A Potential Pitfall of Passion:

Passion is Associated with Performance Overconfidence

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Abstract

Having passion is almost universally lauded. People strive to follow their passion at work, and organizations increasingly seek out passionate employees. Supporting the benefits of passion, prior research finds a robust relationship between passion and higher levels of job performance. At the same time, this research also reveals significant variability in the size of the effect. To explain this heterogeneity, we propose that passion is associated with performance overconfidence—inflated views about how well the self is performing—and that this association provides a helpful lens in understanding when passion will be more or less beneficial for performance. A daily diary field study with 829 employees (33,160 observations) and an experiment with 396 participants provide evidence that passion is associated with performance overconfidence. These findings provide a lens through which to discuss when, why, and for whom passion may be more helpful for performance or a potential pitfall.

Keywords: passion, performance, overconfidence, engagement, experience sampling
“You’ve got to have faith and passion in what you’re doing to make it work, and [Elon Musk] did. Many of us, myself included, couldn’t see how he could possibly succeed. He couldn’t see how he could possibly fail.”

– Jim Cantrell, SpaceX co-founder

The entrepreneur and CEO Elon Musk is often described as a passionate visionary. Musk has developed a network of provocative ventures, including high-speed aerodynamic transportation systems, a human colony on Mars, and neuro-implants to allow for human-AI interfacing. Despite his many successes, Musk has also endured several high-profile failures. For example, in an unveiling of Tesla’s CyberTruck, he tested the claim that the windows of the truck were unbreakable by throwing a small metal disc at the front window—which immediately cracked. Upon seeing this, Musk insisted on trying again, this time on the back window, which also cracked. This is illustrative of another trait of Musk: he has also been called “galactically arrogant” (Ravikumar, 2019) and overconfident in his vision of the future. This characterization is not unique to Musk; entrepreneurs are often described as both passionate about their venture and overconfident about their chances of success (Cooper et al., 1988). In the current research, we propose that passion is associated with performance overconfidence, and that this relationship may shed insight into when, why, and for whom passion may be more versus less helpful.

Passion—defined as “a strong feeling toward a personally important value/preference that sparks intentions and behaviors which express that value/preference” (Jachimowicz et al., 2018, p. 9980)—is lauded as a highly valued employee attribute in both popular and academic literature (O’Keefe et al., 2018; Rao & Tobias Neely, 2019). Organizations commonly list “passion” as an important criterion in their hiring and promotion decisions (Jachimowicz & Weisman, 2022), and employees increasingly state that passion is a central career aspiration, with one recent survey finding that 72% of U.S. college-educated employees listed pursuing their passion as an important
career goal. This “passion paradigm” (Siy et al., 2023; Wang et al., 2022) celebrates passionate individuals who are ostensibly ready to give it their all by doing what they love.

Supporting this favorable view of passion, prior research has largely found a robust and positive relationship between passion and job performance; at the same time, this research also reveals that this relationship is highly variable, with studies varying in finding smaller to larger beneficial effects of passion on performance, and some even finding a negative effect (Curran et al., 2015; Jachimowicz et al., 2018; Pollack et al., 2020). The current research offers a conceptual window for understanding this variability in the relationship between passion and performance. We propose that more passionate employees are more likely to hold inflated beliefs about the degree to which their passion makes them perform better. This association between passion and overconfidence matters because research finds that overconfidence can be associated with both positive and negative effects on performance (Belmi et al., 2020; Moore & Swift, 2011; Reyes et al., 2022; Sanchez & Dunning, 2018). Thus, although passion for work is likely beneficial for performance in many situations, we suggest that the variable effects in overconfidence on performance can shed light on the variable effects of passion on performance. In the General Discussion, we outline the factors that may shape whether passion is more or less likely to be beneficial.

We propose that passion inflates people’s assessment of their own performance by drawing on the importance of “chronic self-views” for performance estimations, defined as the beliefs individuals hold about their abilities and performance potential (Ehrlinger & Dunning, 2003). Chronic self-views become relevant in performance estimation because people often hold a poor sense of their own performance across many domains, from managerial duties to scholastic performance (Mabe & West, 1982). When estimating performance is challenging, such as in the
absence of concrete or task-relevant information, people often employ a top-down perspective; specifically, they use their abstract self-views (in this case, “I am passionate”) to inform their performance appraisals (“I must be performing well”). For instance, Ehrlinger and Dunning (2003) manipulated whether participants believed they were proficient or not in a particular domain, and subsequently gave participants a short quiz on this topic. While actual performance was similar across both conditions, participants estimated their performance to be higher when they were randomly assigned to feel more proficient. Subsequent research has extended this work to show that chronic self-views not only shape people’s expectations about the task (top-down) but also their reflections of their experience on the task itself (bottom-up), which in turn can alter perceptions of their performance (Critcher & Dunning, 2009; see also, Huffman et al., 2022).

