, more reserved ways. That is, more introverted expressions of passion may reflect lower levels of arousal and involve behavior that is directed inward (vs. outward) and that is calmer and more reticent (vs. boisterous or energetic).

This might include energy and attention that is focused internally (e.g., concentration), a quieting of outward expression, or an absorption in the present task.

Because introverted expressions of passion are behavioral manifestations of trait introversion, such expressions are likely distinct from other constructs that may lead to similar behavior but arise from different underlying psychological experiences. For example, engagement and flow both involve absorption in an activity that often leads to a loss of awareness of one's surroundings, particularly in the case of flow (Csikszentmihalyi, 1990; Schaufeli & Bakker, 2004). Though passion has been associated with engagement and flow (Carpentier et al., 2012; Ho et al., 2011; Ho & Astakhova, 2018; Lavigne et al., 2012), people may experience such states during activities regardless of their passion for them (for example, people often experience flow while driving a car; Csikszentmihalyi, 1990). Introverted expressions of passion are also likely to be distinct from affective expressions more broadly. Given that existing measures of passion expression are meant to capture behaviors that convey the overt expression of positive emotion (Davis et al., 2017; Galbraith et al., 2014; Mitteness et al., 2012), the more reserved nature of introverted expressions may seem to be either void of affect or involve more negative affective expressions. However, passion involves intense, often positive affective experiences (Curran et al., 2015). Though introverted expressions may lack animated signs of positive affect, we do not expect that different expressions of passion will involve fundamentally different emotional experiences or expressions. More formally, we suggest:

Hypothesis 1a. Introverted expressions of passion are distinct from extraverted expressions of passion.

Hypothesis 1b. Trait extraversion positively predicts extraverted expressions of passion and negatively predicts introverted expressions of passion.

How Others Value Introverted Expressions of Passion

Interpersonal accounts of passion expression link passion to enhanced status and support (e.g., Jachimowicz et al., 2019). We suggest that introverted expressions of passion do not receive an equal amount of these interpersonal benefits as extraverted expressions of passion. Underlying the interpersonal advantages of passion expression is the notion that they evoke admiration in the eyes of others, who in turn more readily offer their time and support (Jachimowicz et al., 2019). This reasoning is grounded in interpersonal accounts of emotion expression (Côté, 2005; Van Kleef, 2009), which suggest that these influence others' behavior by eliciting inferences and affective reactions in them. In the case of passion, such expressions often trigger positive inferences and emotional reactions in others (i.e., status conferral). Importantly, however, these models suggest that emotional expressions can trigger different inferences and affective reactions in different contexts. That is, the meaning others assign to affective expressions depends in part on their environment, and the cultural narratives within it.

Indeed, an emerging sociological account of passion that centers on this cultural narrative can help explain why expressions of passion often evoke positive inferences and reactions by others in the context of work (Rao & Tobias Neely, 2019). This perspective rests on the pervasive *ideal worker norm* that defines the expectation for employees to be passionate, responsible, and committed (Reid, 2015). That is, passion reflects a cultural ideal, which in turn informs shared expectations and values around passion at work. Within this passion schema, passion expressions signal one's devotion and commitment to work, which is becoming ever-more expected and valued in an economy marked by uncertainty and frequent mobility (Pugh,

2015; Rao & Tobias Neely, 2019). Said differently, passion ideals capture an expectation for workers to engage in “an emotional performance that signals their devotion to work to a particular audience, e.g., an employer” (Rao & Tobias Neely, 2019, p. 3). Those who meet this expectation are awarded emotional capital that leads to the accrual of social resources such as privilege and social value (Cottingham, 2016). This sociological view of passion helps contextualize the link between extraverted expressions of passion and interpersonal benefits evidenced in prior research. That is, extraverted expressions of passion, which capture embodied emotional performances of one’s passion, lead to social worth in the form of admiration and status. In contrast, introverted expressions of passion may not meet the expectations of the passion ideal, as they lack embodied emotional performances, and may fail to adequately signal commitment and devotion, and therefore, not lead to interpersonal benefits.

Taken together, the current research highlights the need for a more comprehensive conceptualization of expressions of passion, and explains why some expressions of passion are valued and rewarded more than others. Passion schemas that expect and reward animated, emotional performances of passion expression lead to the social valuing of passion expressions that are more extraverted (vs. introverted) in nature. The social value awarded to such expressions leads to social benefits in the form of increased support and higher performance ratings, which have important implications for success and upward mobility in organizations. To test this sociological account of passion expression, we examine the social value derived from extraverted and introverted expressions of passion. We hypothesize that introverted expressions of passion are awarded less social worth than extraverted expressions of passion. Following from existing interpersonal accounts of passion expression, we propose that only extraverted but not

introverted expressions of passion are linked with increased support. More precisely, we hypothesize:

Hypothesis 2. Those who express passion extravertedly will receive more social worth from others than those who express passion introvertedly.

Hypothesis 3. Extraverted expressions of passion, but not introverted expressions of passion, are associated with increased support from others.

Study Overview

We test our hypotheses across four studies. We first develop items measuring introverted expressions of passion, and empirically distinguish them from related constructs. We subsequently demonstrate the link between personality and expressions of passion, showing that trait extraversion predicts introverted and extraverted expressions of passion in opposite directions (Studies 1 and 2). Next, in a field study with subordinate-supervisor pairs, we show that extraverted expressions of passion are linked to increased support from others, while introverted expressions of passion are not (Study 3). Finally, we provide casual evidence in an experimental study, which revealed that employees described as expressing passion extravertedly were rated as more promotable than employees described as expressing passion more introvertedly (Study 4). All data and code necessary to reproduce our results are available at: https://osf.io/8tpz5/?view_only=ab369fe721aa4f65bc865e839f3b1a4a.

Study 1

In Study 1, we developed items that measure introverted expressions of passion and tested their validity. We also tested the relationship between trait extraversion and expressions of passion. We predicted that introverted expressions of passion would be distinct from extraverted

expressions as well as affect expressions (Hypothesis 1a), and that trait extraversion would uniquely predict expressions of passion (Hypothesis 1b).

Method

Participants. We recruited 205 participants from Prolific, and after removing individuals who failed our attention checks, had a sample of $N = 189$ participants ($M_{age} = 36.65$, $SD_{age} = 9.66$, 44.44% female).¹ Using the *pwr* package in *R* (Champely et al., 2020) reveals that we are adequately powered (79%) to detect a correlation of $r = .20$.

Measures.

Participants were asked to think about something they are passionate about and to answer the following questions about this passion.

Extraverted Expressions of Passion. To measure extraverted expressions of passion, we used items from Chen et al. (2009), which ask participants the extent to which they engage in the following when expressing their passion (i.e., “When expressing my passion...”): “I have energetic body movement,” “I have rich body language,” “I show animated facial expression,” “I use gestures,” “My face lights up,” and “I talk with varied tone and pitch” ($\alpha = .87$, $M = 4.89$, $SD = 1.25$). Participants responded to the items on a 7-point scale ranging from 1 (not at all) to 7 (extremely).

Introverted Expressions of Passion. To capture introverted expressions of passion, we drew on extant definitions of passion (Cardon et al., 2009; Chen et al., 2009; Jachimowicz et al., 2019; Perrewé et al., 2014) and theoretically derived the following items to the Chen et al., (2009) scale using the same question stem (i.e., “When expressing my passion...”): “I focus my

¹ In the middle of the survey, participants were asked to complete an attention check, which asked participants to read a simple essay and answer five questions about the essay they had just read. Results held when removing participants who incorrectly answered three or more ($N=16$) of the five attention checks incorrectly. Please see Supplementary Materials for attention check questions.

energy and attention inward,” “I become quiet and focused,” “I become absorbed in what I am doing,” and “I turn inward and forget about the outside world” ($\alpha = .76$, $M = 4.85$, $SD = 1.30$).² These items were intended to capture expressions of passion that do not require the outward and animated expression of passion, and are more trait-consistent with introversion (e.g., see Neely, 2020; Riggio & Riggio, 2002). Participants responded to these items on a 7-point scale ranging from 1 (not at all) to 7 (extremely).

Personality. Participants were asked to complete the BFI-2 (Soto & John, 2017b), which is a 60-item measure of Big Five personality traits. The measure includes 12 items per Big Five trait that are designed to measure both higher-order personality domains as well as its facets (Extraversion $\alpha = .90$, $M = 4.19$, $SD = 1.18$; Agreeableness $\alpha = .88$, $M = 5.31$, $SD = .93$; Conscientiousness $\alpha = .91$, $M = 5.40$, $SD = 1.00$; Openness $\alpha = .90$, $M = 5.37$, $SD = 1.02$; Neuroticism $\alpha = .93$, $M = 3.29$, $SD = 1.03$). Participants were asked to think about the extent to which they agreed that each item described them using a 7-point scale ranging from 1 (disagree strongly) to 7 (agree strongly).

Discriminant Validity: Affect. We also assessed participants’ positive and state negative affect while experiencing their passion using Watson et al.’s (1988) Positive and Negative Affect Schedule (PANAS). The scale contains twenty states, ten of which are positively-valanced: “interested,” “strong,” “proud,” “determined,” “attentive,” “inspired,” “alert,” “excited,” “enthusiastic,” and “determined,” ($\alpha = .85$, $M = 5.64$, $SD = .87$) and the ten of which are negatively valanced: “guilty,” “hostile,” “irritable,” “ashamed,” “afraid,” “upset,” “nervous,”

² For example, note Chen et al.’s (2009) definition of passion, which describes passionate people as those “who cannot stop thinking about their ideas” (pg. 203). Further, Perrewé et al. (2014) describe passionate individuals as those “who persist on completing work tasks” and “demonstrate a desire to engage in their chosen work” (pg. 146). Finally, Cardon et al. (2009) describe passion as deep engagement in activities that are personally meaningful and salient.

