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Entrepreneurial Passion: A Review, Synthesis, and Agenda for Future Research

Alexander Newman

Deakin University, Australia

Martin Obschonka*

Queensland University of Technology, Australia

Julia Moeller 🕩

University of Leipzig, Germany

Gemma Garima Chandan

RMIT University, Australia

The present study undertakes a comprehensive and critical review of the body of empirical work on entrepreneurial passion. In particular, we document how the "first generation" of research on entrepreneurial passion and work passion in entrepreneurs has gained growing attention in various sub-fields of entrepreneurship research including entrepreneurial management, psychology, and finance. We provide an overview over theories used, definitions and measurements adopted, research methods utilized (e.g., qualitative vs. quantitative, survey-based vs. experimental/intervention), the thematic focus of studies, and unit of investigation (e.g., individual vs. team). We not only flag the problems of inconsistencies and limitations with respect to theory use, the making of causal inferences, and the conceptualization and measurement of entrepreneurial passion in existing studies (e.g., jingle fallacies), but also review the antecedents and outcomes of entrepreneurial passion identified in prior work and work where it had been examined as a moderator. Following this, we offer a research agenda with concrete suggestions to act as a foundation for the "second generation" of entrepreneurial passion research that proactively addresses the issues and gaps identified in our review. Finally, we also highlight how insights from the entrepreneurial passion literature can inform scholarship on passion more broadly.

^{*} Address for correspondence: Martin Obschonka, Australian Centre for Entrepreneurship Research, QUT Business School, Queensland University of Technology, Brisbane, QLD, Australia. Email: martin.obschonka@qut.edu.au

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INTRODUCTION

Across the past decade, the topic of passion has become a focus of discussion in the popular media (e.g., *The New York Times*, 2018), and in international bestsellers (e.g., Duckworth, 2016). Many people agree that "finding and living one's passion" is a widely accepted hallmark of a successful life, with potentially important contributions to society via those passionate activities that turn people's talents and interests into productive and successful actions (Gagné, 2007; O'Keefe, Dweck, & Walton, 2018).

Along with this general popularity, academic research on passion has increased rapidly over the last years (Curran, Hill, Appleton, Vallerand, & Standage, 2015). Research across a broad variety of academic disciplines, including educational psychology, sports psychology, and organizational behavior, has highlighted the key role passion plays in influencing individuals' motivation, cognitions, and behavior (Perrewe, Hochwarter, Ferris, McAllister, & Harris, 2014; Stoeber, Childs, Hayward, & Feast, 2011; Vallerand & Miguelon, 2007). A sub-field of passion research that has attracted particularly significant attention from researchers over the past decade is entrepreneurial passion (e.g., an individual's passion for inventing, founding, or developing a new business; Cardon, Gregoire, Stevens, & Patel, 2013). Given the importance of entrepreneurial activity to economic and social development, researchers have begun to examine the personal and contextual factors related to entrepreneurial passion (e.g., Cardon et al., 2013; Thorgren & Wincent, 2015), as well as the important role played by entrepreneurial passion in the creation and development of entrepreneurial ventures. For example, recent research has demonstrated that entrepreneurial passion is closely linked to a whole host of entrepreneurial outcomes, including venture growth and performance, access to funding, and entrepreneurial persistence (e.g., Drnovsek, Cardon, & Patel, 2016; Li et al., 2017; Mueller, Wolfe, & Syed, 2017). As in the broader passion research, there are ongoing discussions in the entrepreneurship literature as to how to best conceptualize and measure passion in this context, and about the mechanisms that foster the development of passion and explain its links to numerous outcomes. For example, both the broader research on passion, and the specific research on entrepreneurial passion, are still lacking broad consensus as to whether passion is best conceptualized as a state or trait (or combination thereof; e.g., Moeller, Dietrich, Eccles, & Schneider, 2017), and whether passion should be understood and measured in relation to specific activities, or as a domainunspecific form of motivation. In addition, the literature offers various ways to measure and study passion in terms of a multi-faceted construct (e.g., subtypes of passion such as harmonious vs. obsessive passion or different shortterm/long-term components, and affective, cognitive, and behavioral aspects).

While the research on entrepreneurial passion is a thriving and growing subfield of the passion research, we have yet to witness a systematic and critical review of the literature on entrepreneurial passion, to summarize the numerous insights and to clarify what the entrepreneurial passion literature can learn from the research on general passion in other domains, and vice versa. Such a review will also allow us to identify and address gaps in our understanding, and inconsistencies in the current conceptualization and measurement of entrepreneurial passion. In this review, we start by examining how entrepreneurial passion has been conceptualized and measured and highlight the nomological network of variables to which entrepreneurial passion is related. We then draw on the broader passion literature to articulate a future research agenda on entrepreneurial passion that not only targets opportunities for empirical and theoretical development of the field, but also potential remedies that can help addressing existing limitations in the entrepreneurial passion literature.

In examining these issues, the present review makes four key contributions. First, it synthesizes the findings from prior empirical work on entrepreneurial passion into a unifying framework that highlights the nomological network of variables to which entrepreneurial passion is related (see Figure 1). This not only provides an integrative overview of the factors which foster entrepreneurial passion amongst individuals, but also helps us to understand the critical role played by entrepreneurial passion in enhancing entrepreneurial outcomes.

Second, the present study elucidates the main perspectives that have been used to explain how entrepreneurial passion develops and transmits its influence.

Third, the review critically examines how entrepreneurial passion has been conceptualized and measured, and the strength and weakness of research designs adopted in prior empirical work. The review will help authors to avoid terminological fallacies in future research (i.e., the fallacies of calling different phenomena the same—jingle—or using different terms to describe the same phenomenon—jangle). We also discuss a taxonomy of passion facets as they have been suggested in psychological studies, in the hope that future studies on entrepreneurial passion will be more explicit and unambiguous in stating the facets they include or exclude in their definitions and measures of passion.

Finally, based on the gaps and concerns identified from reviewing the literature, the present review contributes a comprehensive agenda for future research to foster theoretical and empirical advancement of the field. As the entrepreneurial passion literature is a relatively young field, we also highlight what we can learn from the latest developments and research insights on passion in other settings for the research on entrepreneurship. In addition, we

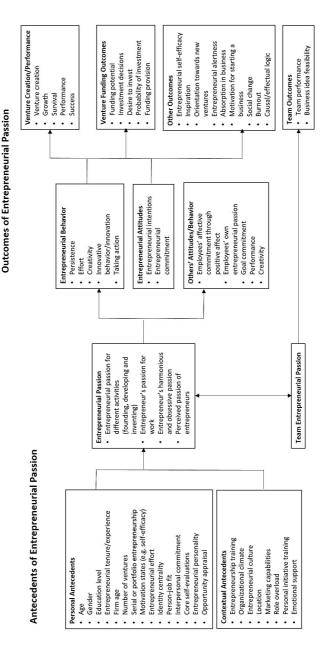


FIGURE 1. Nomological network of variables to which entrepreneurial passion is related.

also ask what the broader field of passion research can learn from developments in the entrepreneurial passion field.

METHODS

In line with best practice (Short, 2009), we initially searched the Web of Science and related databases for relevant peer-reviewed articles published in journals with a social science citation index. We searched for a number of terms (entrepreneurial passion, business owner passion, and entrepreneur passion) in the title, keywords, and abstract of articles published before the end of September 2019. We did not include book chapters and dissertations, as there was no way of ascertaining the extent to which they had been peer reviewed. Although no time restrictions were placed on our search, the earliest article on entrepreneurial passion that was identified was published in 2004. To ensure we had not missed any articles on entrepreneurial passion that had not included the term in their title, abstract, or keywords, we undertook a backward and forward citation search of the articles already identified. As well as including articles that had focused explicitly on entrepreneurial passion, we also included articles that measured entrepreneurs' or business owners' passion for work more generally. While entrepreneurial passion captures the entrepreneur's passion towards entrepreneurial activities or domains (e.g., inventing, founding, and developing), passion for work captures their passion for their work more generally, irrespective of whether it involves entrepreneurial activities and including any mundane day-to-day business activities. We included articles that measure entrepreneur's passion for work, as it shares conceptual overlaps with entrepreneurial passion.

Finally, in order for our review to capture recent scholarship on entrepreneurial passion, we also included papers, where available, that had been presented at the premier management conference (the Academy of Management Annual Conference) from 2017 to 2019, and had not been subsequently published in a peer-reviewed journal. Where the papers were not accessible online, we contacted the authors to provide their papers, and included those that they provided.

Two researchers independently read the articles to determine whether they focused on entrepreneurial passion or entrepreneurs' work passion and should be included in our review. They then consulted with one another to determine whether to exclude certain articles. This process led to a total of 69 articles being included in our review, of which 56 were quantitative (4 at the team level of analysis), 8 were qualitative, 1 mixed methods, and 4 conceptual in nature (articles in review marked by an asterisk in the reference section).

In the following sections we examine how entrepreneurial passion has been defined and measured, review prior literature on the antecedents and outcomes of entrepreneurial passion, and highlight the findings of studies in which entrepreneurial passion was treated as a moderator.

LITERATURE REVIEW

Definition and Measurement of Entrepreneurial Passion

In this section we examine the different ways in which entrepreneurial passion has been defined and measured. In the Online Appendix 1 we summarize the key conceptualizations and measurement scales for entrepreneurial passion.

Entrepreneurial Passion Towards Different Activities/Domains. In prior quantitative work, entrepreneurial passion has been defined and measured in a number of different ways. The most popular definition of entrepreneurial passion is the one proposed by Cardon and colleagues (Cardon, 2008; Cardon et al., 2013; Cardon, Wincent, Singh, & Drnovsek, 2009). They define entrepreneurial passion as "consciously accessible intense positive feelings experienced by engagement in entrepreneurial activities associated with roles that are meaningful and salient to the self-identity of the entrepreneur" (Cardon et al., 2009, p. 517). Under this definition, entrepreneurial passion is seen as arising when the entrepreneur exhibits intense positive feelings towards a specific entrepreneurial activity or "domain" they undertake in relation to their entrepreneurial venture, such as inventing, founding, and developing, and considers that the activity or "domain" is central to their self-identity (Cardon et al., 2013).

Based on this definition, Cardon et al. (2013) developed a five-item selfreport scale to capture an entrepreneur's passion towards inventing, and four-item scales to capture an entrepreneur's passion towards founding and developing. In developing these scales, they initially created a larger pool of items and discarded items during the process of scale validation. The scale that measures passion towards inventing comprises four items that capture an entrepreneur's intense positive feelings towards this activity, and one item that measures the centrality of this activity to the entrepreneur's self-identity. Similarly, the scales that measure passion towards founding and developing comprise three items that capture an entrepreneur's intense positive feelings towards each activity, and one item that measures the centrality of each activity to the entrepreneur's self-identity. Although Cardon et al.'s (2013) subscales for passion towards inventing, founding, and developing activities have been the most widely used in subsequent empirical work (24 empirical studies at the individual level), there has been a great deal of inconsistency in how they have been used. For example, some researchers chose to focus on entrepreneurial passion in relation to one or two activities rather than all three activities (e.g., Adomako, Mole, Murnieks, & Franklin, 2019; Biraglia & Kadile,

2017; Campos, 2017; Kang, Matusik, Kim, & Phillips, 2016; Lopez et al., 2018; Huyghe, Knockaert, & Obschonka, 2016; Mueller et al., 2017; Mumi et al., 2018; Shockley & Turner, 2016), while others have focused on entrepreneurial passion towards all three activities, but used previous versions of the Cardon et al. (2013) scale that did not measure identity centrality (Stenholm & Renko, 2016). Others added additional items that had been removed in the process in validating the scale (Adomako, Zheng, & Ahsan, 2018; Adomako et al., 2019; Cardon & Kirk, 2015; Drnovsek et al., 2016; Huyghe et al., 2016). Some studies combined items capturing entrepreneurial passion in relation to different kinds of entrepreneurial activity in an overall measure of entrepreneurial passion (Costa, Santos, Wach, & Caetano, 2018; Gielnik et al., 2015, studies 1 and 2; Hubner, 2017; Ma, Gu, & Liu, 2018; Mensmann et al., 2019; Stenholm & Nielsen, 2019), an approach which Cardon et al. (2013) warned against adopting when developing the original measure, and others only used a minimal number of items (e.g., Gielnik et al., 2015, study 1). In addition, there have been inconsistencies in how entrepreneurial passion towards each activity has been measured in relation to the interactive effects between intense positive feelings and identity centrality. While some researchers (Campos, 2017; Cardon & Kirk, 2015; Drnovsek et al., 2016; Kang et al., 2016; Mueller et al., 2017) have first aggregated the items measuring intense positive feelings towards each domain, before examining their interactive effects with the item measuring the centrality of the domain to the entrepreneur's self-identity as per the instructions of Cardon et al. (2013), others have aggregated items measuring intense positive feelings and identity centrality together, against the advice of Cardon and colleagues (e.g., Biraglia & Kadile, 2017; Shockley & Turner, 2016; Turner & Gianiodis, 2018), or not included items which measured identity centrality (e.g., Gielnik et al., 2015, study 1). Such inconsistencies in how the Cardon et al. (2013) measure has been used imply that it is difficult to ascertain the validity of the sub-scales across different cultural contexts and the generalizability of findings from prior research, which may hamper the progress of research on entrepreneurial passion as a cumulative process (e.g., Block, 1995; Rauthmann, 2015; Roeser, Peck, & Nasir, 2006).