We integrate research on chronic self-views with prior work on passion to suggest that experiencing passion may both change people’s expectations of how well they will perform (top-down) as well as their reflections of their performance itself (bottom-up). As a result of these processes, passion can inflate people’s assessments of their performance. Previous studies have found that experiencing passion positively shapes employees’ experience of their work by making their exertion of effort feel less exhausting (i.e., “if you do what you love, you never work another day”; Bakker & Demerouti, 2017; Bredehorst et al., 2023; Cardon, 2008; Demerouti et al., 2001; Grichnik et al., 2010), and leading them to view potential setbacks in a more positive light (Gielnik et al., 2015; Nielsen & Colbert, 2022; Zigarmi et al., 2018). Experiencing passion also affects how people remember their own performance, painting a more positive picture than their actual efforts may actually have accomplished (Bunderson & Thompson, 2009; Schabram & Maitlis, 2017). These favorable views of passion—similarly echoed in societal narratives on passion
(Jachimowicz & Weisman, 2022)—likely inform people’s chronic self-views to shape how positively people view their own performance.

More specifically, we suggest that higher levels of passion drive employees to engage more with their work and that people in part rely on this engagement with work to estimate how well they are performing. Indeed, prior work has found that passion increases engagement, with higher levels of passion being related to individuals working longer hours, taking on additional tasks, and expending more effort to overcome setbacks (Curran et al., 2015; Krautter et al., 2023; Pollack et al., 2020; Schabram & Maitlis, 2017). As a result, when estimating performance, we suggest that passionate people use their increased engagement with work as a salient and relevant benchmark for performance (Mabe & West, 1982). Importantly, while increased engagement is an input into performance, this relationship however is unlikely to be linear, particularly in occupations where people are more likely to pursue their passion for work (Cech, 2021). Indeed, engagement commonly represents only a subset of the features supervisors use to evaluate performance (Christen et al., 2006) and may at times even go awry (Bazerman et al., 1984).

Taken together, while passion may inform chronic self-views to make people feel like they are performing well—and indeed, may positively shape how much people engage with their work—these may also lead people to make inflated judgements about the degree to which their passion makes them perform better (Ehrlinger & Dunning, 2003). That is, we predict:

**Hypothesis 1.** Passion for work is positively associated with increased performance overconfidence.

**Hypothesis 2.** The relationship between passion and performance overconfidence is statistically mediated by people’s increased engagement with their work.
Overview of Studies

In Study 1, we recruited 829 employees from 155 teams in an engineering company who rated themselves and each other for 20 consecutive days (33,160 observations), and test whether daily levels of passion for work are linked to daily performance overconfidence. In Study 2, we randomly assigned 396 participants to imagine holding a job they were passionate about or for other reasons, and gave everyone identical performance feedback, such that differences in self-rated performance would offer evidence of overconfidence. We also test whether increased engagement statistically mediates the link between passion and performance overconfidence. Our OSF repository containing data and code is accessible at the following link: https://osf.io/bg9hu/?view_only=67ab02b187e242ab95284f2a08f120ab.

Study 1

Methods

We conducted a field study in collaboration with an engineering company headquartered in Beijing, China. This study was not pre-registered. For 20 days, employees who worked on teams rated how passionate they felt about their work each morning. Each evening, employees rated their overall performance that day, and team members rated focal employees’ performance that day. Our sample consisted of 829 employees that worked on 155 teams, ranging between four and seven team members (M = 5.53, SD = .94). The sample was 41.5% female and had an average age of 32.20 years (SD = 5.35 years, range 24-50 years). The average tenure in the organization was 9.32 years (SD = 5.54).

To ensure anonymity for participants, all surveys were distributed through a pen-and-paper procedure and were carefully coded and cross-checked by several research assistants. Surveys were translated from English to Chinese and back-translated to English by bilingual current and
recently graduated Ph.D. students. Disagreements about translations were resolved via discussion with an external bilingual expert. The morning survey was conducted at the start of the workday (around 9 am) and the evening survey was conducted towards the end of the workday (around 5 pm). All surveys were completed during the workday, and employees received around $1 in compensation for each completed daily survey. This strategy resulted in a very high response rate where most employees completed all forty surveys (>99% overall response rate), with 33,160 observations for the daily surveys across the twenty days.