“scared,” “jittery,” and “distressed” ($\alpha = .89$, $M = 3.35$, $SD = 1.24$). Participants were asked to rate the extent to which they feel each state when expressing their passion using a 7-point scale ranging from 1 (not at all) to 7 (extremely).

Control Variables. Following prior work (Jachimowicz et al., 2019), we accounted for potential demographic differences in passion by including a number of participant demographic characteristics as control variables in our analyses, including age, gender, and ethnicity.

Results

Exploratory Factor Analysis. We first conducted an exploratory factor with an orthogonal rotation (varimax). The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, $KMO = .83$. Barlett’s test of sphericity, $\chi^2(45) = 841.76$, $p < .001$, indicated that correlations between items were sufficiently large for factor analysis. We subsequently used a parallel factor analysis to determine how many factors to extract (Horn, 1965) and found that a two-factor solution emerges, supporting our theorizing of two distinct modes of expressing passion (i.e., extraverted and introverted expressions of passion). Indeed, as Table 1 highlights, all items intended to reflect extraverted expressions of passion loaded onto one factor, while all items developed to reflect introverted expressions of passion loaded onto another (see Supplementary Materials for bivariate correlations between each scale item).

Table 1**Distinct Factor Loadings of Extraverted and Introverted Expressions of Passion**

When expressing my passion for my work...	Factor 1	Factor 2
I have energetic body movement	0.75	0.00
I have rich body language	0.86	0.00
I show animated facial expression	0.77	-0.19
I use gestures	0.80	0.00
My face lights up	0.55	0.00
I talk with varied tone and pitch	0.64	-0.23
I focus my energy and attention inward	0.00	0.78
I become quiet and focused	-0.36	0.58
I become absorbed in what I am doing	0.17	0.49
I turn inward and forget about the outside world	0.00	0.82

Note. Table contains factor loadings for extraverted and introverted expressions of passion using varimax rotation.

Discriminant Validity. We next tested the discriminant validity of expressions of passion from the PANAS scale. Bivariate correlations between expressions of passion and affect were small to moderate (see Table 2; strongest $r = .38$ between positive affect and extraverted expressions of passion). We also conducted a confirmatory factor analysis in which the best-fitting model had four factors: extraverted expressions of passion, introverted expressions of passion, positive affect, and negative affect. That is, CFA results suggested an acceptable fit for the model discriminating the expressions of passion from affect ($\chi^2(399) = 885.054$, CFI = .814, RMSEA = .08, SRMR = .095) and a poorer model fit for all alternative models combining expressions of passion with affect. For example, the four-factor model fit the data significantly better than three factor models that combined positive affect with introverted expressions of passion ($\chi^2(3) = 191.30$, $p < .001$), positive affect with extraverted expressions of passion ($\chi^2(3) = 350.08$, $p < .001$), negative affect with introverted expressions of passion ($\chi^2(3) = 211.96$, $p < .001$), and negative affect with extraverted expressions of passion ($\chi^2(3) = 829.38$, $p < .001$).

Table 2
Bivariate Correlations of Expressions of Passion with Affect

	1	2	3
1. Extraverted Expression of Passion			
2. Introverted Expressions of Passion	-0.229**		
3. Positive Emotions	0.380***	0.140	
4. Negative Emotion	-0.162*	0.053	-0.330***

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

Extraversion Predicts How Participants Express Passion. We next tested whether Big Five personality traits are associated with extraverted/introverted expressions of passion. Our analysis reveals that more extraverted participants were more likely to express passion extravertedly ($b = .303$, $SE = .085$, $p < .001$), and less likely to express passion introvertedly ($b = -.275$, $SE = .089$, $p = .002$; see Table 3). These results were robust to the inclusion of demographic control variables (extraverted expressions of passion: $b = .308$, $SE = .085$, $p < .001$; introverted expressions of passion: $b = -.269$, $SE = .089$, $p = .003$). Importantly, extraversion is the only personality characteristic that significantly predicts disparate effects in expressions of passion (that is, the 95% CI for the effect of extraversion on extraverted expressions of passion [.141, .475] does not overlap with that of the effect of extraversion on introverted expressions of passion [-.443, -.095]). We also detail relationships between different facets of extraversion and extraverted/introverted expressions of passion in the Supplementary Materials.

Table 3
Extraversion Predicts How Participants Express Passion

	<i>Dependent Variable:</i>			
	Extraverted Expressions of Passion		Introverted Expressions of Passion	
	(1)	(2)	(3)	(4)
Extraversion	0.303*** (0.085)	0.308*** (0.085)	-0.275** (0.089)	-0.269** (0.089)
Neuroticism	-0.040 (0.116)	-0.080 (0.121)	-0.030 (0.121)	0.019 (0.127)
Openness	-0.046 (0.096)	-0.052 (0.096)	0.346*** (0.101)	0.366*** (0.101)
Conscientiousness	-0.128 (0.105)	-0.126 (0.107)	0.112 (0.109)	0.159 (0.112)
Agreeableness	0.180 (0.115)	0.151 (0.117)	-0.108 (0.120)	-0.072 (0.123)
Controls		Y		Y
Constant	3.729*** (1.103)	4.625*** (1.180)	4.216*** (1.154)	4.181*** (1.236)
Observations	189	189	189	189
R ²	0.106	0.130	0.095	0.119
Adjusted R ²	0.081	0.092	0.070	0.079
Residual Std. Error	1.197 (df = 183)	1.191 (df = 180)	1.253 (df = 183)	1.247 (df = 180)
F Statistic	4.326*** (df = 5; 183)	3.369** (df = 8; 180)	3.844** (df = 5; 183)	3.025** (df = 8; 180)

Note. Controls include age, gender, and ethnicity. * $p < .05$; ** $p < .01$; *** $p < .001$.

Discussion

In Study 1, and in support of Hypothesis 1a, we found that introverted expressions of passion were distinct from extraverted expressions. (In the Supplementary Material, we report the results of a replication—Study S1—of these findings.) Further, we found that trait extraversion uniquely predicted expressions of passion, i.e., extraversion positively predicted extraverted expressions of passion and negatively predicted introverted expressions of passion, in line with Hypothesis 1b. While openness to experience was positively related to introverted

expressions of passion, it was not related to extraverted expressions of passion. Moreover, the effect of extraversion on expressions of passion persisted when controlling for openness to experience, further highlighting the unique effect of extraversion in modulating how passion is expressed. These findings suggest that personality, and in particular extraversion, influences the way people express their passion. In subsequent studies, we replicate and extend these findings to demonstrate the implications of varied passion expression for work behaviors and attitudes.

Study 2

In Study 2, we further distinguish introverted expressions of passion from other related constructs that may be associated with similar behavior but arise from different underlying psychological experiences (i.e., flow and engagement). In addition, we provide initial evidence of the effect of passion expression on work attitudes, demonstrating that extraverted expressions of passion are associated with more social worth than introverted expressions of passion (Hypothesis 2).

Method

Participants. We recruited 302 participants from Prolific, and our final sample after removing participants who failed our attention checks was 280 ($M_{age} = 36.79$, $SD_{age} = 11.17$, 43.21% female).³ Using the *pwr* package in *R* (Champely et al., 2020) reveals that we are adequately powered (91%) to detect a correlation of $r = .195$.

Measures.

Extraverted and Introverted Expressions of Passion. We used the same measure of extraverted and introverted expressions of passion as in Study 1. In addition, in Study 2, we

³ In the middle of the survey, participants were asked to complete an attention check, which asked participants read a simple essay and answer five questions about the essay they had just read. Focal results hold when removing participants who incorrectly answered three or more of the four questions incorrectly ($N=21$).

specifically asked participants about their passion expression for their work using the following prompt: “When expressing passion for my work...” (Extraverted: $\alpha = .92$, $M = 4.24$, $SD = 1.41$, Introverted: $\alpha = .84$, $M = 4.27$, $SD = 1.33$).

Personality. As in Study 1, participants were asked to complete the 60-item BFI-2 (Soto & John, 2017b); Extraversion $\alpha = .90$, $M = 4.12$, $SD = 1.16$; Agreeableness $\alpha = .86$, $M = 5.06$, $SD = .93$; Conscientiousness $\alpha = .90$, $M = 4.74$, $SD = .43$; Openness $\alpha = .88$, $M = 5.41$, $SD = .95$; Neuroticism $\alpha = .93$, $M = 3.64$, $SD = 1.32$). Participants were asked to think about the extent to which they agreed that each item described them using a 7-point scale ranging from 1 (disagree strongly) to 7 (agree strongly).

Dependent Variable: Social Worth. In order to capture the social worth participants felt they received for their expression of passion, we adapted a measure using items from Grant and Gino (2010) and Tyler and Blader (2002). The scale contained the following items: “I feel valued as a person for the passion I have for my work,” “I feel appreciated as an individual for the passion I have for my work,” “I feel that I make a positive difference at work through my passion,” and “My colleagues respect the passion I have for my work.” Participants rated each item using a 7-point scale from 1 (strongly disagree) to 7 (strongly agree) ($\alpha = .95$, $M = 5.18$, $SD = 1.29$).

Discriminant Validity: Flow. In order to measure flow, participants completed the Flow Short Scale (Engeser & Rheinberg, 2008). The measure contains 10-items that capture the fluency of behavior (e.g., “My thoughts/activities run fluidly and smoothly” and “I have no difficulty concentrating”) and absorption by the activity that one is engaging in (e.g., “I am totally absorbed in what I am doing” and “I am completely lost in thought”). Participants rated the extent to which they experienced each item while expressing their passion for their work

using a 7-point scale ranging from 1 (not at all) to 7 (very much) (fluency: $\alpha = .86$, $M = 4.78$, $SD = 1.12$; absorption: $\alpha = .74$, $M = 4.42$, $SD = 1.18$).