Building on Cardon et al.'s (2013) initial work, researchers have also begun to highlight other activities or "domains" which entrepreneurs might be passionate about. For example, Cardon, Glauser, and Murnieks (2017b) undertook qualitative work to identify activities towards which entrepreneurs were passionate about. Although in line with their previous work they found that passion for inventing and growth (development) were prominent amongst entrepreneurs, they did not find evidence of passion for founding. They also uncovered several topics of passion that have not been investigated in previous research; passion for people, passion for the product or service, passion

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for competition, and passion for a social mission. In an additional qualitative study, Milanesi (2018) found that an entrepreneur's passion towards hobbies predicted the entry of many of them into hobby-related entrepreneurship.

Entrepreneurs' Passion for Work. A second group of researchers have defined entrepreneurial passion as an entrepreneur's love, attachment, and longing for their work (Baum & Locke, 2004). Based on this definition, Baum and Locke (2004) developed a five-item scale which measures an entrepreneur's passion for work. Unlike the Cardon et al. (2013) scale, this scale does not focus on an entrepreneur's passion towards different entrepreneurial activities, but captures their passion for work more generally. This scale has only been utilized in two subsequent studies (De Clercq, Honig, & Martin, 2013; Snell et al., 2015), probably because of its lack of specific focus on different entrepreneurial activities. Bhansing, Hitters, and Wijngaarden (2017) also developed their own scale for entrepreneurs' passion for their work. This scale has yet to be used outside the study for which it was developed.

Entrepreneurs' Obsessive and Harmonious Passion. In examining entrepreneurial passion, a third group of researchers has drawn on Vallerand et al.'s (2003) dualistic model of passion, which defines passion as a strong inclination or desire towards an activity that one loves or likes, finds important, and invests time and energy towards. In this model, Vallerand et al. (2003) distinguish between harmonious and obsessive passion, based on whether the desire to engage in the activity is under an individual's control. Vallerand et al. (2003) hypothesize that autonomous internalization in terms of Deci and Ryan's (1985) self-determination theory leads to harmonious passion, while controlled internalization leads to obsessive passion. According to this definition, while both individuals with harmonious and obsessive passion have a strong desire to pursue entrepreneurship, only those with harmonious passion are able to control their desire to freely engage in entrepreneurship when they choose (Ho & Pollack, 2014). In contrast, individuals with obsessive passion are presumably unable to control their desire to engage in entrepreneurship and feel compelled to engage in entrepreneurship until their passion runs its course.

In line with this definition, researchers have adapted Vallerand et al.'s (2003) scales of harmonious and obsessive passion to fit the entrepreneurial setting, asking respondents to rate both dimensions of passion in relation to work activities associated with their entrepreneurial business. Although some researchers have used the seven-item scales from Vallerand et al. (2003) to measure harmonious and/or obsessive passion (Gielnik, Uy, Funken, & Bischoff, 2017; Stroe et al., 2018a, 2018b), others have used abbreviated

scales comprising six items (Ho & Pollack, 2014; Stenholm & Nielsen, 2019), five items (Dalborg, von Friedrichs, & Wincent, 2015; Dalborg & Wincent, 2015; de Mol, Ho, & Pollack, 2018; Murnieks, Mosakowski, & Cardon, 2014; Obschonka et al., 2019; Thorgren & Wincent, 2015) and four items (Fisher, Merlot, & Johnson, 2018). Full or adapted versions of the scales have been used in 14 quantitative studies at the individual level. As with the Cardon et al. (2013) measure, inconsistencies in how this measure has been used means it is difficult to ascertain the validity of the scale across different contexts. It should be noted that the assumption that individuals can be categorized into harmonious and obsessive individuals has been criticized in studies that examined the intra-individual profiles of harmonious and obsessive passion (Moeller, Keiner, & Grassinger, 2015; Wang & Yang, 2007). In several domains of leisure activities (not including entrepreneurial ones), researchers have found that most passionate individuals experienced simultaneously high levels of both harmonious and obsessive passion, and reported a mix of positive and negative emotions. Across all levels of passion, harmonious and obsessive passion for leisure activities were aligned, meaning that they were both relatively high, or both moderate, or both low, for most individuals in their samples. While harmonious passion tended to be a little bit higher than obsessive passion in most individuals ("positive bias"), there were very few individuals with higher obsessive than harmonious passion. It is so far unclear whether the same applies to passion for entrepreneurial activities, because to our knowledge, no such intra-individual profile analyses have been reported.

Perceived or Observed Entrepreneurial Passion. Researchers have also begun to examine how others' views of the entrepreneur's perceived/observed passion (e.g., angel investors' and employees' perceptions of an entrepreneur's passion) may influence their behavior towards the entrepreneur, defining entrepreneurial passion as an intense affective state that is accompanied by cognitive and behavioral manifestations of high personal value (Chen, Yao, & Kotha, 2009). Based on this definition, Chen et al. (2009) developed a six-item other-report scale of perceived entrepreneurial passion that measures the nonverbal cues and behavioral indicators that a presenter or speaker is passionate about his/her work. In developing this scale, they initially created a larger pool of items and discarded items during the process of scale validation. The six-item scale has been adopted by a growing number of studies to capture others' perceptions of entrepreneurial passion (e.g., Davis, Hmieleski, Webb, & Coombs, 2017; Galbraith, McKinney, DeNoble, & Ehrlich, 2014).

Li et al. (2017) developed their own six-item other-report scale of displayed entrepreneurial passion for the crowdfunding setting. They argued that the Chen et al. (2009) scale was only appropriate for face-to-face settings, because

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it captured displayed entrepreneurial passion based on presenters' body gestures, tone, and facial expression. Li et al. (2017) therefore developed a more general scale that assessed the overall passion displayed by the entrepreneur, based on prior work by Vallerand et al. (2003). Their six-item scale captures whether the entrepreneur appears excited about the project idea, conveys an obsession about the project idea, appears enthusiastic about the project idea, is able to convey his or her enthusiasm for the project idea, appears to be passionate about the project idea, and displays an urge to complete the project. They validated the scale across two separate samples of undergraduate and MBA students who rated entrepreneurial passion.

Two further other-rated measures of entrepreneurial passion have been developed by researchers. Examining whether angel investors' perceptions of CEOs perceived entrepreneurial passion influenced their evaluations of the CEOs funding potential, Mitteness et al. (2012) developed a short two-item other-rated scale of perceived passion. However, this scale has yet to be used in subsequent work. Finally, Breugst, Domurath, Patzelt, and Klaukien (2012) developed an other-report scale based on Cardon et al.'s (2009) work to capture employees' perceptions of an entrepreneur's passion towards inventing, founding, and developing. This scale adapted items from Cardon et al.'s work to measure others' perceptions of the entrepreneurs' intense positive feelings towards their work, but did not draw on items measuring identity centrality. This scale has been used in subsequent research (Hubner, 2017) to capture employees' perceptions of an entrepreneur's passion towards different activities. A total of eight quantitative studies at the individual level have sought to measure perceived/observed entrepreneurial passion.

Experimental Approaches to Examine Others' Reactions to Passionate Entrepreneurs. Researchers have begun to adopt experimental approaches to examine how individuals respond to passionate entrepreneurs. For example, Warnick et al. (2018) examined how venture capitalists evaluated the funding potential of entrepreneurs by manipulating written profiles of entrepreneurs to reflect high and low levels of passion in relation to start-up activity and the business domain. Similarly, to examine how angel investors evaluated the funding potential of the entrepreneur, Murnieks et al. (2016) drew on an experimental approach where written profiles of entrepreneurs were manipulated to reflect high or low levels of obsessive entrepreneurial passion. Li et al. (2017) developed video-based business pitches where entrepreneurs asked for financial support from crowdfunders. They manipulated entrepreneurial passion in the videos by hiring a professional actor to pitch the product either with high passion through facial expression, body language and verbal expression, or with limited passion. Finally, using professional actors, Hubner (2017) developed eight video messages from

entrepreneurs to employees. In these videos both positive emotions and identity centrality were manipulated. The entrepreneurs in each video either exhibited strong positive emotions or no emotions, and either no identity or an identity towards inventing, founding, or developing.

Qualitative Research on Entrepreneurial Passion. There also is a small but growing number of *qualitative* studies on the phenomenon of entrepreneurial passion. Although these studies have not quantitatively measured entrepreneurial passion, they have typically drawn upon Cardon et al.'s (2009, p. 517) definition of entrepreneurial passion as "intense positive feelings experienced by engagement in entrepreneurial activities associated with roles that are meaningful and salient to the self-identity of the entrepreneur" (e.g., Gerschewski, Lindsay, & Rose, 2016; Laaksonen et al., 2011; Wang, Dong, Si, & Dou, 2017; Yitshaki & Kropp, 2016). Building on Cardon et al.'s work, Yitshaki and Kropp (2016) examined differences in the characteristics of entrepreneurial passion between high technology and social entrepreneurs. They found that for high technology entrepreneurs, entrepreneurial passion was composed of a significant challenge to lead a meaningful activity and to leave a "fingerprint", whereas social entrepreneurs' passion was characterized more in terms of excitement and enthusiasm, and a desire to make a mark. They also found that compared to social entrepreneurs, the identity of high technology entrepreneurs was more central to their self-concept.

Team Entrepreneurial Passion Towards Different Activities/Domains. Building on conceptual work which defines team entrepreneurial passion as "the level of shared intense positive feelings for a collective team identity that is high in identity-centrality for the new venture team" (Cardon, Post, & Forster, 2017a, p. 286), a limited number of studies have examined the phenomenon of team entrepreneurial passion towards different activities/ domains (de Mol, Cardon, de Jong, Khapova, & Elfring, 2019; Santos & Cardon, 2019; Taggar et al., 2019). For example, adopting a referent shift approach, Santos and Cardon (2019) adopted the 13-item scale of Cardon et al. (2013) for the team context. They empirically examined whether shared passion for different entrepreneurial activities/domains existed and distinguished between mono-focal and poly-focal team entrepreneurial passion, which refers to shared positive and intense feelings for a single or multiple entrepreneurial identities respectively. When defining poly-focal team entrepreneurial passion they also distinguished between teams that share passion for all activities/domains (complete poly-focal), or some activities/ domains (incomplete poly-focal, e.g., two out of three). Although they adopted a similar definition of team entrepreneurial passion, both Taggar et al. (2019) and de Mol et al. (2019) measured team entrepreneurial passion

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by aggregating individuals' entrepreneurial passion scores towards different activities/domains to the team-level using a direct consensus approach, rather than a referent shift approach. Finally, Uy et al. (2017) look at heterogeneity in entrepreneurial passion within teams by calculating the standard deviation of team members' ratings of entrepreneurial passion towards inventing.

Antecedents of Entrepreneurial Passion

Scholars have started to examine the personal and contextual antecedents of entrepreneurial passion, although comparatively less attention has been paid to its antecedents than its outcomes. Out of 60 empirical studies published on entrepreneurial passion, only 25 looked at the antecedents of entrepreneurial passion. In the following sections, we look at work on the personal and contextual antecedents that have been linked to different forms of entrepreneurial passion.

Antecedents of Entrepreneurial Passion Towards Different Activities/ Domains.

Personal Antecedents. A small number of studies have examined the link between demographic variables (e.g., entrepreneurial tenure, experience, age, gender, and education level) and entrepreneurial passion towards different activities/domains. For example, Cardon et al. (2013) examined whether an entrepreneurs' passion towards inventing, founding, and developing varied according to their age, gender, education level, prior entrepreneurial experience, and firm age. They found that male entrepreneurs and those with prior entrepreneurial experience exhibited significantly higher levels of intense positive feelings towards inventing. They also found that the age of the firm was positively related to the entrepreneur's intense positive feelings and identity centrality towards founding. Finally, they established that entrepreneurial experience was positively related to the entrepreneur's identity centrality toward developing. Stenholm and Nielsen (2019) found a positive link between entrepreneurial experience and a composite measure of entrepreneurial passion capturing passion towards inventing, developing, and founding. Taggar et al. (2019) found that while founding experience was positively related to passion for founding, business experience was positively related to passion for developing. They also found that the entrepreneur's core self-evaluation was related to passion for founding, developing, and inventing. Collewaert, Anseel, Crommelinck, De Beuckelaer, and Vermeire (2016) looked at how entrepreneurial passion for founding changed over the venture lifecycle. While they found that an entrepreneur's identity centrality remained stable over time, they also found that an entrepreneur's intense positive feelings for founding decreased over time.