Measures

**Daily Passion for Work.** Each morning, participants were asked to report on their levels of passion for work using the following item: “How passionate do you feel about your work right now?” (adapted from Bredehorst et al., 2023) on a 7-point scale where 1 = *Not at all* to 7 = *Extremely.* Note that single-item measures are limited given their lower reliability relative to multi-item scales. However, we elected to use a single item measure of passion given that past work has highlighted advantages over conventional multiple-item scales in longitudinal contexts (Fisher & To, 2012). For instance, single-item measures are less time-consuming, cause less participant fatigue, and thus result in a lower proportion of missing data (Allen et al., 2022; Fisher & To, 2012). In addition, this single-item measure of passion has been used and validated in previous daily diary studies (Bredehorst et al., 2023; Krautter et al., 2023; Wang et al., 2022).

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1 We initially invited 891 employees to participate, but later learned that some employees were out of the office—either because they were on paid time off or on a business trip—leaving a total sample size of 829 employees.

2 Note that the data reported in this manuscript were collected as part of a larger data collection which includes an additional midday time point.

3 Note also that prior research has shown that laypersons’ answers to what passion for work means are broadly well-aligned with scientific definitions of passion (Chen & Ellsworth, 2019).
Daily Performance Overconfidence. To assess performance overconfidence, we measured both self- and other-reported (from a focal participant’s team members) performance each evening. We then calculated a daily overconfidence score as the difference between self-reported and other-reported job performance (i.e., a positive score reflecting that employees’ assessment of their performance is higher than their team members’ assessment of their performance), in line with past research (Coutinho et al., 2021; Lyons et al., 2021; Visser et al., 2019).4

Employees reported their daily performance using the following three items: “How well do you think you performed at work today?”, “Today, how satisfied were you with the amount of work that you produced?”, and “Today, how satisfied were you with the quality of work that you produced?”:5 Responses were captured on a 7-point scale where 1 = Not at all to 7 = Extremely. Within-person (between-person) Cronbach’s Alpha and McDonald’s Omega were .85 (.92) and .85 (.93).

For other-reported job performance, each employee responded to the same self-rated items for job performance for each of their team members: “How well do you think this colleague performed at work today?”, “Today, how satisfied were you with the amount of work that this colleague produced?”, and “Today, how satisfied were you with the quality of work that this colleague produced?”. We first established that all other-reported variables had sufficient interrater reliability, indicating that team members were consistent with their performance ratings. We used

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4 We identified two other approaches to operationalize performance overconfidence in prior literature. First, overconfidence can be calculated using a residual approach in which self-rated performance is regressed on a predictor while additionally controlling for other-reported performance. Overconfidence is therefore captured by the residuals, describing any unexplained variance in self-rated performance that is not explained by other-reported performance. We fully replicate our results with this alternative procedure and report the results in the Supplementary Information (see Supplementary Table 1). Second, some scholars employ a response surface analysis approach to examine the consequences of performance overconfidence (Belmi et al., 2020; Mayer et al., 2020). However, this approach can only be used to examine the extent to which combinations of two predictor variables relate to an outcome variable. This approach is not feasible here because the combination of self- and other-reported performance is the outcome variable, with passion being the predictor.

5 All results replicate when only using the first item of self- and other-reported job performance.
the *irrNA* package in *R* to estimate intraclass correlation coefficients (ICC[C, k]) for every day separately and then averaged the ICCs across the study period. The average ICC score was .75 (95% CI = [.72, .78]) which lies above the threshold of .50 and can be considered moderate/good based on the guidelines of Koo and Li (2016). Therefore, all team member ratings of performance were summarized into a single averaged other-reported score. Within-person (between-person) Cronbach’s Alpha and McDonald’s Omega were both .94 (.97).

**Control Variables.** We controlled for demographic variables—age, gender, and tenure—given that prior research has found that our focal variables may vary for these (e.g., Curran et al., 2015; Jachimowicz et al., 2018; Pollack et al., 2020). Results did not significantly differ when removing or adding controls. We report results in the main text without control variables, while the results with the control variables are available in Supplementary Table 2.