Discriminant Validity: Engagement. In order to measure engagement, participants completed a measure of engagement by Schaufeli and Bakker (2003). The measure contained 12-items that capture vigor (e.g., “I feel bursting with energy” and “I feel strong and vigorous”) and absorption (e.g., “I forget everything else around me” and “It is difficult to detach myself”). Participants rated the extent to which they experienced each item while expressing their passion for their work using a 7-point scale ranging from 1 (not at all) to 7 (very much) (vigor: $\alpha = .86$, $M = 4.18$, $SD = 1.26$; absorption: $\alpha = .85$, $M = 4.70$, $SD = 1.15$).

Control Variables. We included a number of participant demographic characteristics as control variables in our analyses, including gender, ethnicity, and industry (public vs. private). We also controlled for participants’ self-rated status in their organization, which was measured on a scale from 0 (lowest status) to 100 (highest status).

Results

Discriminant Validity. We first tested the discriminant validity of the introverted expressions of passion scale from flow and engagement. Bivariate correlations between introverted expressions of passion and flow and engagement were small to moderate (flow $r = .33$; engagement $r = .41$). We also conducted a confirmatory factor analysis in which the best-fitting model had four factors: extraverted expressions of passion, introverted expressions of passion, flow, and engagement. That is, CFA results suggested an acceptable fit for the model discriminating the expressions of passion from flow and engagement ($\chi^2(458) = 1587.179$, CFI = .81, RMSEA = .094, SRMR = .094) and a poorer model fit for all alternative models combining introverted expressions of passion with flow ($\chi^2(3) = 394.19$, $p < .001$) and engagement ($\chi^2(3) =$

346.20, $p < .001$), as well as those combining extraverted expressions with flow ($\chi^2(3) = 910.03$, $p < .001$) and engagement ($\chi^2(3) = 733.48$, $p < .001$). These analyses highlight that introverted expressions of passion are distinct from flow and engagement.

Extraversion Predicts How Participants Express Passion. We next tested whether Big Five personality is associated with extraverted/introverted expressions of passion. As in Study 1, and in line with Hypothesis 1b, more extraverted participants were more likely to express passion extravertedly ($b = 0.553$, $SE = .079$, $p < .001$), and less likely to express passion introvertedly (though the effect for introverted expressions was not statistically significant; $b = -.039$, $SE = .082$, $p = .63$; see Table 4). After accounting for control variables as well as engagement and flow, the effect of extraversion on extraverted expressions remained statistically significant and positive ($b = .398$, $SE = .075$, $p < .001$), while the effect of extraversion on introverted expressions of passion was statistically significant and negative ($b = -.159$, $SE = .079$, $p = .046$). Again, as in Study 1, extraversion was the only personality characteristic that significantly predicted disparate effects in expressions of passion (that is, the 95% CI for the effect of extraversion on extraverted expressions of passion [.251, .545] does not overlap with that of the effect of extraversion on introverted expressions of passion [-.314, -.004]).

Table 4
Extraversion Predicts How Participants Express Passion

	<i>Dependent variable:</i>					
	Extraverted Expressions of Passion			Introverted Expressions of Passion		
	(1)	(2)	(3)	(4)	(5)	(6)
Extraversion	0.553*** (0.079)	0.514*** (0.082)	0.398*** (0.075)	-0.039 (0.082)	-0.043 (0.085)	-0.159* (0.079)
Neuroticism	0.113 (0.080)	0.117 (0.084)	0.153* (0.077)	-0.007 (0.083)	0.004 (0.087)	0.102 (0.081)
Openness	-0.143 (0.088)	-0.100 (0.090)	-0.106 (0.081)	-0.141 (0.092)	-0.108 (0.093)	-0.154 (0.085)
Conscientiousness	0.573** (0.204)	0.565** (0.206)	0.387* (0.190)	0.920*** (0.212)	0.943*** (0.214)	0.663*** (0.199)
Agreeableness	0.100 (0.101)	0.109 (0.104)	0.054 (0.094)	-0.026 (0.105)	-0.012 (0.108)	-0.020 (0.099)
Flow			-0.264** (0.101)			0.122 (0.106)
Engagement			0.674*** (0.090)			0.463*** (0.094)
Controls		Y	Y		Y	Y
Constant	-0.904 (1.170)	-0.584 (1.216)	-0.877 (1.107)	0.989 (1.217)	1.342 (1.261)	0.452 (1.162)
Observations	280	280	280	280	280	280
R ²	0.231	0.250	0.398	0.073	0.099	0.260
Adjusted R ²	0.217	0.225	0.373	0.056	0.069	0.230
Residual Std. Error	1.245 (df = 274)	1.239 (df = 270)	1.113 (df = 268)	1.294 (df = 274)	1.285 (df = 270)	1.169 (df = 268)
F Statistic	16.456*** (df = 5; 274)	9.976*** (df = 9; 270)	16.116*** (df = 11; 268)	4.300*** (df = 5; 274)	3.302*** (df = 9; 270)	8.578*** (df = 11; 268)

Note: All VIF values < 2.50. Controls include ethnicity, gender, industry, and self-rated status.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Effect of Passion Expression on Social Worth. Finally, we tested whether expressions of passion were associated with the social worth participants experienced for their passion. Both extraverted and introverted expressions of passion were associated with increased social worth (extraverted expressions: $b = .369$, $SE = .054$, $p < .001$; introverted expressions: $b = .132$, $SE =$

.057, $p = .02$; see Table 5), however, the positive effect of extraverted expressions was significantly greater than that of introverted expressions ($b_{\text{diff}} = 0.24, p = .01$). These effects were largely robust to the inclusion of controls (extraverted expressions: $b = 0.332, SE = .055, p < .001$; introverted expressions: $b = 0.148, SE = .057, p = .010$; $b_{\text{diff}} = 0.18, p = .056$) as well as additionally controlling for flow and engagement (extraverted expressions: $b = 0.184, SE = .054, p < .001$; introverted expressions: $b = 0.023, SE = .053, p = .661$; $b_{\text{diff}} = 0.16, p = .065$).

Table 5
Passion Expressions and Experienced Social Worth

	<i>Dependent variable:</i>		
		Social Worth	
	(1)	(2)	(3)
Extraverted Expressions of Passion	0.369*** (0.054)	0.332*** (0.055)	0.184*** (0.054)
Introverted Expressions of Passion	0.132* (0.057)	0.148* (0.057)	0.023 (0.053)
Flow			0.255** (0.088)
Engagement			0.340*** (0.089)
Controls		Y (0.139)	Y (0.124)
Constant	3.049*** (0.258)	2.928*** (0.418)	1.703*** (0.407)
Observations	280	280	280
R ²	0.230	0.254	0.414
Adjusted R ²	0.224	0.237	0.396
Residual Std. Error	1.137 (df = 277)	1.127 (df = 273)	1.003 (df = 271)
F Statistic	41.300*** (df = 2; 277)	15.455*** (df = 6; 273)	23.885*** (df = 8; 271)

Note. Controls include ethnicity, gender, industry, and self-rated status. * $p < .05$; ** $p < .01$; *** $p < .001$

Discussion

In line with Hypotheses 1 and 2, we again found that introverted expressions of passion are distinct from extraverted expressions, as well as flow and engagement, and that trait extraversion uniquely predicts passion expression. We also found that those who express passion introvertedly receive less social worth from their peers than do individuals who express their passion extravertedly. In Study 3, we explore the effect of passion expression on other's behavior towards the passion expresser, providing additional evidence for the interpersonal effects of varied passion expression.

Study 3

In Study 3, we examined whether extraverted expressions of passion are associated with more support from colleagues (Hypothesis 3). This study also allowed us to rule out an alternative explanation, i.e., that others reward introverted expressions of passion less because they are less likely to recognize them.

Method

Participants. We recruited pairs of supervisors and subordinates from ROIRocket, an online survey provider. Eligible participants were professionals located within the United States and working full-time. We first asked focal employees to complete a survey about their passion and work experiences, as well as answer several questions about their supervisor at work. At the end of the survey, focal employees were asked to nominate their supervisor, who was then recruited to participate in our study. Supervisors completed questions about the focal employee who nominated them to participate as well as questions about their own passion and work experiences.

A total of 163 pairs were recruited. In order to confirm that participants were indeed working full-time, we removed participants whose salary fell below \$39,000 or who worked fewer than 30 hours per week ($N=19$). In addition, the research team assessed overlap between employee and supervisor responses on a number of questions, including a brief description of their relationship, the length of their relationship, as well as their industry. Pairs were excluded if there was significant discrepancy in employee and supervisor responses ($N=13$). After removing participants that did not meet our exclusion criteria, we were left with a total of 134 pairs. Finally, after removing participants who failed our attention checks, our final sample consisted

of 106 pairs of supervisors and subordinates (supervisors: $M_{age} = 46.24$, $SD_{age} = 9.67$, 42.45% female, subordinates: $M_{age} = 40.95$, $SD_{age} = 9.77$, 64.15% female).⁴

Measures

Self-Rated.

Extraverted and Introverted Expressions of Passion. We used the same measure of extraverted and introverted expressions of passion as before (Extraverted: $\alpha = .89$, $M = 5.70$, $SD = 1.06$, Introverted: $\alpha = .88$, $M = 4.79$, $SD = 1.61$).

Personality. Participants were asked to complete the BFI-2 short form (Soto & John, 2017a), which is a 30-item measure of Big Five personality traits. The measure includes 6-items per big five trait that are designed to measure both higher order personality domain as well as its facets (Extraversion $\alpha = .73$, $M = 5.28$, $SD = 1.10$; Agreeableness $\alpha = .75$, $M = 5.74$, $SD = .99$; Conscientiousness $\alpha = .73$, $M = 5.95$, $SD = .91$; Openness $\alpha = .73$, $M = 5.44$, $SD = 1.05$; Neuroticism $\alpha = .77$, $M = 2.43$, $SD = 1.10$). As before, participants were asked to think about the extent to which they agreed that each item described them using a 7-point scale ranging from 1 (disagree strongly) to 7 (agree strongly).