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Researchers have also begun to examine the role of motivational components, such as entrepreneurial self-efficacy and regulatory focus, in shaping entrepreneurial passion. For example, Cardon and Kirk (2015) found that entrepreneurial self-efficacy was positively related to an entrepreneur's passion for inventing and founding, but not developing. In arguing for a positive relationship, they draw on identity theory, highlighting that individuals are more likely to identify with and feel more passionate about things if they feel confident at doing them. Drawing on regulatory focus theory, Lopez et al. (2018) found that when entrepreneurs appraised constraints as opportunities they displayed higher levels of entrepreneurial passion towards inventing and founding.

Other work has looked at the relationship between entrepreneurial effort and passion. Gielnik et al. (2015) found strong evidence that entrepreneurial effort predicted changes in entrepreneurial passion for inventing and founding. In addition, adopting an experimental approach, they found, consistent with self-regulation theory, that effort enhances entrepreneurial passion through enhancing individuals' perceptions of venture progress. In line with the predictions of self-perception theory, Gielnik et al. (2015) also found that the indirect effects of entrepreneurial effort were stronger when individuals could freely choose the business project on which they worked.

Contextual Antecedents. A small number of studies have examined the role played by contextual antecedents in shaping entrepreneurial passion towards different activities/domains. Drawing on data from 39 entrepreneurial firms, Kang et al. (2016) examined the link between the organizational climate and the entrepreneurial passion of employees. They found that the innovation climate in the organization was positively related to employees' passion for inventing, and that the strength of this relationship was contingent on the proactive climate in the organization. Drawing on social support theory, Stenholm and Nielsen (2019) found that entrepreneurs who perceived higher levels of emotional support from others had higher levels of entrepreneurial passion towards inventing, founding, and developing, especially when they had greater entrepreneurial experience. Bolinger and Bolinger (2019) highlight rivalry and revenge as a potential source of entrepreneurial passion. Finally, Mensmann et al. (2019) found that participation in personal intiative training fostered entrepreneurial passion towards inventing and developing among female entrepreneurs, but not male entrepreneurs.

Antecedents of Entrepreneurs' Passion for Work.

Contextual Antecedents. Some but limited work has examined the contextual antecedents of entrepreneurs' passion for work more generally. Snell et al. (2015) found that the marketing capabilities of small firms were

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positively related to an entrepreneur's passion for work. Drawing on social facilitation theory, Bhansing et al. (2017) examined whether the location in which creative entrepreneurs work (i.e., creative business centers) predicted their entrepreneurial passion. They found that the passion exhibited by others in the location where entrepreneurs worked ("localized passion") was positively associated with their own entrepreneurial passion as a result of emotional contagion processes.

Antecedents of Entrepreneurs' Obsessive and Harmonious Passion.

Personal Antecedents. Growing work has examined the personal antecedents of obsessive and harmonious passion among entrepreneurs. Obschonka et al. (2019) found that an entrepreneurial personality profile weakly predicted harmonious passion, mainly driven by a positive association between openness to experience and harmonious passion, as well as a negative association between neuroticism and harmonious passion. Thorgren and Wincent (2015) also looked at the relationship between entrepreneurial experience and entrepreneurial passion. They found that portfolio entrepreneurs (those presently running multiple businesses) exhibited higher levels of harmonious passion than novice entrepreneurs (those who are running their first business) or serial entrepreneurs (those who have run multiple businesses but are only presently running one business). In contrast, they found that serial entrepreneurs exhibited significantly higher levels of obsessive passion. Dalborg and Wincent (2015) also found that the higher levels of entrepreneurial self-efficacy that result from pull entrepreneurship as opposed to push entrepreneurship predicted higher levels of harmonious passion amongst entrepreneurs. Drawing on social learning theory, they argued that self-efficacy fosters continued motivation in relation to the daily tasks undertaken by entrepreneurs.

Although most studies view identity centrality conceptually as a key dimension of entrepreneurial passion (Cardon et al., 2013), some prior work has examined it as an antecedent of entrepreneurial passion (Murnieks, Cardon, & Haynie, 2018; Murnieks et al., 2014). Drawing on social identity theory, both Murnieks et al. (2014) and Murnieks et al. (2018) found a strong positive relationship between an entrepreneur's identity centrality (i.e., the degree to which an individual places greater importance on their entrepreneurial identity compared to their other identities) and their harmonious passion. Murnieks et al. (2018) found that this relationship was significantly stronger for male entrepreneurs. Recent work has found a strong link between an entrepreneur's person-job fit and their harmonious passion (de Mol et al., 2018). However, they also found that the link between an entrepreneur's person-job fit was only related to their obsessive passion when destiny beliefs were high

but not when they were low. Finally, researchers have also established a strong link between affective interpersonal commitment and obsessive entrepreneurial passion, especially for male entrepreneurs (Murnieks et al., 2018).

Contextual Antecedents. Limited research has looked at the link between contextual factors and both obsessive and harmonious passion. Gielnik et al. (2017) examined the role of entrepreneurship training in the development of entrepreneurial passion. They found that entrepreneurial training boosted harmonious passion, and that entrepreneurial self-efficacy sustained the influence of training on harmonious passion over time. Stroe at al. (2018b) found a positive relationship between role overload and obsessive passion, especially where there were high levels of goal challenge and achieved progress.

Antecedents of Perceived or Observed Entrepreneurial Passion. Hubner (2017) has examined what factors lead to other's perceptions of entrepreneurial passion. She found that the entrepreneur's display of strong positive emotions in a video significantly predicted an employee's perceptions of entrepreneurial passion, whereas the display of entrepreneurial identity did not. She also found that the entrepreneur's display of positive emotions only influenced the employee's perceptions of entrepreneurial passion when the entrepreneur did not display an entrepreneurial identity. Recent work by Oo, Allison, Sahaymb, and Juasrikul (2019) found that user entrepreneurs have higher levels of perceived entrepreneurial passion than non-user entrepreneurs.

Antecedents of Team Entrepreneurial Passion. Only one prior study has looked at the antecedents of team entrepreneurial passion. Taggar et al. (2019) found that high levels of person-team fit within teams positively predicted team entrepreneurial passion.

Outcomes of Entrepreneurial Passion

A growing number of studies have examined the outcomes of entrepreneurial passion. Out of 65 empirical studies published on entrepreneurial passion, 50 looked at the outcomes of entrepreneurial passion. In the following sections, we review prior work on the relationship between different forms of entrepreneurial passion and entrepreneurial attitudes, entrepreneurial behavior, venture creation and performance, venture funding, and the attitudes and behaviors of others.

Outcomes of Entrepreneurial Passion Towards Different Activities/Domains.

Entrepreneurial Attitudes. Researchers have begun to examine the link between entrepreneurial passion towards different activities/domains

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and entrepreneurial intentions. Biraglia and Kadile (2017) found that entrepreneurial passion for founding was positively related to entrepreneurial intentions of homebrewers both directly and indirectly through eliciting higher levels of entrepreneurial self-efficacy. Drawing on social cognitive theory, they argued that entrepreneurial passion acts as an affective state which generates action-oriented entrepreneurial intentions. In line with social identity theory, Huyghe et al. (2016) found that higher levels of entrepreneurial passion for inventing amongst academic researchers were associated with both higher spin-off and start-up intentions. Similarly, Turner and Gianiodis (2018) found that entrepreneurial passion for inventing and founding was positively associated with the entrepreneurial intentions of students participating in a blended learning entrepreneurship program.

Entrepreneurial Behaviors. Researchers have begun to look at the link between entrepreneurial passion towards different activities/domains and entrepreneurial behaviors such as persistence and effort. Overall the findings on the link between entrepreneurial passion towards different and various entrepreneurial behaviors have been inconsistent. Cardon and Kirk (2015) found that whereas inventing and founding passion were related to entrepreneurial persistence, developing passion was not. Similarly, Lopez et al. (2018) found a strong link between entrepreneurial passion for inventing and founding and taking action. However, in contrast Cardon et al. (2013) found that only passion for founding and developing were related to entrepreneurial persistence. Drawing on longitudinal data, Gielnik et al. (2015) found that entrepreneurial passion for inventing and founding did not influence entrepreneurial effort over time. They found the opposite was true, that entrepreneurial effort predicted entrepreneurial passion.

Other studies have examined the link between entrepreneurial passion and both creativity and innovative behavior within entrepreneurial organizations. For example, whilst Kang et al. (2016) found a strong relationship between passion for inventing and employees' innovative behavior in entrepreneurial firms, Cardon et al. (2013) found a strong link between both passion for inventing and founding and entrepreneurs' creative behavior. Drawing on social exchange and organizational justice theories, Shockley and Turner (2016) examined the link between the entrepreneurial passion of franchisees and the level of innovation in the franchises they owned. They found that entrepreneurial passion for inventing was strongly related to innovation, and that such a relationship was stronger when there were higher levels of distributive justice in the franchise relationship. Ko, Liu, Yusoff, and Mat (2019) found a strong link between the entrepreneurial passion of social entrepreneurs towards different activities and social innovation performance, and that this link was partly explained by the mediating mechanism of creative

solution generation capacity. Finally, both Ma et al. (2018) and Kiani, Ali, Kanwal, and Wang (2019) found that entrepreneurial passion for different activities was positively related to organizational innovation, and that such a relationship was stronger when entrepreneurs exhibited higher levels of Zhongyong thinking (a style of thinking which emphasizes interpersonal harmony and connection). In addition, Kiani et al. (2019) found that the relationship between entrepreneurial passion and organizational innovation was mediated through the entrepreneur's exploratory learning.

Creation/Performance. Studies on the link between entrepreneurial passion towards different activities/domains and different measures of venture creation and performance have generally found strong evidence that passion for inventing and developing fosters venture survival and growth, where passion for founding do not. For example, Stenholm and Renko (2016) found that passion for inventing and developing positively predicted venture survival over time through fostering entrepreneurial bricolage, whereas passion for founding did not. In line with goal setting theory, Drnovsek et al. (2016) found that entrepreneurial passion for developing predicted venture growth over time through enhancing goal commitment but not goal challenge. Adomako et al. (2018) found that whilst passion for inventing and developing were positively related to subsequent venture growth, passion for founding was negatively related. They also found that the relationships between both passion for developing and passion for founding and venture growth were contingent on the availability of financial resources and resource flexibility, in such a way that when availability and flexibility were high the relationships were stronger.

Drawing on self-regulation theory, Mueller et al. (2017) examined the link between entrepreneurial passion and venture performance. They found that passion for developing predicted venture performance through indirectly enhancing entrepreneurs' grit. It should be noted that Mueller et al. (2017) did not follow Duckworth, Peterson, Matthews, and Kelly's (2007) suggestion to use the label passion for the grit facet of consistency of interests. Instead, Mueller et al. (2017) considered grit and passion as two separate constructs and emphasized the malleable aspects of passion, in contrast to the studies that consider grit a facet of the rather stable personality trait of conscientiousness (e.g., Ivcevic & Brackett, 2014). Adomako et al. (2019) found a positive link between passion for developing and venture performance. They also found that the relationship was stronger under conditions of greater political connections and higher environmental dynamism. Mensmann et al. (2019) looked at whether entrepreneurial passion for inventing and developing fostered through personal initiative training predicted business success of entrepreneurs. They found that it did, but only for female entrepreneurs.

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Overall, our review of prior empirical work suggests that passion for developing and inventing exhibit stronger relationships with venture creation and performance than passion for founding, and that such relationships are contingent on a number of personal and contextual factors.

Other Outcomes. Campos (2017) found that passion for developing amongst entrepreneurs predicted higher levels of entrepreneurial orientation in new ventures through the mediating mechanism of entrepreneurial alertness. Cardon et al. (2013) found that passion for developing predicted entrepreneurs' absorption in their business. Finally, Shockley and Turner (2016) found that entrepreneurial passion for inventing was positively related to franchisees' long-term orientation towards their franchise.

Outcomes of Entrepreneurs' Passion for Work.