**Table 1**

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>T-SD</th>
<th>BP-SD</th>
<th>WP-SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Self-Reported Passion</td>
<td>5.03</td>
<td>.75</td>
<td>.79</td>
<td>1.24</td>
<td>.42*</td>
<td>.50*</td>
<td>.05*</td>
<td></td>
</tr>
<tr>
<td>2. Self-Reported Performance</td>
<td>4.88</td>
<td>.64</td>
<td>.62</td>
<td>1.13</td>
<td>.40 (.17)</td>
<td>.47*</td>
<td>.71*</td>
<td></td>
</tr>
<tr>
<td>3. Other-Reported Performance</td>
<td>4.91</td>
<td>.44</td>
<td>.50</td>
<td>.84</td>
<td>.48 (.31)</td>
<td>.49 (.38)</td>
<td></td>
<td>-.30*</td>
</tr>
<tr>
<td>4. Overconfidence</td>
<td>-.04</td>
<td>.59</td>
<td>.66</td>
<td>1.05</td>
<td>-.03 (.03)</td>
<td>.82 (.70)</td>
<td>-.48 (-.32)</td>
<td></td>
</tr>
</tbody>
</table>

*Notes. Means (M) across participants and days, team-level (T), between-person (BP) and within-person (WP) standard deviations (SD) are displayed in columns 2-4. The range of all variables is 1-7. Correlations below the diagonal are between-person (team-level) correlations and correlations above the diagonal are within-person correlations. *p < .01.*

**Results**

We tested our hypotheses at the within-person level which accounts for the variability in passion from one day to the next (Bredehorst et al., 2023). Because days were nested in participants who were nested in teams, we used multilevel structural equation modeling (Preacher et al., 2010)
to partition variance into within-person variance (e.g., on some days, an employee is more passionate than on other days), between-person variance (e.g., some employees are generally more passionate than other employees), and team-level variance (e.g., some teams are generally more passionate than other teams). We used the three-level option with two random intercepts and fixed slopes (i.e., TYPE = THREELEVEL) and a Bayes estimator to specify the model at both the within-person, between-person, and team-level (Muthén & Asparouhov, 2012).

We examined whether levels of passion in the morning were related to performance overconfidence later that day. Both the within-person relationship between passion and self-rated ($\beta = .51$, 95% CI [.50, .53], $p < .001$) and other-rated ($\beta = .60$, 95% CI [.59, .61], $p < .001$) performance was statistically significant and positive. However, and in line with our prediction, the within-person relationship between passion and performance overconfidence was statistically significant and positive ($\beta = .06$, 95% CI [.04, .08], $p < .001$), indicating that employees tended to be more overconfident about their performance on days when they experienced higher levels of passion.

**Discussion**

Study 1 provided evidence that passion is linked to performance overconfidence in an ecologically valid context. First, we found that on days employees reported higher levels of passion, their coworkers also evaluated their performance to be higher; this finding supports prior research showing that passion positively predicts performance. In line with our proposed association between passion and performance overconfidence, we also found that employees rated their own performance as even higher than their coworkers did. That is, although passion was associated with higher other-rated performance, it was associated with yet higher self-rated performance.
Note that we were unable to obtain objective performance information, a challenge that is common in knowledge work (Conway & Huffcutt, 1997). As a result, it is likely that others’ ratings of job performance may be positively biased by an employees’ passion for their work, given the positive associations between perceptions of passion and others’ favorable responses found in previous research (Cho & Jiang, 2021; Jachimowicz et al., 2019; Wang et al., 2022). This is likely to have made our analyses a more conservative test, i.e., we continue to observe inflated self-views of more passionate employees even relative to others’ potentially inflated views of that performance. However, this also highlights the importance of revisiting the relationship between passion and performance overconfidence in a more controlled experiment, which we turn to next.

**Study 2**

Study 2 involved an experiment in which we randomly assigned participants to imagine they held a job they were passionate about or for other reasons. We gave all participants identical performance feedback such that higher self-rated performance would indicate overconfidence. We also tested whether engagement statistically mediates the link between passion and performance overconfidence.

**Methods**

580 participants were recruited for this study through Prolific. As pre-registered, we limited our sample to full-time U.S. employees as this most closely resembled the workplace scenario described in the study. Following this exclusion, our final sample consisted of 396 participants ($M_{age} = 35.49$ years, $SD_{age} = 9.51$ years, 228 men, 166 women, 2 nonbinary individuals). The full pre-registration can be found at https://osf.io/ay8wj/?view_only=396710864f5b4a56abddaf02eb64386a. Following data collection, we conducted a sensitivity

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Note that our pre-registration includes a test for two statistical mediators—the extent to which participants identified with their job (“identification”), and their levels of behavioral engagement with their role (“investment”). Both indirect
power analysis based on the size of our sample, which suggested that our sample size was able to
detect an effect size of Cohen’s $d = .25$ with 80% power under standard parameters (alpha = .05). Participants were paid $1.50 upon study completion.