Control Variables. We included a number of participant demographic characteristics control variables in our analyses, including ethnicity, gender, tenure (measured in years), and industry (public vs. private). We also controlled for participants' self-rated status in their organization, which was measured on a scale from 0 (lowest status) to 100 (highest status).

⁴ In the middle of the survey, participants were asked to complete an attention check, which asked participants to read a simple essay and answer five questions about the essay they had just read. We also embedded an attention check item into our personality measure, which read "Please select Agree for this item". We coded participants as having failed the attention check if they answered five or more of the six attention check questions. Results held when removing participants who incorrectly answered three or more of our attention checks incorrectly ($N=28$).

Other-Rated.

Extraverted and Introverted Expressions of Passion. We adapted the self-rated measure of passion expression to capture other-rated expressions. The scale included six items measuring extraverted expressions (e.g., “This person has energetic body movement”; $\alpha = .91$, $M = 5.60$, $SD = 1.18$), and four items measuring introverted expressions (e.g., “This person becomes quiet and focused”; $\alpha = .83$, $M = 4.81$, $SD = 1.54$).

Support Offered. We measured the support participants offered their supervisor or subordinate with a 3-item measure (Jachimowicz et al., 2019): “How willing are you to give your {supervisor/employee} advice?”, “How willing are you to help your {supervisor/employee}?”, “How willing are you to offer support to your {supervisor/employee}?”. Items were rated on a 7-point scale ranging from 1 (not at all) to 7 (completely) ($\alpha = .84$, $M = 6.44$, $SD = .85$).

Results

Extraversion Predicts How Participants Express Passion. We first tested whether Big Five personality is associated with extraverted/introverted expressions of passion, controlling for our demographic variables, self-rated status, as well as position as a supervisor or subordinate. Replicating our results from Studies 1 and 2, we find that more extraverted participants were more likely to express their passion extravertedly ($b = .198$, $SE = .093$, $p = .034$), and less likely to express their passion introvertedly ($b = -.296$, $SE = .142$, $p = .038$; see Table 6). As in Studies 1 and 2, the 95% CI for the effect of extraversion on extraverted expressions of passion [.016, .380] did not overlap with the effect of extraversion on introverted expressions of passion [-.574, -.018], suggesting that extraversion disparately predicts expression of passion.

Table 6
Extraversion Predicts How Participants Express Passion (Study 3)

	<i>Dependent variable:</i>			
	Extraverted Expressions		Introverted Expressions	
	(1)	(2)	(3)	(4)
Extraversion	0.216*	0.198*	-0.230	-0.296*
	(0.090)	(0.093)	(0.139)	(0.142)
Neuroticism	0.018	0.013	0.233	0.162
	(0.092)	(0.097)	(0.144)	(0.147)
Openness	0.225**	0.253**	0.289*	0.333*
	(0.086)	(0.087)	(0.133)	(0.135)
Conscientiousness	-0.118	-0.143	0.050	-0.029
	(0.117)	(0.119)	(0.182)	(0.182)
Agreeableness	-0.001	-0.010	0.014	0.037
	(0.104)	(0.105)	(0.161)	(0.162)
Controls		Y		Y
Constant	4.001***	3.488***	3.494**	3.445*
	(0.861)	(0.921)	(1.337)	(1.418)
Observations	212	212	212	212
R ²	0.101	0.138	0.059	0.108
Adjusted R ²	0.080	0.090	0.036	0.064
Residual Std. Error	1.016 (df = 206)	1.010 (df = 200)	1.578 (df = 206)	1.555 (df = 201)
F Statistic	4.653*** (df = 5; 206)	2.907** (df = 11; 200)	2.565* (df = 5; 206)	2.435** (df = 10; 201)

Note. Controls include ethnicity, gender, tenure, industry, self-rated status, and status as a supervisor or subordinate. * $p < .05$; ** $p < .01$; *** $p < .001$

Effect of Passion Expression on Support from Others. To examine the interpersonal effects of passion expression, we next tested whether self-rated expressions of passion are associated with support from others (see Table 7). We find that participants who express their passion extravertedly are offered more support ($b = .157$, $SE = .052$, $p = .003$), whereas participants who express their passion introvertedly are not offered support from others ($b = -.015$, $SE = .034$, $p = .668$).

Table 7
Passion Expressions Predict Support Offered

	<i>Dependent variable:</i>	
	Support Offered	
	(1)	(2)
Extraverted Expressions	0.210*** (0.055)	0.157** (0.052)
Introverted Expressions	-0.042 (0.036)	-0.015 (0.034)
Controls		Y
Constant	5.450*** (0.328)	4.448*** (0.373)
Observations	212	212
R ²	0.065	0.221
Adjusted R ²	0.056	0.191
Residual Std. Error	0.825 (df = 209)	0.764 (df = 203)
F Statistic	7.281*** (df = 2; 209)	7.218*** (df = 8; 203)

Note: Controls include ethnicity, gender, tenure, industry, self-rated status, and status as a supervisor or subordinate. *p<0.05; **p<0.01; ***p<0.001

Ruling out an Alternative Explanation. One alternative explanation for our findings is that others may not recognize introverted expressions of passion. That is, because extraverted expressions are more outwardly-focused than introverted expressions, the latter may go altogether unnoticed by the perceiver. If introverted expressions are unnoticed—given that interpersonal rewards of passion expression presume that such expressions be perceived—they bear no opportunity for interpersonal reward. By this account, introverted expressions may be less likely to be associated with interpersonal benefits not because they are undervalued, but because they are simply unnoticed.

To rule out this alternative hypothesis, we tested whether self-rated introverted/extroverted expressions of passion are associated with other-rated

introverted/extroverted expressions of passion (see Table 8). We find that self-rated extraverted expressions of passion significantly predict other-rated extraverted expressions of passion ($b = .530, SE = .068, p < .001$), and self-rated introverted expressions of passion significantly predict extraverted expressions of passion ($b = .089, SE = .045, p = .050$); self-rated extraverted expressions are a stronger predictor of other-rated extraverted expressions of passion ($b = .44, p < .001, 95\% CI [.27, .62]$). We also find that both self-rated introverted expressions of passion ($b = .554, SE = .052, p < .001$) and self-rated extraverted expressions of passion ($b = .264, SE = .079, p = .001$) significantly predict other-rated extraverted expressions of passion; however, self-rated introverted expressions are a stronger predictor of introverted expressions than self-rated extraverted expressions ($b = .29, p = .006, 95\% CI [.09, .49]$). These results suggest that others are at least somewhat able to accurately perceive introverted and extraverted expressions of passion, ruling out the alternative explanation that our effects are solely driven by introverted expressions of passion going unnoticed.

Table 8
Self-Rated Expressions are Associated with Other-Rated Expressions

	<i>Dependent variable:</i>			
	Other-Rated Extraverted Expressions of Passion		Other-Rated Introverted Expressions of Passion	
	(1)	(2)	(3)	(4)
Self-Rated Extraverted Expressions of Passion	0.560*** (0.067)	0.530*** (0.068)	0.265** (0.081)	0.264*** (0.079)
Self-Rated Introverted Expressions of Passion	0.071 (0.044)	0.089* (0.045)	0.533*** (0.053)	0.554*** (0.052)
Controls		Y		Y
Constant	2.070*** (0.397)	1.643*** (0.477)	0.748 (0.483)	0.725 (0.553)
Observations	212	212	212	212
R ²	0.285	0.316	0.386	0.465
Adjusted R ²	0.278	0.289	0.380	0.444
Residual Std. Error	1.001 (df = 209)	0.993 (df = 203)	1.216 (df = 209)	1.151 (df = 203)
F Statistic	41.615*** (df = 2; 209)	11.734*** (df = 8; 203)	65.677*** (df = 2; 209)	22.049*** (df = 8; 203)

Note. Controls include ethnicity, gender, tenure, industry, self-rated status, and status as a supervisor or subordinate.
 * $p < .05$; ** $p < .01$; *** $p < .001$

Discussion

In Study 3, we found that when individuals express passion extravertedly, they are offered more support than those who express their passion introvertedly. In addition, we were able to provide evidence against the alternative explanation for our findings—that introverted expressions of passion are unnoticed—by demonstrating that self and other-ratings of both extraverted and introverted expressions of passion are significantly correlated. We note that while Studies 1-3 show correlational evidence for the effects of passion expression at work, they lack causal evidence that properly isolates the influence of passion expression on work outcomes, which we turn to next.

Study 4

In Study 4, we adopted an experimental design to test the effects of passion expression on likelihood of promotion. We predicted that those who express their passion extravertedly would be more likely to be promoted than those who express their passion introvertedly. We recruited 200 participants from Prolific, and our final sample after removing participants who failed our attention checks was 189 ($M_{age} = 37.23$, $SD_{age} = 9.75$, 43.39% female). Using the *pwr* package (Champely et al., 2020) reveals that we are adequately powered (79%) to detect a correlation of $r = .20$.⁵

Method

Participants were asked to rate several profiles of employees expressing passion for their work. Profiles were created by randomly pairing employee job descriptions with descriptions of how employees express their passion for their work. Expressions of passion varied on whether passion was expressed extravertedly or introvertedly, and followed items capturing passion expression used in Studies 1-3. Participants rated eight profiles in total, four of which contained extraverted expressions of passion and four of which contained introverted expressions of passion (see Table 9 for stimuli).