Entrepreneurial Behavior and Venture Growth. A small number of studies have examined outcomes of entrepreneurs' general passion for work. Baum and Locke (2004) found that entrepreneur's passion for work predicted venture growth over time through the mediating mechanisms of self-efficacy, communicated vision, and goal setting. Snell et al. (2015) found a strong relationship between passion for work in small businesses and growth quality of work-life ambidexterity. Bhansing et al. (2017) found that entrepreneurs' work passion predicted greater inspiration, a specific type of motivation that allows the entrepreneur to transform creative ideas into creative products. Other research has examined whether entrepreneurs' passion for their work uniformly motivates different types of entrepreneurs to start a business. Drawing on the theory of choice overload, Nordström et al. (2016) examined whether passion motivated entrepreneurs who were also in paid employment to engage in entrepreneurship. They found that the longer the entrepreneurs had been running the side business, the less likely was passion to be the main motive behind entrepreneurship. They also found that passion was less likely to motivate entrepreneurs running a side business as part of an entrepreneurial team. They argued that the increasing time that an entrepreneur spends in business and the extent to which they interact with others in their business reduces their passion for entrepreneurship, due to the heightened negative emotions that result from choice overload. Thorgren, Nordström, and Wincent (2014) also examined the motivations of entrepreneurs who started a side business whilst in full-time employment. In line with the conservation of resources (COR) theory (Hobfoll, 1989), they found that older entrepreneurs and those who spend more time on the businesses were more likely to consider passion as their main motive for starting a side business.

Outcomes of Entrepreneurs' Obsessive and Harmonious Passion.

Entrepreneurial Attitudes. Not until recently have researchers begun to examine the link between obsessive and harmonious passion and entrepreneurial attitudes. Drawing on the theory of planned behavior, Türk et al. (2019) found that whilst obsessive passion was positively and directly related to the social entrepreneurial intentions of university students, the relationship between harmonious passion and social entrepreneurial intentions was mediated by moral obligation, entrepreneurial self-efficacy, and perceived social support.

Entrepreneurial Behavior. Few studies have examined the link between entrepreneurs' obsessive and harmonious passion and entrepreneurial behavior, with prior work typically focusing on harmonious passion. Murnieks et al. (2014) found a strong link between entrepreneurs' harmonious passion and entrepreneurial behavior measured as the amount of time they engaged in entrepreneurial activity. Similarly, Obschonka et al. (2019) found a positive link between academics' harmonious passion and their entrepreneurial behavior.

Venture Creation/Performance. Researchers have begun to look at the influence of obsessive and harmonious passion on venture creation and performance. Gielnik et al. (2017) found that harmonious entrepreneurial passion amongst undergraduate students positively influenced the rate at which they created businesses over time. Dalborg et al. (2015) found that obsessive entrepreneurial passion predicted the likelihood that those with intentions to start a business actually started up a business over time. Drawing on social network theory, Ho and Pollack (2014) examined the link between harmonious and obsessive passion and business income. They found that the link between harmonious passion and entrepreneurs' business income was mediated by their higher out-degree centrality, that is, the extent to which they sought help from their peers, whereas the link between obsessive passion and business income was mediated through their lower in-degree centrality, that is, the extent to which they were approached by peers for help. Fisher et al. (2018) examined the link between entrepreneurial passion and entrepreneurial success. They found that harmonious passion was positively related to success both directly and indirectly through the mediating mechanism of entrepreneurial resilience, while obsessive passion was positively related to entrepreneurial commitment, which in turn predicted success through entrepreneurial resilience. Overall, prior research found a positive link between both forms of passion and various measures of venture creation and performance.

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Other Outcomes. In contrast to other work which has found that motivational states such as entrepreneurial self-efficacy generally predict entrepreneurial passion towards different activities/domains (Cardon & Kirk, 2015; Dalborg & Wincent, 2015), Murnieks et al. (2014) found that harmonious passion predicted higher levels of entrepreneurial self-efficacy amongst entrepreneurs. De Mol et al. (2018) found that while harmonious passion was negatively related to burnout amongst entrepreneurs, obsessive passion was positively related to higher levels of burnout. Finally, Stroe et al. (2018b) found that obsessive passion predicted use of a causal logic in entrepreneurial decision-making, whereas harmonious passion predicted use of an effectual logic.

Outcomes of Entrepreneurial Passion Perceived or Observed by Others.

Entrepreneurial Attitudes of Others. Drawing on emotional contagion and goal setting theories, Breugst et al. (2012) examined whether employees' perceptions of their supervisors' entrepreneurial passion towards different activities were positively related to their affective commitment to entrepreneurial ventures and the mechanisms that underlie these relationships. They found that whereas passion for inventing was positively related to employees' commitment through heightening their positive affect, passion for developing was positively related to employees' affective commitment through heightening both their positive affect and goal clarity. In contrast, they found that passion for founding was negatively related to employees' affective commitment through reducing their positive affect. Similarly, Hubner (2017) examined the link between an employee's perceptions of the entrepreneur's entrepreneurial passion and their affective goal commitment. She found that the employee's entrepreneurial passion mediated the relationship between the entrepreneur's entrepreneurial passion and their affective commitment. She also found a direct link between the entrepreneur's entrepreneurial passion and their goal commitment.

Behavior of Others. Limited work has looked at the link between perceived or observed entrepreneurial passion and the behavior of others. Hubner (2017) found a strong link between an employee's perceptions of the entrepreneur's entrepreneurial passion and their performance and creativity, and this was contingent on the levels of entrepreneurial passion employees felt before interacting with the entrepreneur.

Entrepreneurial Finance/Venture Funding. A growing body of work has examined whether funders' perceptions of entrepreneurial passion are positively related to venture funding outcomes such as evaluations of funding

potential (Mitteness et al., 2012), investment decisions (Chen et al., 2009), desire to invest (Murnieks et al., 2016), probability of investment (Warnick et al., 2018), crowdfunding performance (Oo et al., 2019) and funding provision (Li et al., 2017). Overall such work has generally found a positive link between funders' perceptions of entrepreneurial passion and funding outcomes (Li et al., 2017; Mitteness et al., 2012; Murnieks et al., 2016; Oo et al., 2019; Warnick et al., 2018). For example, Murnieks et al. (2016) found that angel investors tended to have a greater desire to invest in ventures led by entrepreneurs when they exhibited higher levels of obsessive passion, and that this was contingent on the tenacity of the entrepreneur. They also found that the experience of angel investors positively moderated this contingent relationship. Warnick et al. (2018) found that angel investors and venture capitalists were more likely to invest in ventures run by entrepreneurs with higher levels of passion, especially when the entrepreneur was highly open and receptive to feedback. They also found that investors with more investing experience placed greater emphasis on the combination of product passion and openness to feedback, while those with more entrepreneurial experience placed greater emphasis on the combination of entrepreneurial passion and openness to feedback. Mitteness et al. (2012) found that angel investors tended to evaluate the funding potential of ventures more highly when they were run by entrepreneurs who displayed higher levels of entrepreneurial passion. They also found that angel investors who were older, more intuitive, motivated to mentor, and had a high openness personality were more likely to evaluate a venture's funding potential more highly when entrepreneurs exhibited high levels of entrepreneurial passion. Surprisingly, they found that the effects of entrepreneurial passion on evaluations of funding potential were weaker when angel investors were extraverted or had a promotiondominated regulatory focus. Drawing on emotional contagion theory, Li et al. (2017) found that the entrepreneurs' displayed passion in a crowdfunding video for a crowdfunding project predicted higher levels of experienced enthusiasm amongst viewers, which in turn prompted them to contribute funding to the project and share information about the project by social media. They also found that the link between entrepreneurial passion and crowdfunding was stronger when funders perceived higher levels of project innovativeness. Similarly, Oo et al. (2019) found a positive link between perceived entrepreneurial passion and crowdfunding performance. However, contrary to the body of work highlighted above, linking entrepreneurial passion to positive funding outcomes, Chen et al. (2009) found no evidence to suggest that venture capitalists' perceptions of entrepreneurial passion was related to their decisions to invest in entrepreneurial ventures.

Other Outcomes. Examining the influence of displayed entrepreneurial passion, Galbraith et al. (2014) found that a panel of experts from a funding

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agency determining grant applications rated technology firms' technology merit, management ability and commercial potential higher when the presenter of the grant proposal displayed higher levels of entrepreneurial passion.

Qualitative Research on Outcomes of Entrepreneurial Passion.

Venture Creation/Performance. Wang et al. (2017) found that entrepreneurial passion contagion amongst individuals working together in commercial organizations, predicted the likelihood they would start a new business, a term they labelled entrepreneurial collective turnover. Laaksonen et al. (2011) found that at least one founding entrepreneur had to be passionate about the business in order for a creative venture to be successful globally. Gerschewski et al. (2016) found that entrepreneurial passion on its own was not a precondition for business success. Entrepreneurs had to possess both entrepreneurial passion and business skills.

Other Outcomes. Ruskin, Seymour, and Webster (2016) examined the link between entrepreneurial passion and motives for starting a social enterprise. They found that social entrepreneurs with high levels of entrepreneurial passion tended to start a social enterprise to maximize their own self-interest rather than for other-oriented motives such as altruism and social justice. Rispal and Servantie (2017) found that the success of a social enterprise in fostering social change was contingent on the entrepreneur's passion for social change.

Outcomes of Team Entrepreneurial Passion. A small number of studies have looked at the outcomes of team entrepreneurial passion. Whilst Santos and Cardon (2019) found that team entrepreneurial passion for developing and inventing were positively related to team performance, team entrepreneurial passion for founding was not. They also found that mono-focal and complete poly-focal team entrepreneurial passion were more beneficial for team performance than incomplete poly-focal team entrepreneurial passion. In contrast, de Mol et al. (2019) found that overall team entrepreneurial passion was not related to new team performance in the short and long term. They also found that different measures of entrepreneurial passion diversity in the team (passion intensity separation and passion focus variety) were negatively related to short and long-term performance respectively. They also established that whilst team entrepreneurial passion for founding, inventing and developing were not positively related to venture performance in the long run, they were related to venture performance in the short run, as measured by quality of venture idea. Finally, they found that the overall negative impact of passion intensity separation in the team on quality of the business idea was

predominantly driven by diversity in passion for developing and founding. Taggar et al. (2019) found a positive link between team entrepreneurial passion and business idea feasibility. Finally, Uy et al. (2017) found that whilst in the early stages of development team entrepreneurial passion heterogeneity was positively related to new venture team performance, the positive relationship diminished over time.

Entrepreneurial Passion as a Moderator

A small number of studies have examined the moderating role played by entrepreneurial passion. Drawing on social cognitive theory, Costa et al. (2018) adopted an experimental approach to examine whether students with higher levels of entrepreneurial passion responded more positively to entrepreneurial training. They found that entrepreneurial passion as captured by positive intense feelings for founding, developing, and inventing heightened the impact of cognitive entrepreneurial training on students' accurate identification of business opportunities' prototypical viability. However, identity centrality, the other dimension of entrepreneurial passion, had no moderating effect. De Clercq et al. (2013) found that individuals with a greater belief in their ability to become an entrepreneur and perceived entrepreneurship to be an attractive career had higher entrepreneurial intentions when their passion for work was higher. Mumi et al. (2018) found that whilst entrepreneurial passion for founding moderated the opportunity recognition and pre-commitment seeking orientation relationship, it negatively moderated the social media and opportunity recognition relationship. Across two empirical studies Stroe, Siren, Shepherd, and Wincent (2019) examined whether the link between fear of failure and negative effect amongst entrepreneurs was dependent on the dualistic regulatory effect of passion. They found that whilst harmonious passion dampened the influence of fear of failure on negative affect across both studies, the moderating effects of obsessive passion were not consistent across the two studies, dampening it in one study and magnifying it in the other. Finally, Davis et al. (2017) found that crowdfunders were more likely to fund entrepreneurs' product pitches when they perceived high levels of product creativity both directly and indirectly as a result of positive affective reactions towards the product. They also found that such indirect effects of product creativity were contingent on the entrepreneurial passion of the entrepreneur such that those with high levels of passion obtained greater crowdfunding.

Summary of the Review of the Literature on Entrepreneurial Passion

In the previous sections we reviewed the literature on the antecedents and outcomes of entrepreneurial passion, and studies in which entrepreneurial

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passion was treated as a moderator. Based on the review, we developed a framework to organize the literature (see Figure 1). A number of key observations can be drawn from our review. First, our review established that there has been no consistent use of theory to highlight how entrepreneurial passion influences the individual and others around them. In explaining the link between entrepreneurial passion and its antecedents and outcomes, researchers have drawn on a variety of theories including social identity theory as well as self-regulation, emotional contagion, and conservation of resources theories. Worryingly, a significant percentage of articles reviewed did not draw on theory at all to explain their empirical findings.

Second, our review highlighted significant inconsistencies in how entrepreneurial passion has been conceptualized and measured. For example, whilst some research looks at passion in relation to different activities the entrepreneur may undertake (domains), others look at entrepreneurs' obsessive and harmonious passion more generally, or others' perceptions of the entrepreneur's passion. Such inconsistencies mean we are unable to determine if findings are comparable across studies and generalizable to the wider population.