Participants were asked to imagine that they worked at a mid-size company called “M International” as a designer. They were given the following information about the company: “Imagine that you work at a mid-size company, M International as a designer. M International is a global, privately owned company focused on developing and selling to clients around the world. For this exercise, you are going to estimate your performance review as a designer. To help you evaluate your performance, you’ll first be given a description of your role as a designer and a summary of your day-to-day work.” They were then given a generic description of their role which included the below manipulations (the full survey text is available on our OSF page).

Participants were randomly assigned to one of two conditions, in line with common inductions of psychological states (for a similar manipulation for passion, see Kim et al., 2020). In the passion condition, participants were told: “You have been a designer at M International for a little over a year. You are extremely passionate for your work. Being passionate for your work is something that you particularly care about in your current role.” In the control condition, participants were told: “You have been a designer at M International for a little over a year. You often leave your home early to avoid the morning rush hour. Clearly, being punctual is important to you.”

All participants were given the same performance information with respect to the role. Specifically, they were told, “Recently, you asked several of your colleagues to rate your mediation paths were empirically supported. However, when we include both mediators simultaneously, the “investment” pathway was a stronger statistical mediator ($p < .001$) relative to “identification” ($p = .082$). For clarity, we later renamed “investment” as “engagement” in the main text. All additional measures, analyses, and results are presented in the Supplementary Information.
performance. Your colleagues described you as being an average employee.” They were given this information prior to evaluating their own performance, as described below.

**Measures**

**Self-Rated Performance.** Because all participants in our study were given identical performance information, we used participants’ ratings of their own performance as our measure of overconfidence. To do so, participants responded to three different measures of self-rated performance. First, participants responded to an overall performance rating. They were asked, “Based on what you know about your work as a designer at M International, what performance rating would you give yourself?” on a 5-point scale where 1 = *Does Not Meet Expectations* to 5 = *Strongly Exceeds Expectations*. Participants were also asked to report their performance compared to average. Specifically, they responded to the following prompt, “How do you think your performance as a designer at M International compares to the average employee?” on a 7-point scale where 1 = *One of the worst* to 7 = *One of the best*. Finally, participants rated their performance using a 6-item measure score based on the measure used by Williams and Anderson (1991). Sample items included, “I adequately complete assigned duties” and “I always complete the duties specified in my job description” (α = .81). As pre-registered, these three measures were standardized individually and aggregated to generate a measure of self-reported performance (α = .70).

**Engagement.** Employees completed the Behavioral Engagement Scale (Shuck et al., 2017). The scale included four items that assess a participant’s willingness to devote time, effort, and resources to their role. Sample items include: “I push myself to work beyond what is expected of me” and “I am willing to put in extra effort without being asked” (α = .90).

**Results**
We hypothesized that participants randomly assigned to the passion condition would have higher self-ratings of performance, compared to those in the control condition. Consistent with this hypothesis, we found that participants randomly assigned to the passion condition rated their performance as significantly higher ($M = .14, SD = .74$) than those in the control condition ($M = -.13, SD = .82$; difference $= .27, t = 3.49, p < .001$, Cohen’s $d = .35$; see Figure 1). Because all participants were given the same performance information, differences in self-rated performance are evidence of overconfidence.

We next evaluated whether engagement statistically mediated the relationship between assignment to the passion condition and self-rated performance. First, we evaluated how being randomly assigned to the passion condition predicted increased engagement. We found that the passion condition positively and significantly predicted engagement ($estimate = .50, SE = .10, t = 5.09, p < .001$). Next, we conducted a mediation analysis on the effect of the passion condition on performance through engagement, testing the significance of the indirect effects with 10,000 bootstraps. We found that increased engagement statistically mediated the relationship between condition and self-rated performance ($estimate = .27, SE = .05, z = 5.00, p < .001, 95\% CI: [.17, .37])..