⁵ In the middle of the survey, participants were asked to complete an attention check, which asked participants read a simple essay and answer five questions about the essay they had just read. Results held when removing participants who incorrectly answered three or more of these five questions incorrectly ($N=11$).

Table 9
Stimuli Used in Study 4

Job Descriptions

Portfolio 1: Mark works at a technology firm that develops medical devices. Specifically, he designs technology to improve the accuracy of medical devices to detect underlying health problems.

Portfolio 2: Jane works at the warehouse of a large retail store. Specifically, she is responsible for the smooth processing of orders, and oversees compliance with procedures and regulations.

Portfolio 3: David works as a consultant for a larger professional services firm. Specifically, he helps clients understand and solve problems by conducting research and distilling findings into reports.

Portfolio 4: Clark works as an account manager for a large insurance company. Specifically, he makes sure client accounts are being handled properly, and he looks for new client relationships to establish.

Portfolio 5: Fiona works as a nurse anesthetist for a large hospital. Specifically, she is with patients before, during and after surgery, delivering anesthesia to make sure the patient remains pain-free.

Portfolio 6: Laura works as a sales representative for a software company. Specifically, she is responsible for reaching out to potential new clients and pitching her company's products.

Portfolio 7: Nicole works as a financial advisor for a bank. Specifically, she assesses risk and advises clients on where and how to invest their money.

Portfolio 8: Andrew works as a graphic designer for an advertising company. Specifically, he works with companies to design logos, signs, and other media.

Passion Expressions

Extraverted Expressions

When (s)he expresses passion for work, his(her) face lights up and his(her) energy is focused outward. (S)He uses lots of animated body language, like waving his(her) arms as (s)he engages others with ideas.

When (s)he expresses passion for this work, (s)he uses energetic body movement, such as motioning with his(her) hands, as (s)he talks loudly and quickly.

When expressing passion for this work, his(her) eyes become wide, and his(her) arms stretch out to take up more space. The way (s)he turns his(her) energy outwards grabs the attention of others.

When he expresses passion for this work, (s)he talks with varied pitch and tone and tends to fidget. His(Her) facial expressions are often animated to match this energetic body movement.

Introverted Expressions

When (s)he expresses passion for this work, (s)he focuses energy inward. (S)He becomes quiet and adsorbed in his(her) thinking.

When (s)he expresses passion for this work, (s)he becomes absorbed in what (s)he is doing, often forgetting about the outside world. (S)He turns inward, and does not draw much attention.

When (s)he expresses passion for this work, (s)he often becomes quiet. His(Her) energy and attention are focused inward and (s)he sometimes gets lost in thought.

When (s)he expresses passion for this work, (s)he is often still and quiet, focusing his(her) energy inward.

Measures.

Promotion. Participants were asked to imagine that they were the supervisor of the employee described in each profile. Participants were then asked to rate the likelihood that they would recommend each person for promotion on a scale from 1 (Not at all) to 7 (Completely; $M = 5.27, SD = 1.19$).

Control Variables. We included a number of participant demographic characteristics as control variables in our analyses including gender, industry (public vs. private), and participants' self-rated status in their organization, which was measured on a scale from 0 (lowest status) to 100 (highest status). We also controlled for the gender of the participant described in the scenario, as well as the scenario.

Results

In order to test whether extraverted expressions of passion are positively associated with a greater likelihood of promotion, we fit a linear mixed-effects model with the personality of the passion expression as our independent variable, promotion as our dependent variable, and participant as a random intercept. Analysis reveals that participants expressed a greater likelihood of promoting employees who expressed passion extravertedly as opposed to introvertedly ($b = .136, SE = .051, p = .008$). These effects were robust to the inclusion of controls ($b = .147, SE = .005, p = .004$).⁶

Discussion

Using an experimental design, we found that individuals who express their passion extravertedly are more likely to be recommended for a promotion than individuals who express their passion introvertedly. These results provide additional evidence for the notion that

⁶ Following recommendations (Pek & Flora, 2018), we report and interpret unstandardized effects given the difficulty of interpreting standardized effect sizes from mixed-effects.

extraverted expressions of passion are rewarded over introverted expressions of passion, and show the potential implications expressing passion introvertedly has on organizational advancement.

General Discussion

Passion is an increasingly valued attribute in many contemporary organizations, and prior research highlights the substantial benefits that accrue to passionate employees (e.g., see Pollack et al., 2020). In the current research, we suggest that individuals may differ in how they express their passion, notably, that prior conceptualizations of passion predominantly favor more extraverted over more introverted expressions (Chen et al., 2009; Riggio & Riggio, 2002). Drawing on an emerging sociological perspective on passion (Rao & Tobias Neely, 2019; Reid, 2015), we suggest that introverted expressions of passion are valued less than extraverted expressions of passion, and as a result, do not connote the same interpersonal benefits.

Our studies provide empirical evidence in favor of this view. We first developed a measure to capture introverted expressions of passion and subsequently show that personality—more specifically, trait extraversion—uniquely predicts how passion is expressed. We next demonstrate that introverted expressions of passion are valued less by others than extraverted expressions of passion: using data from the lab and field, we find that those who express passion are offered more support from their colleagues and are more likely to be recommended for a promotion than those who express passion introvertedly. We also rule out the alternative explanation that these effects solely occur because others do not recognize introverted expressions of passion. Taken together, our findings highlight the multifaceted nature of passion expressions, and provide a tentative explanation for the emergence of more extravertedly passionate leaders in contemporary organizations.

Theoretical Contributions

Our results make several contributions to the literature. Through an integration of passion and personality literatures, we contribute to prior work on the interpersonal effects of expressing passion. We note that prior research has predominantly focused on expressions of passion that are reflective of trait extraversion, e.g., involving outward emotional displays (Chen et al., 2009; Davis et al., 2017; Galbraith et al., 2014; Mitteness et al., 2012). In the current research, we demonstrate that passion can also be expressed in more introverted ways, providing a more nuanced perspective to prior accounts which suggest that interpersonal benefits accrue to those who express their passion (e.g., Jachimowicz et al., 2019). Indeed, we reason, not all expressions of passion are equally admired, and in turn, rewarded.

To understand whether and why expressions of passion may be valued differently, we draw on an emerging sociological account of passion (Rao & Tobias Neely, 2019), which argues that extraverted expressions of passion fulfill cultural expectations that employees signal their passion and commitment to their work through an outward emotional performance (Cottingham, 2016; Rao & Tobias Neely, 2019; Reid, 2015). As a result, more extraverted expressions of passion are deemed more appropriate (Côté, 2005; Van Kleef, 2009), and in turn rewarded by garnering increased access to social resources. Our research supports this account of passion expression, advancing interpersonal accounts of passion expression by drawing attention to the context in which passion is expressed and given meaning. That is, interpersonal accounts of passion need to recognize that passion expressions are rewarded considering the cultural norms and values of groups in which that passion is expressed.

This view may have important implications for who rises to the top of organizational hierarchies. Consider that upward mobility is determined in large part by opportunity, social

status, and support (Chetty et al., 2014; Putnam, 2015). As a result, awarding such resources only to those who adhere to narrow cultural expectations of passion expressions—i.e., those who express their passion extravertedly—may lead to the underrepresentation of individuals who express their passion in more introverted ways. Indeed, the overrepresentation of extravertedly passionate leaders may fuel a self-perpetuating cycle in which those who express passion extravertedly rise to the top, and themselves set and reinforce cultural expectations that favor extraverted expressions (Schein, 2010). Early career professionals who express their passion introvertedly may additionally lack the role models critical to their ability to advance in the organization (Humberd & Rouse, 2016).

The lack of introvertedly passionate leaders may also hinder an organization's performance because a focus on extraverted expressions of passion excludes two groups of individuals. First, it excludes those that are more introverted, by quelling the likelihood that passionate introverts emerge as leaders despite their potential to make important contributions (Grant et al., 2011). Second, it excludes those from lower socioeconomic backgrounds who have not been exposed to culturally accepted ways of expressing passion at work, which favors “expressive individualism” (Martin & Côté, 2019; Stephens et al., 2014). In both cases, rewarding one form of passion expression over the other may contribute to a lack of diversity—in personality, and in socioeconomic status—in upper echelons of organizations.

Limitations and Future Research Directions

Our research comes with several limitations. First, one might argue that extraverted expressions of passion are a manifestation of extraversion, and not passion. This argument is not unfounded, given that extraversion is a strong predictor of status (Anderson et al., 2001) and work performance (Blickle et al., 2015). However, consider that individuals enact different

personality traits depending on their immediate context (Mischel et al., 2002; Mischel & Shoda, 1995), i.e., that situations trigger different goals and expectations which in turn influence what personality traits individuals express. As a result, people may at times act in trait inconsistent ways. For example, complex situations are associated with expressions of openness to experience and extraversion, whereas adverse situations are associated with the expression of neuroticism (Parrigon et al., 2017).

Applied to the current research, this prior work suggests that extraverted individuals may not always act in extraverted ways, particularly when they are expressing their passion. Therefore, in the present work, we chose to measure behavioral manifestations of trait extraversion in a particular situation—when expressing their passion—as a more accurate measure of what personality traits individuals draw on when expressing passion. While extraverted individuals are more likely to express their passion extravertedly, extraversion and passion are distinct; as a result, introverted individuals are also able to express their passion extravertedly (and vice versa).

Indeed, we encourage future research to explore the processes and consequences of such incongruent passion expressions which may involve emotional labor, and when sustained over time may result in burnout (Hochschild, 1979). Given the strong expectation for extraverted expressions, individuals who express their passion introvertedly may experience pressure to conform to expectations. Engaging in inauthentic displays may have an emotional cost to passion expressers (Brotheridge & Grandey, 2002), and may be less effective in eliciting support from others who respond negatively to perceived inauthenticity (Côté, 2005). This would place those who express passion introvertedly in a “double bind,” facing negative consequences whether they conform to expectations surrounding passion expression or not.