Third, our review identified that there has been comparatively limited research on the antecedents of entrepreneurial passion relative to the outcomes of entrepreneurial passion. In particular, limited research has been conducted on how entrepreneurial passion develops in both the short and long term. We therefore have limited knowledge as to how environmental factors such as role models, education, and social networks shape entrepreneurial passion, or whether it is something primarily driven by an individual's personality and other individual difference variables.

Fourth, although researchers have highlighted the need to study the topic of collective entrepreneurial passion, we have only seen a limited number of empirical studies on whether entrepreneurial passion exists at the group or team-level, the factors that influence its development, and its influence on entrepreneurial outcomes.

Fifth, as the overwhelming majority of work has focused on the positive outcomes of entrepreneurial passion, we have limited knowledge as to its potential negative consequences and whether different forms of entrepreneurial passion may differentially predict venture or employee outcomes.

Sixth, many studies make causal assumptions and interpretations, but these causal interpretations are rarely supported by the methods used. Experimental and intervention studies are limited, with most research examining inter-individual correlations or regression models of some sort, most often in cross-sectional studies. It is therefore unclear whether the assumed antecedents and outcomes really are that, or if other directional relationships between passion and these variables exist. These limitations with respect to causal implications are also common in the broader passion literature, as

stressed, for example, in Curran, Hill, Appleton, Vallerand, and Standage's (2015) review paper on the psychology of passion.

Finally, prior work on entrepreneurial passion has typically focused on the entrepreneurial venture setting, and has rarely examined the link between entrepreneurial passion and employees' behavior outside the context of entrepreneurial ventures. For example, no research has examined the influence of entrepreneurial passion on intrapreneurial behavior such as corporate entrepreneurship.

DIRECTIONS FOR FUTURE RESEARCH ON ENTREPRENEURIAL PASSION

Building on the gaps identified in our review of entrepreneurial passion research, and recent developments in the more broader field of passion research, the following sections highlight opportunities for theoretical and empirical advancement of the literature on entrepreneurial passion.

Opportunities for Theoretical Advancement

As highlighted previously, prior research on entrepreneurial passion has typically failed to adequately integrate and build upon established theories of motivation and behavior to explain how passion influences individual entrepreneurs and those around them. In the following sections we outline a number of theories that offer promising explanations as to how entrepreneurial passion may influence the entrepreneurs themselves, their ventures and products, and the people around them.

Understanding the Influence of Entrepreneurial Passion. Researchers have often drawn on social identity theory to explain why individuals become passionate about a particular activity or "domain" (e.g., Huyghe et al., 2016; Murnieks et al., 2014). According to this theory, individuals develop passion in relation to different activities, such as entrepreneurship, as a result of identifying with such activities. However, it seems to us that the social cognitive theory (Bandura, 1986) offers insights that have not yet been exhaustively integrated in the research on passion. In particular, we argue that under the social cognitive theory, entrepreneurial passion can be viewed as an affective inclination that motivates individuals to exert time and effort towards entrepreneurial activity. Passion is therefore likely to explain positive attitudes towards entrepreneurship and lead individuals to engage in entrepreneurial behavior. Potential, not yet exhausted contributions of social cognitive theory in research on entrepreneurial passion might focus specifically on the question of what leads people to engage in entrepreneurial behavior. Social cognitive theory specifies pathways, such as social

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persuasion, mastery experiences, and vicarious learning from others, which may help explain the mechanisms linking passion to behavioral outcomes or successful entrepreneurial learning. Future studies could compare the relative importance of affective inclinations, such as entrepreneurial passion, with other, more cognitive, pathways specified under Bandura's model (social persuasion, mastery experiences and vicarious learning from others) in explaining entrepreneurial attitudes and behavior.

Understanding How Entrepreneurial Passion Influences Others. In line with recent work, which has begun to examine how entrepreneurial passion influences others around them (e.g., Breugst et al., 2012; Davis et al., 2017), we suggest that the affective events theory or emotional contagion theory could help understand the processes by which entrepreneurial passion might be appraised by or affect others. In particular, building on recent work by Davis et al. (2017), researchers might draw on affective events theory, which provides a framework for understanding how different events engender affective reactions in individuals, and may help us explain how funders appraise and respond to entrepreneurs' visual expressions of passion in their funding pitches. This theory might also be used to aid our understanding of how employees or entrepreneurial team members appraise and respond to displays of passion by entrepreneurial leaders.

Opportunities for Empirical Advancement

Improving the Conceptualization and Measurement of Entrepreneurial Passion. One central finding of our review is that current research uses a multitude of different definitions and measures of entrepreneurial passion, and offers no consensus about the best use of these disparate approaches (see Online Appendix 1). This is not just an issue in *entrepreneurial* passion research—it is also evident in the broader passion literature, where over the last 16 years, diverse definitions and measures of passion have been proposed by researchers, but no consensus regarding how best to conceptualize and measure passion has been achieved yet (for a comprehensive review of the different approaches and literature in the broader passion literature see Online Appendix 2). For example, in the broader passion research, passion has been viewed as a synonym for strong interests for an activity (e.g., Achter & Lubinski, 2005; Gagné, 2007), or persistently pursued interests (Duckworth et al., 2007; Chen, Ellsworth, & Schwartz, 2015; O'Keefe et al., 2018). as well as strong, persistent motivation in learning and achievement contexts (e.g., Achter & Lubinski, 2005; Mills, 2003; Noble, Childers, & Vaugham, 2008).

Since the publication of Vallerand's influential *Dual Model of Passion* in 2003, which has been the most widely adopted definition of passion in the broader passion research, a number of alternative definitions have been

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proposed. For example, Fredricks, Alfeld, and Eccles (2010) defined a person to be passionate if they report wanting to do the activity all the time, are intensely involved in the activity, experience emotional release through the activity, invest much time and energy into doing the activity, and identify with the activity. Other researchers examining love in romantic relationships have defined passion as a person's short-term sexual attraction to another person, including intense longing for the other person, frequent thoughts about the other person, and arousal (Sternberg, 1997). In a comprehensive literature review of the research on passion in psychology, Moeller (2014) concluded that the large number of implicit and explicit definitions of passion proposed by researchers, along with a lack of dialogue and integration, has led to confusion in the form of jingle fallacies (one term being used to refer to many different phenomena) and jangle fallacies (multiple terms referring to the same phenomenon). According to that review, there seems to be at least a general agreement amongst researchers that passion is a multi-faceted construct, which encompasses a strong motivation to engage and persist in activities pertaining to a certain topic or domain, that is related to intense emotions of either valence and characterized by strong approach motivation/desire.

But how should entrepreneurial passion be best conceptualized and measured in future research? In the present review, we do not advocate for a single definition and measurement of entrepreneurial passion, as we acknowledge that the different approaches have their own benefits, and, just like in the broader passion literature, it might require intensified dialogue and integrative work to develop a consensus or maybe even a "gold standard". In view of the existing lack of consensus with respect to the conceptualization and measurement of entrepreneurial passion, experts have begun to encourage researchers to test research questions and models by means of alternative conceptualizations and measures of passion to stimulate this dialogue and integration (e.g., Cardon, Post, & Forster, 2017a). To facilitate this process, we see a need for more clarity and transparency in the use of the term entrepreneurial passion and its related measures in future research. Here we offer some suggestions that might help create more transparency and avoid the currently prevailing jingle and jangle fallacies.

First, in future conceptual and empirical work on entrepreneurial passion researchers could either attempt to consider and measure *all* relevant facets of passion to fully understand passion in a holistic way, or they could focus on single facets separately to deepen our knowledge about their specific and differential roles. The latter approach implies that future studies could state more clearly which facets of entrepreneurial passion they measure and which they do not, and justify this decision. For that purpose, we have developed a taxonomy of passion facets, and essential components of passion proposed in the previous literature (see Table 1). Please note that the term facets

Entrepreneurial Passion as a Multi-Faceted Construct: A Suggested Taxonomy of Passion Facets that Can Inform Future Advancement in the Conceptualization and Measurement of Entrepreneurial Passion

#	Facet name	References
	Liking the activity Finding the activity important Spending extensive time and energy on the activity (may be invariant because always re-	Vallerand et al., 2003 Vallerand et al., 2003 Vallerand et al., 2003
N >	quired among active entrepreneuts, may meet-mutividually differ in nascent entrepreneuts) Labelling the activity one's passion Obsessive symptoms (feeling an uncontrollable urge, being emotionally dependent of the activity, not being able to "manage life" without this activity, being completely taken by the	Vallerand et al., 2003 Vallerand et al., 2003
ΙΛ	activity, recting cosessed of compensed to do activity, not being able to live without activity, mood dependent on being able to engage in activity) Harmonious symptoms (valuing activity, making unforgettable experiences because of activity, making a variety of experiences, liking oneself because of activity, activity being in borroom with other occasing the organization of activity being	Vallerand et al., 2003
VIII	In national with other aspects of first tenralining in control of activity) Strong personal interest Salient identification with the activity/ venture/ or the role as an entrepreneur	Chen et al., 2015; O'Keefe et al., 2018 Vallerand et al., 2003; Fredricks et al., 2010: Moeller, 2014; Cardon et al., 2009
X	Engagement in activity (which in turn is another multi-faceted construct with associated inple and iangle fallacies requiring more clear definitions)	Cardon et al., 2009
×	Consciously available strong positive emotions (characterized by intensity and a positive valence, but not necessarily approach motivation (please see Berridge, 2007; Berridge, Robinson, & Aldridge, 2009; Davis et al. Oby, for the distinction between wanting in terms of parameter and library of badanic positive effects.	Cardon et al., 2009
IX	High arousal/ emotional energy/ emotional intensity (does not specify any valence. The emotional intensity can accompany positive or negative emotions, or an approach motivation in terms of an urging desire. Facet XI (the high arousal) can be a part of facet X (strong positive emotions), but facet XI (the high arousal) can also occur without positive emotions and instead in combination with negative emotions. Some authors mention such valence-neutral intensity as an essential component of passion, others assume that only positive valence is characteristic of passion)	Cardon et al., 2009; Moeller, 2014; Sternberg, 1997

TABLE 1 (Continued)

 **Eacet name **XII **Desire/ urge/ strong approach motivation (is related to wanting, in terms of Berridge's distinction between liking and wanting, and is an intense, temporarily fluctuating urga approach a certain object or re-engage in an activity, characterized by recurrent thoughout that object or activity and a strong motivation to make the desired activity hap sproach a person resemble obsession or addiction-like symptoms, like in situations in which a person might want to quit working on an entrepreneurship-related task for th day, but then goes home and cannot resist the urge to get back to the task despite haviother plans and competing ongoing activities (e.g., family life). Such approach motiva can be accompanied by positive or negative valence (Friedman & Förster, 2011; Orton Turner, 1990)) XIII Getting emotional release from the activity XIV Complete involvement and flow experiences XV Persistence of motivation and behavior related to passionate activity (considered a fact of commitment. This can exist with or without the urge and the experience of "wantin in terms of Berridge (2007), but is necessarily characterized by a long-term stability of motivation. That can be due to dispositional factors (e.g., well-developed personal into or personality facets related to the perseverance facet of extraversion), or to successfu self-regulation, persisting reward experiences or financial gains related to the passional activity. Persistence in this regard is a mere description of the stability for any reason, in any form of motivation, emotion-driven or rational choice.) XVI Confinuous intentions (specific action plans) concerning the activity (considered a facet of commitment) 			
Desire/ un distinct approa about t Such an awhich a day, but other p can be Turner, Getting e Complete Persistenc of com in term motiva or pers self-reg activity in any 1 Long-tern Continuo commit	#		References
	IIX	Desire/ urge/ strong approach motivation (is related to wanting, in terms of Berridge's 2007 distinction between liking and wanting, and is an intense, temporarily fluctuating urge to approach a certain object or re-engage in an activity, characterized by recurrent thoughts about that object or activity and a strong motivation to make the desired activity happen. Such an urge can resemble obsession or addiction-like symptoms, like in situations in which a person might want to quit working on an entrepreneurship-related task for the day, but then goes home and cannot resist the urge to get back to the task despite having other plans and competing ongoing activities (e.g., family life). Such approach motivation can be accompanied by positive or negative valence (Friedman & Förster, 2011; Ortony & Turner, 1990))	Cardon et al., 2009; Moeller et al., 2015
· · · · · · · · · · · · · · · · · · ·	IIIX VIX	Getting emotional release from the activity	Fredricks et al., 2010 Fredricks et al., 2010
Long-terr Continuo commi	×	Persistence of motivation and behavior related to passionate activity (considered a facet of commitment. This can exist with or without the urge and the experience of "wanting" in terms of Berridge (2007), but is necessarily characterized by a long-term stability of motivation. That can be due to dispositional factors (e.g., well-developed personal interest or personality facets related to the perseverance facet of extraversion), or to successful self-regulation, persisting reward experiences or financial gains related to the passionate activity. Persistence in this regard is a mere description of the stability for any reason, and	Cardon et al., 2009; Duckworth et al., 2007; Moeller, 2014
	XVI	In any form of motivation, emotion-criven of rational choice.) Long-term goals (considered a facet of commitment) Continuous intentions (specific action plans) concerning the activity (considered a facet of commitment)	Moeller, 2014; Moeller et al., 2015 Moeller, 2014; Moeller et al., 2015

complexity of the umbrella term "entrepreneurial passion". Future research on entrepreneurial passion could consider measuring all facets of entrepreneurial passion, or it should be more clear and transparent why certain/single facets have been chosen and what this means for the study results. Where facets were grouped (e.g., I-VI), the Notes: Informed by the broader passion literature, here we start a taxonomy of relevant facets of entrepreneurial passion, thereby illustrating the potential psychological respective references assumed that these grouped facets have to come together for the multifaceted construct of passion to exist. can also overlap with the terms types, dimensions, components or aspects, although for the sake of clarity and simplicity we mainly use the term facets here. This taxonomy of entrepreneurial passion facets, as shown in Table 1, allows future studies to make it more transparent to others which facets of passion they include or exclude when measuring entrepreneurial passion. All relationships between entrepreneurial passion and the nomological network of constructs to which it is related, could be reported on the level of specific facets, to help the reader understand which specific facets of the multi-faceted construct of entrepreneurial passion are most important in a specific situation or context. This is also insightful because correlations at the level of facets tend to be higher and easier to interpret than correlations of higher-order constructs (e.g., Armstrong & Anthoney, 2009; Beauducel, Liepmann, Felfe, & Nettelnstroth, 2007; Schimmack, Oishi, Furr, & Funder, 2004).