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Note that the test of a statistical mediation analysis has significant assumptions and limitations. The mediation analysis is based on the theorized relationship; however, in the present study, the causal link is only between passion and engagement, and passion and self-rated performance. With this test, we cannot explicitly define engagement as a mediator, rule out the presence of other mediators, or make causal claims regarding the relationship between engagement and self-rated performance (Fiedler et al., 2011, 2018). In addition, interpretation of these results should be used cautiously, as it is unknown (and untestable within the current design) whether there are unobserved additional variables which link engagement and self-rated performance (Bullock et al., 2010).
Notes. Figure 1 presents a box-violin plot of self-rated performance by condition. The red center dot reflects the mean, with lines around the data points indicating the distribution of values. As evidenced in the figure, the mean self-reported performance is higher in the passion condition compared to the control condition. The figure was created using the ggstatsplot package in R (Patil, 2018).

Discussion

In Study 2, participants randomly assigned to think of themselves in a passionate role reported higher performance compared to those in a control role, despite being given the same performance information. In addition, we found initial support for the mediation pathway of increased passion to overconfidence through increased engagement. Taken together, this study provides evidence of passion’s association with performance overconfidence in a more controlled environment. We discuss limitations of an experimental approach to studying passion in the General Discussion.
General Discussion

In both popular and academic literature, passion is often identified as key to future success (Cech, 2021; O’Keefe et al., 2018, 2021; Rao & Tobias Neely, 2019; Siy et al., 2023). In the current research, we highlight the ways in which these beliefs about success and superior performance may trickle into the minds of passionate employees and manifest in performance overconfidence. In a field study with an engineering company where employees were surveyed twice a day for 20 days, we found that passion in the morning predicted performance overconfidence later in the day. In a subsequent experiment, we found that participants randomly assigned to imagine holding a job they were passionate about were more likely to be overconfident in their performance. We additionally find that this effect was statistically mediated by increased engagement with their work, providing tentative evidence that the increased engagement evoked by passion may in part underlie people’s inflated views of their own performance.

Theoretical Implications

The current research aligns with previous work which has found a sizable and robust relationship between passion and performance (Curran et al., 2015; Jachimowicz et al., 2018; Pollack et al., 2020); at the same, this work also finds significant variability in the association between passion and performance, ranging from small to large positive effects, and even including potentially negative relationships. We next outline how the association between passion and overconfidence provides a helpful lens to understand when the benefits of passion to performance may vary, including when, why, and for whom this may occur.

One way to understand when overconfidence may be more versus less helpful for job performance is to consider what behaviors are valued or penalized in a given organizational setting (Higgins et al., 2003; Kahneman & Egan, 2011; Moore, 2023). For example, when a job requires
employees to dedicate effort on choosing the “right” path by critically evaluating the self, comparing the self to others, and being analytical about the way forward, overconfidence—and therefore, passion—may not be as helpful. This is especially likely to be true in roles with little margin for error (e.g., pilots, accountants, and pharmacists; Orasanu & Davison, 2001). In contrast, when a job requires employees to avoid negative social comparisons, or to overcome potential setbacks, overconfidence—and therefore, passion—may be more beneficial. For example, as highlighted in the introduction, overconfidence may be helpful in entrepreneurial settings where budding founders often need to overcome seemingly insurmountable hurdles and ignore exceedingly high base rates of failures to continue with their venture (Koellinger et al., 2007). In line with this view, one study found that observers believed it was less appropriate for an accountant to be passionate (perhaps because there is little margin for error in this job) but more appropriate for a consultant to be passionate (perhaps because in this line of work, it is more helpful to paint a bolder picture of the future; see Jachimowicz et al., 2019). We encourage future research to examine these and related possibilities.

The perspective on passion we introduce here may also be helpful to shed light on the interpersonal consequences of being seen as passionate. Prior research has predominantly focused on how perceptions of passion evoke positive and preferential treatment by others (X. P. Chen et al., 2009; Jachimowicz et al., 2019; Mitteness et al., 2010), such that coworkers and supervisors provide praise and positive feedback to more passionate employees while also offering them greater development opportunities (Cho & Jiang, 2021; Wang et al., 2022). While this may positively contribute to passionate employees’ performance when they work as individual contributors, it is possible that in a more collaborative and interdependent team context, passion may also provide some challenges for employees. Consider that inflated self-perceptions may lead
passionate employees to struggle to effectively work on highly interdependent teams by engaging in behaviors which harm those around them (Edmondson, 1999). In addition, passionate employees may be more likely to take on challenging tasks beyond their expertise, attempt to ascend the hierarchy prematurely, and insufficiently delegate tasks to others (Akinola et al., 2018), which may lead to negative interpersonal effects. As a result, passion may be more helpful for individual contributions, but perhaps less helpful when employees seek to work together with others, another possibility we encourage future work to examine.