Second, in Study 3, we provide evidence against the notion that introverted expressions of passion go unnoticed, and therefore unrewarded. That is, we find that others readily recognize introverted expressions in others, making it unlikely that these expressions are not rewarded because they go unnoticed. However, we are not able to rule out the possibility that even if introverted expressions of passion are accurately perceived, as our results suggest, it is possible that perceivers do not categorize such expressions as connoting passion (Barrett, 2006, 2017). That is, for an expression of passion to be valued, others would have to categorize that expression as denoting passion, a categorization which may vary by context (Van Kleef & Côté, 2007). We note that this explanation is entirely consistent with our theorizing that introverted expressions of passion are not equally valued by others because they do not meet expectations of outward displays as suggested by the sociological perspective on passion ideals (Neely, 2020); indeed, one could view extraverted expressions of passion as those that are deemed “worthy” as being categorized as passion, in contrast to introverted expressions of passion. We encourage future research to more thoroughly tease apart these accounts, and explore if and when different expressions of passion are viewed as such.

Additional future research could also explore interventions that attempt to alter passion schemas that favor extraverted expressions. Both diversifying institutional norms as well as empowering individuals may be fruitful areas for intervention (Stephens et al., 2014). For example, diversifying institutional norms may come in the form of increasing awareness around the multitude of ways passion can be expressed, and educating people on the behavioral markers of such varied expressions. Empowering passionate introverts by creating advancement opportunities that highlight their unique skill set may also be effective in altering passion schemas. Field research could explore the effects of implementing such interventions on

changing the perceptions of those who express passion introvertedly, as well as charting introverted passion expressers' progression throughout the firm. This research would be critical to understanding how the negative impact of extraverted passion schemas on those who express passion introvertedly could be ameliorated.

Conclusion

We broaden the lens of research on passion expression by showing that passion can be expressed in both extraverted and introverted ways. We find, however, that only extraverted expressions are rewarded at work. That is, those who express passion extravertedly are offered more support and are more likely to be recommended for a promotion. Thus, despite their potential to generate heat, fires that burn quietly are often untended while fires that roar, soar.

References

- Anderson, C., John, O. P., Keltner, D., & Kring, A. M. (2001). Who attains social status? Effects of personality and physical attractiveness in social groups. *Journal of Personality and Social Psychology, 81*(1), 116–132. <https://doi.org/10.1037/0022-3514.81.1.116>
- Ashton, M. C., Lee, K., & Paunonen, S. V. (2002). What is the central feature of extraversion? Social attention versus reward sensitivity. *Journal of Personality and Social Psychology, 83*(1), 245–252. <https://doi.org/10.1037/0022-3514.83.1.245>
- Baron, R., & Kenny, D. (1986). The moderator-mediator variable distinction in social psychological research. *Journal of Personality and Social Psychology, 51*(6), 1173–1182. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Barrett, L. F. (2006). Solving the emotion paradox: Categorization and the experience of emotion. *Personality and Social Psychology Review, 10*(1), 20–46. https://doi.org/10.1207/s15327957pspr1001_2
- Barrett, L. F. (2017). The theory of constructed emotion: An active inference account of interoception and categorization. *Social Cognitive and Affective Neuroscience, 12*(1), 1–23. <https://doi.org/10.1093/scan/nsw154>
- Blickle, G., Meurs, J. A., Wihler, A., Ewen, C., Merkl, R., & Missfeld, T. (2015). Extraversion and job performance: How context relevance and bandwidth specificity create a non-linear, positive, and asymptotic relationship. *Journal of Vocational Behavior, 87*, 80–88. <https://doi.org/10.1016/j.jvb.2014.12.009>
- Bolles, R. (1970). *What Color is Your Parachute? A Practical Guide for Job-Hunting and Career Changes*. Ten Speed Press.
- Boyatzis, R. E., McKee, A., & Goleman, D. (2002, April). *Reawakening Your Passion for Work*.

- Harvard Business Review. <https://hbr.org/2002/04/reawakening-your-passion-for-work>
- Brotheridge, C. M., & Grandey, A. A. (2002). Emotional labor and burnout: Comparing two perspectives of “people work.” *Journal of Vocational Behavior*, *60*, 17–39. <https://doi.org/10.1006/jvbe.2001.1815>
- Cardon, M. S., Wincent, J., Singh, J., & Drnovsek, M. (2009). The nature and experience of entrepreneurial passion. In *Academy of Management Review* (Vol. 34, Issue 3, pp. 511–532). <https://doi.org/10.5465/AMR.2009.40633190>
- Carpentier, J., Mageau, G. A., & Vallerand, R. J. (2012). Ruminations and flow: Why do people with a more harmonious passion experience higher well-being? *Journal of Happiness Studies*, *13*(3), 501–518. <https://doi.org/10.1007/s10902-011-9276-4>
- Champely, S., Ekstrom, C., Dalgaard, P., Gill, J., Weibelzahl, S., Anandkumar, A., Ford, C., Volcic, R., & De Rosario, H. (2020). *Basic Functions for Power Analysis*. <https://cran.r-project.org/web/packages/pwr/pwr.pdf>
- Chen, X. P., Yao, X., & Kotha, S. (2009). Entrepreneur passion and preparedness in business plan presentations: A persuasion analysis of venture capitalists’ funding decisions. *Academy of Management Journal*, *52*(1), 199–214. <https://doi.org/10.5465/AMJ.2009.36462018>
- Chetty, R., Hendren, N., Kline, P., Saez, E., & Turner, N. (2014). Is the United States still a land of opportunity? Recent trends in intergenerational mobility. *American Economic Review*, *104*(5), 141–147. <https://doi.org/10.1257/aer.104.5.141>
- Clarke, J. S., Cornelissen, J. P., & Healey, M. P. (2019). Actions speak louder than words: How figurative language and gesturing in entrepreneurial pitches influences investment judgments. *Academy of Management Journal*, *62*(2), 335–360. <https://doi.org/10.5465/amj.2016.1008>

Côté, S. (2005). A social interaction model of the effects of emotion regulation on work strain.

Academy of Management Review, 30(3), 509–530.

<https://doi.org/10.5465/AMR.2005.17293692>

Cottingham, M. D. (2016). Theorizing emotional capital. *Theory and Society*, 45(5), 451–470.

<https://doi.org/10.1007/s11186-016-9278-7>

Csikszentmihalyi, M. (1990). *Flow: The Psychology of Optimal Experience*. Harper & Row.

Curran, T., Hill, A. P., Appleton, P. R., Vallerand, R. J., & Standage, M. (2015). The psychology of passion: A meta-analytical review of a decade of research on intrapersonal outcomes.

Motivation and Emotion, 39(5), 631–655. <https://doi.org/10.1007/s11031-015-9503-0>

Davis, B. C., Hmieleski, K. M., Webb, J. W., & Coombs, J. E. (2017). Funders' positive affective reactions to entrepreneurs' crowdfunding pitches: The influence of perceived product creativity and entrepreneurial passion. *Journal of Business Venturing*, 32(1), 90–106. <https://doi.org/10.1016/j.jbusvent.2016.10.006>

Engeser, S., & Rheinberg, F. (2008). Flow, performance and moderators of challenge-skill balance. *Motivation and Emotion*, 32(3), 158–172. <https://doi.org/10.1007/s11031-008-9102-4>

Fleeson, W. (2001). Toward a structure- and process-integrated view of personality: Traits as density distributions of states. *Journal of Personality and Social Psychology*, 80(6), 1011–1027. <https://doi.org/10.1037/0022-3514.80.6.1011>

Galbraith, C. S., McKinney, B. C., DeNoble, A. F., & Ehrlich, S. B. (2014). The impact of presentation form, entrepreneurial passion, and perceived preparedness on obtaining grant funding. *Journal of Business and Technical Communication*, 28(2), 222–248.

<https://doi.org/10.1177/1050651913513902>

- Geen, R. G., McCown, E. J., & Broyles, J. W. (1985). Effects of noise on sensitivity of introverts and extraverts to signals in a vigilance task. *Personality and Individual Differences*, 6(2), 237–241. [https://doi.org/10.1016/0191-8869\(85\)90114-X](https://doi.org/10.1016/0191-8869(85)90114-X)
- Gershon, I. (2017). Down and out in the new economy: How people find (or don't find) work today. *University of Chicago Press*. <https://doi.org/10.1177/0730888418793489>
- Gore, D. F., Theoharis, J., & Woodard, K. (2009). *Want to start a revolution?: Radical women in the Black freedom struggle*. New York University Press. <https://doi.org/10.5860/choice.48-1077>
- Grant, A. M., & Gino, F. (2010). A little thanks goes a long way: Explaining why gratitude expressions motivate prosocial behavior. *Journal of Personality and Social Psychology*, 98(6), 946–955. <https://doi.org/10.1037/a0017935>
- Grant, A. M., Gino, F., & Hofmann, D. A. (2011). Reversing the extraverted leadership advantage: The role of employee proactivity. *Academy of Management Journal*, 54(4), 656. <https://doi.org/10.5465/AMJ.2011.64868418>
- Hagel, J., Brown, J., & Samoylova, T. (2013). Unlocking the passion of the Explorer. *Deloitte University Press*. <https://www2.deloitte.com/us/en/insights/topics/talent/unlocking-the-passion-of-the-explorer.html>
- Ho, V. T., & Astakhova, M. N. (2018). Disentangling passion and engagement: An examination of how and when passionate employees become engaged ones. *Human Relations*, 71(7), 973–1000. <https://doi.org/10.1177/0018726717731505>
- Ho, V. T., Wong, S. S., & Lee, C. H. (2011). A tale of passion: Linking job passion and cognitive engagement to employee work performance. *Journal of Management Studies*, 48(1), 26–47. <https://doi.org/10.1111/j.1467-6486.2009.00878.x>