Importantly, for many of these facets mentioned in Table 1, there is no consensus about how exactly to define and measure them, and therefore there is a consequential need for future work to strive towards consensual definitions and measures of these facets.

If researchers decide to employ multiple measures of entrepreneurial passion at the same time in future research, they can also offer a systematic head-to-head comparison of different measures and their antecedents and outcomes, which is still missing in the existing entrepreneurial passion literature. This would also follow an open and transparent research culture as it becomes more mainstream in the social science such as psychology (Nosek et al., 2015). It is currently unclear whether findings obtained with one measure of entrepreneurial passion would hold up if another measure was used, and such approaches could help answer such questions. Moreover, such research could also attempt to integrate existing approaches (e.g., Vallerand et al.'s 2003 and Cardon et al.'s 2009 conceptual models) in new or refined measures of entrepreneurial passion that provide more clarity about the similarities and differences between different passion measures and their unique contribution to the explanation of relevant outcomes. Another suggestion would be that instead of using the general term of entrepreneurial passion, future studies could interpret their findings strictly in regard to the applied measure and facet. This would help to avoid jingle fallacies, where the same term (entrepreneurial passion) is used to describe potentially different phenomena.

Second, we offer a list of methodological refinements with respect to the measurement of entrepreneurial passion in future studies in Table 2, to help overcome limitations as identified in the existing body of entrepreneurial passion research. For example, future studies could avoid biases in measurement by drawing on observer reports of entrepreneurial passion in addition to self-reports, and by comparing situational measures, which are often

TABLE 2

Methodological Suggestions for Future Studies Aiming to Develop and Test Advanced Measurements of Entrepreneurial Passion

- 1. Adopt other-reported measures of entrepreneurial passion in addition to self-reported measures to validate the self reports and quantify and/or avoid typical self-report biases (e.g., Chen et al., 2009)
- 2. Combine measures of positive (harmonious) and negative (obsessive) aspects of passion, to make sure both aspects are examined and to enable researchers to find mixed emotions/ ambivalent motivation in terms of co-occurring positive and negative experiences
- 3. Examine *intra-individual* patterns, for example with cluster analyses/latent profile analyses, to find out whether and under which circumstances positive and negative facets or outcomes of passion are experienced together by the same individuals. In doing this, authors should report scatter plots when referring to intra-individual constellations of harmonious and obsessive passion (see e.g., Moeller et al., 2015)
- 4. Combine retrospective measures of passion with situational measures (e.g., experience sampling methods), to avoid or quantify the biases affecting retrospective self-reports and to examine the short-term fluctuations in, situation-specific determinants of, and the stability of, entrepreneurial passion
- 5. Distinguish between specific facets of passion and report all coefficients quantifying the relations of passion to predictors, correlates, and outcomes on the level of specific facets, to enable researchers to determine which facet explains which outcome and is predicted by which antecedent. This is also needed to determine in which aspects different passion measures overlap or differ, to avoid jingle fallacies. Combine this with point 3 above by applying, e.g., cluster analyses to examine how often which combinations of which facets are experienced by which individuals
- 6. Systematically compare different measures of passion with each other to find out to what extent findings obtained with one measure generalize to those using another measure
- 7. Incremental validity: Systematically compare different measures of passion with related constructs, to find out to what degree passion explains relevant outcomes incrementally, beyond the explanation contributed by related constructs, such as engagement, commitment, positive affect, job satisfaction, etc.
- 8. Systematically compare different measures of passion with objective data, such as behavioral observations, psychophysiological data, factual outcomes (such as objective markers of entrepreneurial success) to avoid biases affecting self-reports and to avoid common-method biases that would affect studies examining relations among different self-report measures
- Use attention checks or "lie scales" to avoid acquiescence and other response biases affecting the predominantly self-reported measures of passion and its predictors, correlates, and outcomes
- Avoid redundancies/tautologies between passion measures and outcome measures (e.g., when linking passion to grit)

considered less biased by memory errors and stereotypes, to the common retrospective assessments. Future studies could work towards a consensus about definitions and outcomes of the multifaceted construct of entrepreneurial passion by distinguishing between its specific facets, by measuring these facets alongside each other, and by examining which exact facet incrementally predicts which outcome. Intra-individual analyses are needed to

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examine which individuals experience which exact facets (e.g., positive and aversive components) of entrepreneurial passion together, or separately, and how often. Incremental validity could be examined in three regards: by comparing the unique contribution of different passion *measures* to the explanation of relevant outcomes, by comparing the unique contribution of different passion *facets* to the explanation of relevant outcomes, and by examining whether entrepreneurial passion incrementally contributes to the explanation of relevant outcomes beyond the explanation contributed by related constructs, such as interest, engagement, and commitment.

Third, in future studies researchers might also consider drawing on *physiological measures* of indicators of passion or its components, which capture emotional arousal, such as elevated heart rate and sweating, to complement the possibly biased self-reports of affective experiences linked to passion with more objective measures. It seems an interesting research question for future studies to examine whether entrepreneurial passion can be faked by entrepreneurs, meaning whether it is possible for others to tell whether entrepreneurs are genuinely passionate or just appear as such, for instance in the hope of increasing the likelihood of receiving funding by impressing potential investors. Such research has important implications for entrepreneurs seeking funding and investors looking to fund new ventures.

Does Entrepreneurial Passion Develop Over Time and Is it Trainable? As highlighted in our review of the literature, we have witnessed relatively limited work on the antecedents of entrepreneurial passion compared to its outcomes. In particular, limited research has examined whether and how entrepreneurial passion develops over time, the factors which lead to such changes, and whether entrepreneurial passion is trainable. Building on recent work (e.g., Collewaert et al., 2016; Gielnik et al., 2017), we hope that future studies will identify the factors which cause entrepreneurial passion to fluctuate in the short term and change in the long term. In particular, researchers might consider adopting intensive longitudinal studies, such as diary methods or an experience sampling methodology approach, where entrepreneurs provide repeated situational, daily, or weekly ratings of entrepreneurial passion and its antecedents over a period of weeks or months. This will allow us to pinpoint the personal or contextual factors that may lead to short-term fluctuations in entrepreneurial passion, and determine to what extent the likelihood of having passionate experiences remains stable across situations, that is, it is trait-like. For example, future research could examine whether entrepreneurial passion varies as a result of work demands, success or failure in entrepreneurial activity, or changes in psychological states, such as entrepreneurial self-efficacy. Researchers might also consider adopting a longitudinal panel design to examine the factors that lead to long-term changes in entrepreneurial passion. For example, drawing on social learning and emotional contagion theories, researchers might investigate the role of entrepreneurial experience, mentorship and entrepreneurial training in fostering entrepreneurial passion over time. Research might also draw on recent conceptual work to examine whether the extent to which an entrepreneur maintains high levels of passion over time depends on the extent to which their needs for autonomy, competence, and relatedness are met (Warnick & McMullen, 2018).

In light of debates in the broader passion literature as to whether individuals need to "find their passion" or whether a given individual can develop a passion for any given domain or profession (Chen, Ellsworth, & Schwarz, 2015; O'Keefe, Dweck, & Walton, 2018), future research could investigate whether entrepreneurs find or craft their passion, and which consequences either approach has. In arguing that individuals need to "find their passion", researchers might draw on person-environment fit theory, which emphasizes that individuals tend to be happier and more likely to succeed if they choose activities and professions that match their personality, individual needs, and skills (Edwards, Cable, Williamson, Lambert, & Shipp, 2006). Conversely, in arguing that individuals can develop passion for any given activity, researchers might draw on research on growth mindsets and mastery goals (Dweck, 2008), or the job crafting literature (e.g., Wrzesniewski & Dutton, 2001), both of which suggest mechanisms by which individuals develop passion and find joy in whatever activity they are doing. Drawing on such perspectives researchers might investigate the extent to which entrepreneurs believe they are able to find versus develop their passion for different entrepreneurial activities, given the restrictions and freedom that an entrepreneurial career provides. Future research could also examine whether growth mindsets predict the likelihood that individuals enter into entrepreneurship, and whether growth mindsets develop over time as a result of the entrepreneur's experiences during the entrepreneurial process.

Negative or Curvilinear Effects of Entrepreneurial Passion. Prior work on entrepreneurial passion has typically focused on its relationship with positive entrepreneurial attitudes, behaviors, and both venture creation and performance. Although work on entrepreneurial passion and performance has rarely detected negative outcomes, recent work on entrepreneurial passion and burnout has revealed a positive link between obsessive passion and burnout (de Mol et al., 2018). In light of this work, future research might examine whether at too high levels, entrepreneurial passion, especially obsessive passion, may be linked to negative outcomes including impaired health or impaired psychological well-being. We expect that at too high levels of obsessive or general passion, entrepreneurs may persist with a failing

venture, unworkable ideas, products, and services, and engage in extreme risk-taking behavior. Vice versa, it may be that failures and setbacks turn a formerly harmonious passion into an obsessive one, if we assume that a core element of passion is to persist, no matter the outcome, which may come at emotional costs when the going gets tough. So far, there are no process models that help us to understand how emotionally enjoyable or adverse outcomes or predictors relate to the development of entrepreneurial passion. As well as looking at the negative outcomes associated with being too passionate, we also need more studies to examine the mixed emotions that potentially accompany entrepreneurial passion. While the literature on entrepreneurial passion emphasizes the positive feelings that accompany passion (e.g., Cardon et al., 2009), the general research on passion emphasizes that passion may come accompanied by negative emotions (see, e.g., Moeller et al., 2015; Vallerand et al., 2003). For example, recent analyses of intra-individual profiles of harmonious and obsessive passion found that individuals tend to experience high levels of both positive and negative feelings about passionate activities (Moeller et al., 2015). While it is unclear whether highly passionate entrepreneurs experience similar mixed feelings, several studies in the broader literature on passion at work suggest this may be a possibility. For example, high levels of motivation (engagement) among employees have been found to co-occur with high levels of stress in one out of four US employees (see Moeller et al., 2018). Such findings of mixed emotions in highly motivated employees are in strong contrast to the predominant focus on positive emotions in the previous research on entrepreneurial passion. In light of this work, future studies might want to examine the prevalence of mixed emotions in passionate entrepreneurs, examine longitudinally what happens to passionate entrepreneurs if they encounter frustrating experiences, and whether mixed emotions occur only during transitory states until successful coping, or whether there are individuals who permanently have negative emotions towards entrepreneurial activities while experiencing high levels of passion.

Entrepreneurial Passion as a Group/Collective Level Construct. Given that entrepreneurship is increasingly a team phenomenon, researchers could undertake more research on shared entrepreneurial passion and contagion of entrepreneurial passion in teams, and examine the factors which lead to the development of team entrepreneurial passion. Although recent conceptual work (Cardon et al., 2017a) has introduced the concept of team entrepreneurial passion, limited empirical research has examined the factors which predict team entrepreneurial passion or examined its link to entrepreneurial outcomes. In particular, as recommended by Cardon et al. (2017a), research could seek to ascertain whether team entrepreneurial

passion may emerge from the individual entrepreneurial passion of team members and influence entrepreneurial team-level and individual outcomes at different stages of the venture development process. We might expect higher levels of team entrepreneurial passion to occur in teams where individuals have relatively high levels of individual entrepreneurial passion, interact frequently with one another, and have shared purpose and objectives.