Finally, identifying overconfidence as an association of passion may also offer a novel lens through which to examine whether and why the relationship between passion and performance may vary for different people. Consider that overconfidence may lead to stronger interpersonal penalties for some individuals more so than others; for example, overconfidence is more prevalent among men than women (Barber & Odean, 2001), and among individuals with higher versus lower socioeconomic status (Belmi et al., 2020). As a result, while passion may generally lead both men and women, or individuals from higher and lower socioeconomic status, to be seen in more favorable ways by others, these effects may be smaller for women and lower social class individuals because their overconfidence may be seen as violating expectations of communality (e.g., Campbell & Hahl, 2022; Eagly & Wood, 2011). We encourage future research to consider whether and how the benefits of passion systematically vary among members of some groups over others in ways that may perpetuate inequality (Cech, 2021; Siy et al., 2023; Wilson, 2022).

Limitations and Future Directions

Our studies contain several limitations that provide opportunities for future research. First, while we provide evidence for our predictions in an intensive longitudinal field study, this approach also limits the causal claims we can make. We sought to address these limitations by
conducting an experimental study, following prior research which has manipulated perceptions of passion in others through scenario texts (e.g., Jachimowicz et al., 2019; Kim et al., 2020; Wang et al., 2022) or videos (e.g., Cho & Jiang, 2022); when imaging the passionate (relative to the punctual) workplace scenario, we suggest that participants are likely to draw on their chronic self-views. This controlled method also allowed us to avoid potential work-related confounds that may differ as a function of passion. For example, an alternative method would be to use a paradigmatic writing task in which we ask participants to draw on their own experiences of passion and report their performance; however, this method is also likely to evoke differences between jobs or industries, thereby limiting our ability to make comparisons on estimated performance (Schabram et al., 2023).

At the same time, however, we note that the use of a scenario study as an induction of passion has significant limitations. First, given the strong identity relevance of passion, it is unclear whether passion can be truly manipulated in a lab setting (Jachimowicz & Weisman, 2022). As a result, it is possible that our scenario study drew on participants’ broader lay beliefs about passion rather than their own chronic self-view. Second, our study design does not allow us to effectively rule out potential alternative explanations, including that participants may have chosen to respond in socially desirable ways (though note that this to some extent applies equally to the control condition which emphasized punctuality; see Konstabel et al., 2006). For these and other reasons, we encourage future research to extend our findings in the field, such as by exploiting variation in passion or utilizing quasi-experimental shocks (Bredehorst et al., 2023; Grosz et al., 2020).

We also encourage future research to examine potential boundary conditions of the relationships studied here. Consider that chronic self-views are particularly likely to inform

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8 Note that this stands in contrast to experimental manipulations of perceptions of passion, which prior research has successfully done (e.g., Cho & Jiang, 2022; Jachimowicz et al., 2019; Wang et al., 2022).
people’s assessments of their own performance when information about their actual performance is unclear; as a result, the link between passion and performance overconfidence may vary as a function of the clarity, type, and source of available performance information on the relationship between passion and overconfidence.

Finally, future research could examine how the relationship between passion and performance overconfidence may play out over the course of employees’ careers (Bloom et al., 2021). For instance, our findings suggest that more passionate employees may be more likely to self-select into more challenging roles and set overly ambitious performance expectations, which may both make them more likely to advance but also more likely to fail (Cain et al., 2015; Dai et al., 2018; Lazear, 2004; Schabram & Maitlis, 2017). In addition, subsequent research could examine whether passionate employees are more likely to discount feedback they receive from others—particularly when it contradicts with their view of themselves—which can be beneficial or harmful, for instance, depending on who is providing the feedback and how well they are able to judge performance (P. Chen et al., 2015; Grossman & Owens, 2012). Finally, future work could also examine whether and how passionate employees may become aware of their overconfidence, and mitigate any potential drawbacks associated with such beliefs.
References


Supplementary Materials for

A Potential Pitfall of Passion:

Passion is Associated with Performance Overconfidence

Study 1

Supplementary Table 1
Replication of Results with Residual Approach to Overconfidence

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized</th>
<th>Standardized</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$b$</td>
<td>95% CI</td>
</tr>
<tr>
<td>Passion $\rightarrow$ Self-Reported Performance (controlling for Other-Reported Performance)</td>
<td>.22</td>
<td>[.21,.24]</td>
</tr>
</tbody>
</table>