- Hochschild, A. R. (1979). Emotion work, feeling rules, and social structure. *American Journal of Sociology*, *85*(3), 551–575.
- Humberd, B. K., & Rouse, E. D. (2016). Seeing you in me and me in you: Personal identification in the phases of mentoring relationships. *Academy of Management Review*, *41*(3), 435–455. <https://doi.org/10.5465/amr.2013.0203>
- Jachimowicz, J. M., To, C., Agasi, S., Côté, S., & Galinsky, A. D. (2019). The gravitational pull of expressing passion: When and how expressing passion elicits status conferral and support from others. *Organizational Behavior and Human Decision Processes*, *153*, 41–62. <https://doi.org/10.1016/j.obhdp.2019.06.002>
- John, O. P., & Srivastava, S. (1999). The big-five trait taxonomy: History, measurement, and theoretical perspectives. In *Handbook of Personality: Theory and Research* (2nd ed., pp. 102–138). Guilford Press.
- Kim, J. Y., Campbell, T. H., Shepherd, S., & Kay, A. C. (2020). Understanding contemporary forms of exploitation: Attributions of passion serve to legitimize the poor treatment of workers. *Journal of Personality and Social Psychology*, *118*(1), 121–148. <https://doi.org/10.1037/pspi0000190>
- Lavigne, G. L., Forest, J., & Crevier-Braud, L. (2012). Passion at work and burnout: A two-study test of the mediating role of flow experiences. *European Journal of Work and Organizational Psychology*, *21*(4), 518–546. <https://doi.org/10.1080/1359432X.2011.578390>
- Lavigne, G. L., Forest, J., Fernet, C., & Crevier-Braud, L. (2014). Passion at work and workers' evaluations of job demands and resources: A longitudinal study. *Journal of Applied Social Psychology*, *44*(4), 255–265. <https://doi.org/10.1111/jasp.12209>

- Li, J. J., Chen, X. P., Kotha, S., & Fisher, G. (2017). Catching fire and spreading it: A glimpse into displayed entrepreneurial passion in crowdfunding campaigns. *Journal of Applied Psychology, 102*(7), 1075–1090. <https://doi.org/10.1037/apl0000217>
- Martin, S. R., & Côté, S. (2019). Social class transitioners: Their cultural abilities and organizational importance. *Academy of Management Review, 44*(3), 618–642. <https://doi.org/10.5465/amr.2017.0065>
- McCabe, K. O., & Fleeson, W. (2012). What Is extraversion for? Integrating trait and motivational perspectives and identifying the purpose of extraversion. *Psychological Science, 23*(12), 1498–1505. <https://doi.org/10.1177/0956797612444904>
- Mischel, W., & Shoda, Y. (1995). A cognitive-affective system theory of personality: Reconceptualizing situations, dispositions, dynamics, and invariance in personality structure. *Psychological Review, 102*(2), 246–268. <https://doi.org/10.1037/0033-295X.102.2.246>
- Mischel, W., Shoda, Y., & Mendoza-Denton, R. (2002). Situation-behavior profiles as a locus of consistency in personality. *Current Directions in Psychological Science, 11*(2), 50–54. <https://doi.org/10.1111/1467-8721.00166>
- Mittens, C., Sudek, R., & Cardon, M. S. (2012). Angel investor characteristics that determine whether perceived passion leads to higher evaluations of funding potential. *Journal of Business Venturing, 27*(5), 592–606. <https://doi.org/10.1016/j.jbusvent.2011.11.003>
- Neely, M. T. (2020). The portfolio ideal worker: Insecurity and inequality in the new economy. *Qualitative Sociology, 43*(2), 271–296. <https://doi.org/10.1007/s11133-020-09444-1>
- Parrigon, S., Woo, S. E., Tay, L., & Wang, T. (2017). CAPTION-ing the situation: A lexically-derived taxonomy of psychological situation characteristics. *Journal of Personality and*

- Social Psychology*, 112(4), 642–681. <https://doi.org/10.1037/pspp0000111.supp>
- Pek, J., & Flora, D. B. (2018). Reporting effect sizes in original psychological research: A discussion and tutorial. *Psychological Methods*, 23(2), 208–225. <https://doi.org/10.1037/met0000126>
- Perrewé, P. L., Hochwarter, W. A., Ferris, G. R., McCallister, C. P., & Harris, J. N. (2014). Developing a passion for work passion: Future directions on an emerging construct. *Journal of Organizational Behavior*, 35(1), 145–150. <https://doi.org/10.1002/job.1902>
- Pollack, J. M., Ho, V. T., O’Boyle, E. H., & Kirkman, B. L. (2020). Passion at work: A meta-analysis of individual work outcomes. *Journal of Organizational Behavior*, 41(4), 311–331. <https://doi.org/10.1002/job.2434>
- Pugh, A. J. (2015). *The Tumbleweed Society: Working and Caring in an Age of Insecurity*. Oxford University Press. <https://doi.org/10.1177/0891243216646325>
- Putnam, R. D. (2015). *Our Kids: The American Dream in Crisis*. Simon & Schuster. <https://doi.org/10.4079/pp.v23i0.16242>
- Rao, A. H., & Tobias Neely, M. (2019). What’s love got to do with it? Passion and inequality in white-collar work. *Sociology Compass*, 13(12), 1–14. <https://doi.org/10.1111/soc4.12744>
- Reid, E. (2015). Embracing, passing, revealing, and the ideal worker image: How people navigate expected and experienced professional identities. *Organization Science*, 26(4), 997–1017. <https://doi.org/10.1287/orsc.2015.0975>
- Riggio, H. R., & Riggio, R. E. (2002). Emotional expressiveness, extraversion and neuroticism: A meta-analysis. *Journal of Nonverbal Behavior*, 26(4).
- Rivera, L. A. (2015). Go with your gut: Emotion and evaluation in job interviews. *American Journal of Sociology*, 120(5), 1339–1389. <https://doi.org/10.1086/681214>

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, 25(3), 293–315. <https://doi.org/10.1002/job.248>

Schaufeli, W., & Bakker, A. (2003). *Utrecht Work Engagement Scale Preliminary Manual*. https://www.wilmarschaufeli.nl/publications/Schaufeli/TestManuals/Test_manual_UWES_English.pdf

Schein, E. H. (2010). *Organizational Culture and Leadership*. Jossey-Bass. <https://learning-oreilly-com.ezp-prod1.hul.harvard.edu/library/view/organizational-culture-and/9780470190609/ch01.html>

Sharone, O. (2013). *Flawed System/Flawed Self: Job Searching and Unemployment Experiences*. The University of Chicago Press. <https://doi.org/10.1177/0730888414535354>

Shone, T. (2016, June 16). *Steven Spielberg: 'It's all about making kids feel like they can do anything.'* The Guardian. <https://www.theguardian.com/film/2016/jul/16/steven-spielberg-kids-can-do-anything-bfg>

Simmons, R. (2019, April 9). *Warriors' Stephen Curry has 'quiet fire' fueled by doubters*. San Francisco Chronicle. <https://www.sfchronicle.com/warriors/article/Stephen-Curry-s-quiet-fire-has-been-13751030.php>

Soto, C. J., & John, O. P. (2017a). Short and extra-short forms of the Big Five Inventory–2: The BFI-2-S and BFI-2-XS. *Journal of Research in Personality*, 68, 69–81. <https://doi.org/10.1016/j.jrp.2017.02.004>

Soto, C. J., & John, O. P. (2017b). The next Big Five Inventory (BFI-2): Developing and assessing a hierarchical model with 15 facets to enhance bandwidth, fidelity, and predictive power. *Journal of Personality and Social Psychology*, 113(1), 117–143.

<https://doi.org/10.1037/pspp0000096>

Stenseng, F., Forest, J., & Curran, T. (2015). Positive emotions in recreational sport activities:

The role of passion and belongingness. *Journal of Happiness Studies*, *16*(5), 1117–1129.

<https://doi.org/10.1007/s10902-014-9547-y>

Stephens, N. M., Markus, H. R., & Phillips, L. T. (2014). Social class culture cycles: How three

gateway contexts shape selves and fuel inequality. *Annual Review of Psychology*, *65*(1),

611–634. <https://doi.org/10.1146/annurev-psych-010213-115143>

Stevens, P. (1992). *A Passion for Work: Our lifelong affair*. Centre for Worklife Counselling.

Tyler, T. R., & Blader, S. L. (2002). Autonomous vs. comparative status: Must we be better than

others to feel good about ourselves? *Organizational Behavior and Human Decision*

Processes, *89*(1), 813–838. [https://doi.org/10.1016/S0749-5978\(02\)00031-6](https://doi.org/10.1016/S0749-5978(02)00031-6)

Vallerand, R. J., Paquet, Y., Philippe, F. L., & Charest, J. (2010). On the role of passion for work

in burnout: A process model. *Journal of Personality*, *78*(1), 289–312.

<https://doi.org/10.1111/j.1467-6494.2009.00616.x>

van de Ven, N., Zeelenberg, M., & Pieters, R. (2009). Leveling up and down: The experiences of

benign and malicious envy. *Emotion*, *9*(3), 419–429. <https://doi.org/10.1037/a0015669>

Van Kleef, G. A. (2009). How emotions regulate social life: The emotions as social information

(EASI) model. *Current Directions in Psychological Science*, *18*(3), 184–188.