Other Outcomes of Entrepreneurial Passion. Researchers could consider broadening investigation of the outcomes associated with entrepreneurial passion. In particular, as most research has examined the outcomes of entrepreneurial passion in the entrepreneurial venture context, future studies could consider investigating the outcomes of entrepreneurial passion in more mainstream organizations. For example, future studies could investigate whether entrepreneurial passion leads individuals to engage in entrepreneurial behavior in larger, more established organizations. Future research might also examine the influence on entrepreneurial passion on significant others such as spouses and family members. For example, researchers might investigate whether entrepreneurial passion leads to greater work-family or work-life conflict (Jennings & McDougald, 2007), and subsequently lower levels of life or job satisfaction. In order to allow for causal interpretations, experimental and intervention studies are needed. Systematic longitudinal studies could examine the relation of entrepreneurial passion to antecedents and outcomes while controlling for prior levels of presumed outcomes, which is often missing in previous studies.

Entrepreneurial Grit. While existing research already targeted the link between entrepreneurial passion and perseverance/tenacity in the prediction of entrepreneurial outcomes (Baum & Locke, 2004), future research could intensify the effort to study the interplay between passion and perseverance/ tenacity from the perspective of psychological grit. To this end, researchers might draw upon the concept of grit defined by Duckworth (2016) as perseverance and passion for long-term goals. However, it is also important to note that although there is an emerging literature on entrepreneurial grit which examines the interplay between entrepreneurial passion and perseverance in predicting entrepreneurial success (Mooradian, Matzler, Uzelac, & Bauer, 2016; Mueller et al., 2017), there is an ongoing debate in the psychology literature as to whether (a) grit can indeed be conceptualized as a higher order construct comprising passion and perseverance, and (b) the relative explanatory power of passion vis-à-vis perseverance in driving performance outcomes (e.g., Credé, Tynan, & Harms, 2017). Mueller et al. (2017), for instance, acknowledge that the grit facet of consistency of interests is labeled as passion by Duckworth et al. (2007), but that this

definition of passion also differs much from the usual definitions of passion in the entrepreneurship literature. Mueller et al. (2017) therefore treat grit and passion as two separate constructs. Moreover, there is a growing body of studies indicating that grit, as typically conceptualized and measured in this research, might be essentially conscientiousness (e.g., Ivcevic & Brackett, 2014). Hence, future entrepreneurial passion research following this perspective could consider and test the conceptual and empirical overlap with traits (like conscientiousness) that are already known to be highly relevant in the work context (Barrick & Mount, 1991), including entrepreneurship (Brandstätter, 2011). We see this construct validity issue a general challenge for future entrepreneurial passion research, and call on researchers to show more clearly with which other constructs (e.g., engagement or commitment) measures of entrepreneurial passion overlap and are indeed independent of.

CONTRIBUTIONS OF ENTREPRENEURIAL PASSION RESEARCH TO GENERAL PASSION RESEARCH

We found that the entrepreneurial passion research has been informed and enriched by the broader passion literature. However, as the area of entrepreneurial passion has also developed its own life as a separate, major, and vibrant sub-field of the general passion literature, we conclude this review with some reflections on how recent developments in entrepreneurial passion research could inform and stimulate debates in, and make important contributions to, the broader passion literature (Curran, Hill, Appleton, Vallerand, & Standage, 2015).

First, we believe a core strength of the entrepreneurial passion research is its focus on an individual's level or degree of passion (high versus low), in contrast to the dominant focus in the broader passion literature on differences between harmonious and obsessive passion (e.g., Vallerand et al., 2003). More specifically, although there is growing work in the entrepreneurial passion literature that asks whether it makes a difference if a person experiences a lot of passion versus little passion, limited research has asked whether this is the case outside the entrepreneurship context. Examining differences in outcomes associated with varying levels of passion is important, since recent intra-individual studies have indicated that the distinction between high versus low passion rather than the distinction between harmonious and obsessive passion accounts for much of the observed inter-individual differences in passion (Moeller et al., 2015; Wang & Yang, 2007).

Second, although we have witnessed growing work on other-report measures of displayed passion in the entrepreneurial passion literature, work on displayed passion is largely absent from the broader passion literature. By examining the effects of displayed passion on others, we believe that insights

obtained in the entrepreneurial passion research could stimulate research in the broader passion literature.

A third contribution made by entrepreneurial passion research to the broader field of passion research is its distinction and comparison between passion towards different activities or "domains", such as founding versus developing a business, and its questioning as to whether passion towards different activities or domains have differential relationships with entrepreneurial outcomes (e.g., Cardon et al., 2017b; Cardon & Kirk, 2015). In contrast, much of the research on general passion has treated passion for different activities, such as work, study, or leisure activities, as interchangeable, and has rarely discussed whether activities differ in their potential to elicit passion, or whether passion for different activities has differential effects on outcomes (for exceptions see Fredricks, Alfeld, & Eccles, 2010; Moeller, Dietrich, Eccles, & Schneider, 2017). Future studies in the broader passion research might draw on such ideas from the entrepreneurial passion research and examine whether (a) levels of passion differ between activities; (b) whether passion for different activities is likely to have differential effects on various outcomes; and (c) whether people with high levels of passion towards a specific activity are likely to experience high levels of passion towards other activities.

A fourth contribution of the entrepreneurial passion research arises from its discovery that passion may be contagious (Wang et al., 2017). This finding could inform the research on passion in other domains, such as work, sporting, or academic contexts, where we might expect passionate individuals to inspire others around them to be more passionate. Future research might examine whether the exhibition of passion by managers, coaches, or teachers is likely to inspire employees, players, and students to become more passionate. In other words, future work might examine whether passion is contagious in settings outside the entrepreneurial context.

CONCLUSION

Our review found that existing research on entrepreneurial passion and passion for work in entrepreneurs has become an established and vibrant subfield of contemporary entrepreneurship research and its various subfields in the past decade. Researchers have begun to adopt diverse methodologies, theories, and conceptualizations to examine the antecedents and outcomes of entrepreneurial passion, which we have summarized in our integrative framework (Figure 1). Our review of the literature suggests that research on entrepreneurial passion might not only provide a deeper and more holistic understanding as to how entrepreneurs find and live their passion, but may also contribute to our knowledge as to how passion develops and influences outcomes outside of the context of entrepreneurship. However, we also

identified a number of existing limitations and critical challenges that future research could address to ensure progress of the field. Addressing these issues will help set the foundation for the second generation of entrepreneurial passion research.

REFERENCES

- Achter, J.A., & Lubinski, D. (2005). Blending promise with passion: Best practices for counseling intellectually talented youth. In S.D. Brown & R.W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 600–624). Hoboken, NJ: John Wiley & Sons.
- *Adomako, S., Mole, K.F., Murnieks, C., & Franklin, R. (2019). Analyzing the entrepreneurial passion-performance relationship. Academy of Management 2019 Conference.
- *Adomako, S., Zheng, C., & Ahsan, M. (2018). Passion undisciplined: Exploring the downside of entrepreneurial passion. Academy of Management 2018 Conference.
- Armstrong, P.I., & Anthoney, S.F. (2009). Personality facets and RIASEC interests: An integrated model. *Journal of Vocational Behavior*, 75(3), 346–359.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Barrick, M.R., & Mount, M.K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44(1), 1–26.
- *Baum, J.R., & Locke, E.A. (2004). The relationship of entrepreneurial traits, skill, and motivation to subsequent venture growth. *Journal of Applied Psychology*, 89(4), 587–598.
- Beauducel, A., Liepmann, D., Felfe, J., & Nettelsnstroth, W. (2007). The impact of different measurement models for fluid and crystallized intelligence on the correlation with personality traits. *European Journal of Psychological Assessment*, 23, 71–78.
- Berridge, K.C. (2007). The debate over dopamine's role in reward: The case for incentive salience. *Psychopharmacology (Berl)*, 191(3), 391–431.
- Berridge, K.C., Robinson, T.E., & Aldridge, J.W. (2009). Dissecting components of reward: "Liking", "wanting", and learning. *Current Opinion in Pharmacology*, 9, 65–73.
- *Bhansing, P.V., Hitters, E., & Wijngaarden, Y. (2017). Passion inspires: Motivations of creative entrepreneurs in creative business centres in the Netherlands. *Journal of Entrepreneurship*, 27(1), 1–24.
- *Biraglia, A., & Kadile, V. (2017). The role of entrepreneurial passion and creativity in developing entrepreneurial intentions: Insights from American homebrewers. *Journal of Small Business Management*, 55(1), 170–188.
- Block, J. (1995). A contrarian view of the five-factor approach to personality description. *Psychological Bulletin*, *117*, 187–215.
- *Bolinger, M., & Bolinger, A. (2019). Motivation from the outside-in. Rivalry and revenge as sources of entrepreneurial passion. Academy of Management 2019 Conference.
- © 2019 The Authors. Applied Psychology published by John Wiley & Sons Ltd on behalf of International Association of Applied Psychology.

- Brandstätter, H. (2011). Personality aspects of entrepreneurship: A look at five meta-analyses. *Personality and Individual Differences*, 51(3), 222–230.
- Breugst, N., Domurath, A., Patzelt, H., & Klaukien, A. (2012). Perceptions of entrepreneurial passion and employees' commitment to entrepreneurial ventures. *Entrepreneurship, Theory & Practice*, 36(1), 171–192.
- *Campos, H.M. (2017). Impact of entrepreneurial passion on entrepreneurial orientation with the mediating role of entrepreneurial alertness for technology-based firms in Mexico. *Journal of Small Business and Enterprise Development*, 24(2), 353–374.
- *Cardon, M.S. (2008). Is passion contagious? The transference of entrepreneurial passion to employees. *Human Resource Management Review*, 18, 77–86.
- *Cardon, M.S., Gregoire, D.A., Stevens, C.E., & Patel, P.C. (2013). Measuring entrepreneurial passion: Conceptual foundations and scale validation. *Journal of Business Venturing*, 28, 373–396.
- *Cardon, M.S., & Kirk, C.P. (2015). Entrepreneurial passion as mediator of the self-efficacy to persistence relationship. *Entrepreneurship Theory and Practice*, *39*, 1027–1050.
- *Cardon, M.S., Post, C., & Forster, W.R. (2017a). Team entrepreneurial passion: Its emergence and influence in new venture teams. *Academy of Management Review*, 42(2), 283–305.
- *Cardon, M.S., Glauser, M., & Murnieks, C.Y. (2017b). Passion for what? Expanding the domains of entrepreneurial passion. *Journal of Business Venturing Insights*, 8, 24–32.
- *Cardon, M.S., Wincent, J., Singh, J., & Drnovsek, M. (2009). The nature and experience of entrepreneurial passion. *Academy of Management Review*, 34(3), 511–532.
- Chen, P., Ellsworth, P.C., & Schwarz, N. (2015). Finding a fit or developing it. Implicit theories about achieving passion for work. *Personality and Social Psychology Bulletin*, 41(10), 1411–1424.
- *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.
- *Collewaert, V., Anseel, F., Crommelinck, M., De Beuckelaer, A., & Vermeire, A. (2016). When passion fades: Disentangling the temporal dynamics of entrepreneurial passion for founding. *Journal of Management Studies*, 53(6), 966–995.
- *Costa, S.F., Santos, S.C., Wach, D., & Caetano, A. (2018). Recognizing opportunities across campus: The effects of cognitive training and entrepreneurial passion on the business opportunity prototype. *Journal of Small Business Management*, 56(1), 51–75.
- Credé, M., Tynan, M.C., & Harms, P.D. (2017). Much ado about grit: A meta-analytic synthesis of the grit literature. *Journal of Personality and Social Psychology*, 113(3), 492.
- 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.
- © 2019 The Authors. Applied Psychology published by John Wiley & Sons Ltd on behalf of International Association of Applied Psychology.