Notes. The table presents the regression coefficients for the hypothesized relationships, unstandardized on the left-most columns and standardized on the right-most columns. 95% CI indicates the 95% credibility intervals around the coefficient estimates.
**Supplementary Table 2**  
Replication of Results with Inclusion of Control Variables

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$b$</td>
<td>95% CI</td>
<td>$p$</td>
</tr>
<tr>
<td>Passion $\rightarrow$</td>
<td>.11</td>
<td>[-.50, .71]</td>
<td>.363</td>
</tr>
<tr>
<td>Overconfidence (random slope)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Age $\rightarrow$ Random slope</td>
<td>-.01</td>
<td>[-.03, .02]</td>
<td>.336</td>
</tr>
<tr>
<td>Gender $\rightarrow$ Random slope</td>
<td>.01</td>
<td>[-.06, .08]</td>
<td>.392</td>
</tr>
<tr>
<td>Tenure $\rightarrow$ Random Slope</td>
<td>.01</td>
<td>[-.02, .03]</td>
<td>.296</td>
</tr>
</tbody>
</table>

*Notes.* The table presents the regression coefficients for the hypothesized relationship between passion and overconfidence, while controlling for gender, age, and tenure at the within-person level. That is, we estimated whether the strength of the random slope of the relationship between passion and over-confidence differed for different levels of the demographic variables. Note that only unstandardized coefficients are available for this model.
Additional Mediator

Identification. In addition to the main effects described in the paper, we also collected an additional mediator of identification. We measured identification using a two-item measure of organizational identification based on past research (Bartel, 2001). First, participants answered their “image overlap” between themselves and their organization using an image of concentric circles. We adapted the language current study where one circle was labeled “self,” and the other circle was labeled “designer.” Participants answered on a 7-point scale which indicates (graphically) increasing overlap (see Supplemental Figure 2). For the second item of organizational identification, participants responded to the following prompt, “How much do you think your image of yourself overlaps with the image of M International?” on a 7-point scale where 1 = None at all and 7 = A great deal. Responses to these two items were averaged to form a composite score ($r = .70$).

Figure S1

Organizational Identification Measure (Study 2)
**Note.** Figure S1 presents the image accompanying the question text for the perception of identification overlap the individual has with their role in the fictional organization, where higher numbers indicate increased overlap.

**Additional Results**

We evaluated whether identification statistically mediate the relationship between assignment to the *passion* condition and self-rated performance. First, we evaluated how being randomly assigned to the *passion* condition predicted increased identification. We found that the relationship between assignment to the passion condition and identification was statistically significant and positive (*estimate* = .50 *SE* = .12, *p* < .001, *d* = .44). Next, we conducted a mediation analysis on the effect of identification on the outcome variable of performance, testing the significance of the indirect effect with 10,000 bootstraps. We found that increased identification statistically mediated the relationship between condition and self-rated performance (*estimate* = .10, *SE* = .03, *p* < .001, 95% CI: [.06, .17]). When entered as parallel mediators, we found that the indirect effect of condition to overconfidence through investment remained significant (*p* < .001) while identification was not a statistically significant path (*p* = .082).

In exploratory analyses, we also examined the effect of condition on each of the individual performance items participants responded to. First, we considered the effect of condition on the overall performance rating participants gave themselves; this measure was collected on a 5-point scale, where 1 = *Does Not Meet Expectations* to 5 = *Strongly Exceeds Expectations*. We found that participants in the *passion* condition reported higher overall performance (M = 3.66) relative to participants in the *control* condition (M = 3.37; mean difference = .29, 95% CI [.17, .42], *t*(393) = 4.63, *p* < .001; Cohen’s *d* = 0.47, 95% CI [.27, .67]). We then considered responses to better-than-
average performance. This item most closely resembles the performance information participants were given, as they were told that they were described as an “average employee.” We found that participants in the *passion* condition reported higher better-than-average performance (M = 5.11) relative to participants in the *control* condition (M = 4.84; mean difference = .27, 95% CI [.10, .44], t(394) = 3.10, p = .002; Cohen’s d = .31, 95% CI [.11, .51]). Finally, we considered differences between condition on the general performance measure. We found that participants in the *passion* condition did not report significantly different performance along these items (M = 6.11) relative to participants in the *control* condition (M = 6.08; mean difference = .04, 95% CI [-.09, .17], t(390) = .59, p = .554; Cohen’s d = .06, 95% CI [-.14, .26]).