<https://doi.org/10.1111/j.1467-8721.2009.01633.x>

Van Kleef, G. A., & Côté, S. (2007). Expressing anger in conflict: When it helps and when it

hurts. *Journal of Applied Psychology*, *92*(6), 1557–1569. [https://doi.org/10.1037/0021-](https://doi.org/10.1037/0021-9010.92.6.1557)

[9010.92.6.1557](https://doi.org/10.1037/0021-9010.92.6.1557)

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures

of Positive and Negative Affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063–1070. <https://doi.org/10.1037/0022-3514.54.6.1063>

Welbourne, T. M., Johnson, D. E., & Erez, A. (1998). The role-based performance scale: Validity analysis of a theory-based measure. *Academy of Management Journal*, 41(5), 540–555. <https://doi.org/10.2307/256941>

Whitehurst, J. (2016). How to build a passionate company. *Harvard Business Review Digital Articles*, 2–4. <https://hbr.org/2016/02/how-to-build-a-passionate-company>

Winter, D. G., Stewart, A. J., John, O. P., Klohnen, E. C., & Duncan, L. E. (1998). Traits and motives: Toward an integration of two traditions in personality research. In *Psychological Review* (Vol. 105, Issue 2, pp. 230–250). American Psychological Association Inc. <https://doi.org/10.1037/0033-295X.105.2.230>

Wolf, E. B., Lee, J. J., Sah, S., & Brooks, A. W. (2016). Managing perceptions of distress at work: Reframing emotion as passion. *Organizational Behavior and Human Decision Processes*, 137, 1–12. <https://doi.org/10.1016/j.obhdp.2016.07.003>

Supplementary Material

Additional Study Material

Attention Checks. In the middle of our studies, participants were asked to read a simple essay about a holiday trip, which read as follows: “*Last summer, we decided to spend our vacation at the beach because the weather was very hot in the mountains. The travel agent said that traveling by bus was the cheapest way, but we went by plane because it was faster. We wanted to have more time to spend at the beach. The weather was beautiful and we had a great time.*” Participants then answered five multiple-choice questions related to the details of the trip described in the essay. The five questions were (correct answers underlined): “We decided to go to the beach because ____ (*it was cheaper than going to the mountains / the travel agent said that it was the cheapest / of the hot weather in the mountains / we wanted to spend time at the beach*)”, “The bus was the ____ (*best / easiest / cheapest / slowest*) way to travel”, “Traveling by plane was ____ (*more fun / cheaper / expensive / faster*) than by bus”, “We ____ (*hated / did not like / enjoyed / regretted*) our vacation”, “We had very ____ (*good / freezing / terrible / cold*) weather during our vacation”.

Study 1

We fit models to test whether facets of extraversion are differentially associated with extraverted/introverted expressions of passion. We find that the energy level facet of extraversion ($b = .335$, $SE = .086$, $p < .001$) is positively associated with extraverted expressions of passion, and that the sociability facet of extraversion is negatively associated with introverted expressions of passion ($b = -.193$, $SE = .080$, $p = .017$; see Table S1). Again, these results are robust to controls (energy level: $b = .315$, $SE = .087$, $p < .001$; sociability: $b = -.185$, $SE = .081$, $p = .024$).

Table S1

Extraversion Facets Predicts How Participants Express Passion

	<i>Dependent variable:</i>			
	Extraverted Expressions of Passion		Introverted Expressions of Passion	
	(1)	(2)	(3)	(4)
Sociability	0.086 (0.074)	0.097 (0.074)	-0.193* (0.080)	-0.185* (0.081)
Assertiveness	-0.053 (0.078)	-0.039 (0.078)	-0.043 (0.085)	-0.043 (0.086)
Energy Level	0.335*** (0.086)	0.315*** (0.087)	0.147 (0.093)	0.142 (0.095)
Controls		Y		Y
Constant	3.172*** (0.376)	3.728*** (0.516)	5.034*** (0.409)	5.443*** (0.565)
Observations	189	189	189	189
R ²	0.134	0.150	0.052	0.060
Adjusted R ²	0.120	0.122	0.037	0.029
Residual Std. Error	1.172 (df = 185)	1.171 (df = 182)	1.276 (df = 185)	1.281 (df = 182)
F Statistic	9.554*** (df = 3; 185)	5.344*** (df = 6; 182)	3.383* (df = 3; 185)	1.938 (df = 6; 182)

Note:

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Controls include ethnicity, gender, and age.

Table S2**Correlation Plot of Extraverted and Introverted Expressions of Passion**

	1	2	3	4	5	6	7	8	9
<i>Extraverted Expressions</i>									
1. I have energetic body movement	-	-	-	-	-	-	-	-	-
2. I have rich body language	0.692***	-	-	-	-	-	-	-	-
3. I show animated facial expression	0.529***	0.646***	-	-	-	-	-	-	-
4. I use gestures	0.619***	0.693***	0.619	-	-	-	-	-	-
5. My face lights up	0.386***	0.430***	0.511	0.366***	-	-	-	-	-
6. I talk with varied tone and pitch	0.383***	0.515***	0.621	0.573***	0.346***	-	-	-	-
<i>Introverted Expressions</i>									
7. I focus my energy and attention inward	-0.072	-0.065	-0.213**	-0.136	-0.023	-0.169*	-	-	-
8. I become quiet and focused	-0.312***	-0.317***	-0.372***	-0.320***	-0.131	-0.336***	0.520***	1	-
9. I become absorbed in what I am doing	0.134	0.132	0.048	0.066	0.344***	-0.061	0.292***	0.315***	1
10. I turn inward and forget about the outside world	-0.046	-0.087	-0.242***	-0.151*	0.020	-0.270***	0.663***	0.469***	0.385***

Note: * p<0.05; ** p<0.01; *** p<0.001

Table S3**Extraversion Predicts How Participants Express Passion (Study 2)**

	<i>Dependent variable:</i>			
	Extraverted Expressions		Introverted Expressions	
	(1)	(2)	(3)	(4)
Extraversion	0.206*	0.173	-0.223	-0.307*
	(0.089)	(0.089)	(0.138)	(0.139)
Neuroticism	0.005	-0.002	0.243	0.175
	(0.091)	(0.091)	(0.141)	(0.142)
Openness	0.234**	0.216*	0.282*	0.258
	(0.085)	(0.084)	(0.132)	(0.131)
Conscientiousness	-0.114	-0.098	0.047	0.023
	(0.116)	(0.114)	(0.180)	(0.178)
Agreeableness	-0.001	0.026	0.015	0.090
	(0.103)	(0.101)	(0.160)	(0.157)
Supervisor		0.088		-0.041
		(0.151)		(0.235)
Age		-0.028***		-0.036**
		(0.007)		(0.012)
White		0.360*		-0.265
		(0.169)		(0.264)
Tenure		0.065**		0.134***
		(0.023)		(0.036)
Self-Rated Status		0.002		0.001
		(0.004)		(0.006)
Private Industry		-0.200		-0.013
		(0.144)		(0.224)
Constant	4.014***	4.395***	3.486**	4.621**
	(0.859)	(0.924)	(1.331)	(1.442)
Observations	214	214	214	214
R ²	0.107	0.197	0.059	0.143
Adjusted R ²	0.085	0.153	0.036	0.096
Residual Std. Error	1.013 (df = 208)	0.975 (df = 202)	1.571 (df = 208)	1.521 (df = 202)
F Statistic	4.982*** (df = 5; 208)	4.504*** (df = 11; 202)	2.604* (df = 5; 208)	3.065*** (df = 11; 202)

Note:

*p<0.05; **p<0.01; ***p<0.001

Table S4**Bivariate Correlations of Expressions of Passion with Flow and Engagement (Study 2)**

	1	2	3
1. Extraverted Expressions of Passion	-	-	-
2. Introverted Expressions of Passion	0.448***	-	-
3. Flow	0.320***	0.333***	-
4. Engagement	0.537***	0.414***	0.747***

Note: *p<0.05; **p<0.01; ***p<0.001

Table S5**How People Express Passion Predicts Likelihood of Promotion (Study 4)**

	<i>Dependent variable:</i>	
	Likelihood of Promotion	
	(1)	(2)
Extraverted Expressions of Passion	0.136** (0.051)	0.146** (0.050)
Job Description 2		-0.450*** (0.131)
Job Description 3		-0.504*** (0.098)
Job Description 4		-0.575*** (0.098)
Job Description 5		-0.445*** (0.131)
Job Description 6		-0.635*** (0.131)
Job Description 7		-0.561*** (0.131)
Job Description 8		-0.451*** (0.098)
Participant Gender: Male		-0.133 (0.117)
Passion Expresser Gender: Male		-0.090 (0.110)
Sector: Public		0.132 (0.119)
Self-Rated Status		-0.001 (0.003)
Constant	5.202*** (0.062)	5.782*** (0.197)
Participants	189	189
Observations	1,512	1,512
Log Likelihood	-2,249.421	-2,242.832
Akaike Inf. Crit.	4,506.843	4,515.663
Bayesian Inf. Crit.	4,528.128	4,595.481

Note:

* p<0.05; ** p<0.01; *** p<0.001

Study S1

To further establish the validity of our measure of extraverted and introverted expressions of passion, we conducted a CFA on a new sample of 190 participants from Prolific ($M_{age} = 36.24$, $SD_{age} = 9.83$, 46.32% female) where we measured extraverted and introverted expressions of passion (extraverted expressions: $\alpha = .89$, $M = 4.82$, $SD = 1.26$; introverted expressions: $\alpha = .75$, $M = 4.36$, $SD = 1.27$ for introverted).⁷ Analyses reveals that the two-factor model fit the data better ($\chi^2(34) = 129.46$, CFI = .893, RMSEA = .122, SRMR = .137) than a one-factor model ($\chi^2(35) = 278.95$, CFI = .727, RMSEA = .192, SRMR = .155; difference between both: $\Delta\chi^2 = 149.49$, $p < .001$).

⁷ In the middle of the survey, participants were asked to complete an attention check, which asked participants read a simple essay and answer five questions about the essay they had just read. Results held when removing participants who incorrectly answered three or more of these five questions incorrectly (N=20).