- *Dalborg, C., von Friedrichs, Y., & Wincent, J. (2015). Risk perception matters: Why women's passion may not lead to a business start-up. *International Journal of Gender and Entrepreneurship*, 7(1), 87–104.
- *Dalborg, C., & Wincent, J. (2015). The idea is not enough: The role of self-efficacy in mediating the relationship between pull entrepreneurship and founder passion a research note. *International Small Business Journal*, 33(8), 974–984.
- *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, 90–106.
- Davis, C.A., Levitan, R.D., Reid, C., Carter, J.C., Kaplan, A.S., Patte, K.A., King, N., Curtis, C., & Kennedy, J.L. (2009). Dopamine for "wanting" and opioids for "liking": A comparison of obese adults with and without binge eating. *Obesity*, 17, 1220–1225.
- *De Clercq, D., Honig, B., & Martin, B. (2013). The roles of learning orientation and passion for work in the formation of entrepreneurial intention. *International Small Business Journal*, *31*(6), 652–676.
- *De Mol, E., Cardon, M.S., DeJong, B., Khapova, S.N., & Elfring, T. (2019). Entrepreneurial passion diversity in new venture teams: An empirical examination of short- and long-term performance implications. *Journal of Business Venturing*, in press.
- *De Mol, E., Ho, V.T., & Pollack, J. (2018). Predicting entrepreneurial burnout in a moderated mediated model of job fit. *Journal of Small Business Management*, 56(3), 392–411.
- Deci, E.L. and Ryan, R.M. (1985) *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.
- *Drnovsek, M., Cardon, M.S., & Patel, P.C. (2016). Direct and indirect effects of passion on growing technology ventures. *Strategic Entrepreneurship Journal*, 10, 194–213.
- Duckworth, A. (2016). *Grit: The power of passion and perseverance*. New York, NY: Scribner.
- Duckworth, A.L., Peterson, C., Matthews, M.D., & Kelly, D.R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, 92(6), 1087–1101.
- Dweck, C.S. (2008). *Mindset: The new psychology of success*. New York: Ballantine Books.
- Edwards, J.R., Cable, D.M., Williamson, I.O., Lambert, L.S., & Shipp, A.J. (2006). The phenomenology of fit: Linking the person and environment to the subjective experience of person-environment fit. *Journal of Applied Psychology*, 91, 802–827.
- Fisher, R., Merlot, E., & Johnson, L.W. (2018). The obsessive and harmonious nature of entrepreneurial passion. *International Journal of Entrepreneurial Behavior & Research*, 24(1), 22–40.
- Fredricks, J.A., Alfeld, C., & Eccles, J.S. (2010). Developing and fostering passions in academic and nonacademic domains. *Gifted Child Quarterly*, 54(1), 18–30.
- Friedman, R.S., & Förster, J. (2011). Limitations of the motivational intensity model of attentional tuning: Reply to Harmon-Jones, Gable, and Price. *Psychological Bulletin*, 137(3), 513–516.
- © 2019 The Authors. Applied Psychology published by John Wiley & Sons Ltd on behalf of International Association of Applied Psychology.

- Gagné, F. (2007). Ten commandments for academic talent development. *Gifted Child Quarterly*, 51(2), 93–118.
- *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.
- *Gerschewski, S., Lindsay, V.J., & Rose, E. (2016). Advancing the entrepreneurial orientation construct: The role of passion and perseverance. *Review of International Business and Strategy*, 26(4), 446–471.
- *Gielnik, M., Spitzmuller, M., Schmitt, A., Klemann, D.K., & Frese, M. (2015). "I put in effort, therefore I am passionate": Investigating the path from effort to passion in entrepreneurship. *Academy of Management*, 58(4), 1012–1031.
- *Gielnik, M., Uy, M.A., Funken, R., & Bischoff, K.M. (2017). Boosting and sustaining passion: A long-term perspective on the effects of entrepreneurship training. *Journal of Business Venturing*, 32, 334–353.
- *Ho, V.T., & Pollack, J.M. (2014). Passion isn't always a good thing: Examining entrepreneurs' network centrality and financial performance with a dualistic model of passion. *Journal of Management Studies*, *51*(3), 433–459.
- Hobfoll, S.E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44, 513–524.
- *Hubner, S. (2017). Contagion of entrepreneurial passion and its effects on employees' commitment and work performance. Academy of Management 2017 Conference.
- *Huyghe, A., Knockaert, M., & Obschonka, M. (2016). Unraveling the "passion orchestra" in academia. *Journal of Business Venturing*, 31, 344–364.
- Ivcevic, Z., & Brackett, M. (2014). Predicting school success: Comparing conscientiousness, grit, and emotion regulation ability. *Journal of Research in Personality*, 52, 29–36.
- Jennings, J.E., & McDougald, M.S. (2007). Work-family interface experiences and coping strategies: Implications for entrepreneurship research and practice. *Academy of Management Review*, 32, 747–760.
- *Kang, J.H., Matusik, J.G., Kim, T.Y., & Phillips, J.M. (2016). Interactive effects of multiple organizational climates on employee innovative behavior in entrepreneurial firms: A cross level investigation. *Journal of Business Venturing*, 31, 628–642.
- *Kiani, A., Ali, A., Kanwal, S., & Wang, D. (2019). How and when entrepreneurs' passion lead to firms' radical innovation: Moderated mediation model. *Technology Analysis & Strategic Management*, in press.
- *Ko, W.W., Liu, G., Yusoff, W.T.W., & Mat, C.R.C. (2019). Social entrepreneurial passion and social innovation performance. *Nonprofit and Voluntary Sector Quarterly*, 48, 759–783.
- *Laaksonen, L., Ainamo, A., & Karjalainen, T.M. (2011). Entrepreneurial passion: An explorative case study of four metal music ventures. *Journal of Research in Marketing and Entrepreneurship*, 13(1), 18–36.
- *Li, 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.
- © 2019 The Authors. Applied Psychology published by John Wiley & Sons Ltd on behalf of International Association of Applied Psychology.

- *Lopez, A.A., Neves, P., & Gonzalez-Morales, M.G. (2018). The mediating role of passion in the constraint-appraisal–taking action relationship. Academy of Management 2018 Conference.
- *Ma, C., Gu, J., & Liu, H. (2018). Entrepreneurs' passion and new venture performance in China. *International Entrepreneurship and Management Journal*, 13(4), 1043–1068.
- *Mensmann, M., Frese, M., Campos, F., Goldstein, M., Iacovone, L., Johnson, H., & McKenzie, D. (2019). Closing the gender gap: Personal initiative training and female business performance. Academy of Management 2019 Conference.
- *Milanesi, M. (2018). Exploring passion in hobby-related entrepreneurship: Evidence from Italian cases. *Journal of Business Research*, 92, 423–430.
- Mills, C.J. (2003). Characteristics of effective teachers of gifted students: Teacher background and personality styles of students. *Gifted Child Quarterly*, 47(4), 272–281.
- *Mitteness, C., Sudek, R., & Cardon, M. (2012). Angel investor characteristics that determine whether perceived passion leads to higher evaluations of funding potential. *Journal of Business Venturing*, 27, 592–606.
- Moeller, J. (2014). Passion as concept of the psychology of motivation. Conceptualization, assessment, inter-individual variability and long-term stability. Dissertation published online at http://www.db-thueringen.de/servlets/Derivate-29036/DissJuliaMoeller.pdf\.
- Moeller, J., Dietrich, J., Eccles, J.S., & Schneider, B. (2017). Passionate experiences in adolescence: Situational variability and long-term stability. *Journal of Research on Adolescence*, 27(2), 344–361.
- Moeller, J., Eccles, J.S., Salmela-Aro, K., Dietrich, J., Schneider, B., & Grassinger, R. (2015). Passion and motivation. In J.D. Wright (editor-in-chief), *International encyclopedia of the social and behavioral sciences* (2nd ed. Vol. 17, pp. 570–576). Oxford: Elsevier. https://doi.org/10.1016/B978-0-08-097086-8.26101-1.
- Moeller, J., Ivcevic, Z., White, A.E., Menges, J.I., & Brackett, M.A. (2018). Highly engaged but burned out: Intra-individual profiles in the US workforce. *Career Development International*, 23(1), 86–105.
- Moeller, J., Keiner, M., & Grassinger, R. (2015). Two sides of the same coin: Do the dual "types" of passion describe distinct subgroups of individuals? *Journal for Person-Oriented Research*, 1(3), 131–150.
- Mooradian, T., Matzler, K., Uzelac, B., & Bauer, F. (2016). Perspiration and inspiration: Grit and innovativeness as antecedents of entrepreneurial success. *Journal of Economic Psychology*, *56*, 232–243.
- *Mueller, B.A., Wolfe, M.T., & Syed, I. (2017). Passion and grit: An exploration of the pathways leading to venture success. *Journal of Business Venturing*, 32, 260–279.
- *Mumi, A., Ciuchta, M., & Yang, Y. (2018). Social media for entrepreneurial opportunity and process: An effectuation perspective. Academy of Management 2018 Conference.
- *Murnieks, C.Y., Cardon, M., & Haynie, J.M. (2018). Fueling the fire: Examining identity centrality, affective interpersonal commitment and gender as drivers of entrepreneurial passion. *Journal of Business Venturing*, in press.
- © 2019 The Authors. Applied Psychology published by John Wiley & Sons Ltd on behalf of International Association of Applied Psychology.

- *Murnieks, C.Y., Cardon, M., Sudek, R., White, D., & Brooks, W.T. (2016). Drawn to the fire: The role of passion, tenacity and inspirational leadership in angel investing. *Journal of Business Venturing*, *31*, 468–484.
- *Murnieks, C.Y., Mosakowski, E., & Cardon, M. (2014). Pathways of passion: Identity centrality, passion, and behavior among entrepreneurs. *Journal of Management*, 40(6), 1583–1606.
- Noble, K.D., Childers, S.A., & Vaugham, R.C. (2008). A place to be celebrated and understood: The impact of early university entrance from parents' points of view. *Gifted Child Quarterly*, 52(3), 256–268.
- *Nordström, C., Sirén, C.A., Thorgren, S., & Wincent, J. (2016). Passion in hybrid entrepreneurship: The impact of entrepreneurial teams and tenure. *Baltic Journal of Management*, 11(2), 167–186.
- Nosek, B.A., Alter, G., Banks, G.C., Borsboom, D., Bowman, S.D., Breckler, S.J., ... Contestabile, M. (2015). Promoting an open research culture. *Science*, *348*(6242), 1422–1425.
- O'Keefe, P.A., Dweck, C.S., & Walton, G.M. (2018). Implicit theories of interest: Finding your passion or developing it? *Psychological Science*, 29(10), 1653–1664.
- *Obschonka, M., Moeller, J., & Goethner, M. (2019). Entrepreneurial passion and personality: The case of academic entrepreneurship. *Frontiers in Psychology*, 9, article 2697.
- *Oo, P.P., Allison, T.H., Sahaymb, A., & Juasrikul, S. (2019). User entrepreneurs' multiple identities and crowdfunding performance: Effects through product innovativeness, perceived passion, and need similarity. *Journal of Business Venturing*, 34, 1–16.
- Ortony, A., & Turner, T.J. (1990). What's basic about basic emotions? *Psychological Review*, 97, 315–331.
- Perrewe, P.L., Hochwarter, W.A., Ferris, G.R., McAllister, 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.
- Rauthmann, J.F. (2015). Structuring situational information. A road map of the multiple pathways to different situational taxonomies. *European Psychologist*, 20, 176–189.
- *Rispal, M.H., & Servantie, V. (2017). Business models impacting social change in violent and poverty-stricken neighbourhoods: A case study in Colombia. *International Small Business Journal*, 35(4), 427–448.
- Roeser, R.W., Peck, S.C., & Nasir, N.S. (2006). Self and identity processes in school motivation, learning, and achievement. In P. Alexander & P.H. Winne (Eds.) *Handbook of educational psychology* (2nd ed., pp. 391–424). Mahwah, NJ: Erlbaum.
- *Ruskin, J., Seymour, R.G., & Webster, C.M. (2016). Why create value for others? An exploration of social entrepreneurial motives. *Journal of Small Business Management*, 54(4), 1015–1037.
- *Santos, S.C., & Cardon, M.S. (2019). What's love got to do with it? Team entrepreneurial passion and performance in new venture teams. *Entrepreneurship Theory and Practice*, 43(3), 475–504.
- Schimmack, U., Oishi, S., Furr, R.M., & Funder, D.C. (2004) Personality and life satisfaction: A facet-level analysis. *Personality and Social Psychology Bulletin*, 30(8), 1062–1075.
- © 2019 The Authors. Applied Psychology published by John Wiley & Sons Ltd on behalf of International Association of Applied Psychology.

- *Shockley, J., & Turner, T. (2016). A relational performance model for developing innovation and long- term orientation in retail franchise organizations. *Journal of Retailing and Consumer Services*, 32, 175–188.
- Short, J. (2009). The art of writing a review article. *Journal of Management*, 35, 1312–1317.
- *Snell, L., Sok, P., & Danaher, T.S. (2015). Achieving growth-quality of work life ambidexterity in small firms. *Journal of Service Theory and Practice*, 25(5), 529–550.
- *Stenholm, P., & Nielsen, M.S. (2019). Understanding the emergence of entrepreneurial passion. The influence of perceived emotional support and competences. *International Journal of Entrepreneurial Behavior & Research*, in press.
- *Stenholm, P., & Renko, M. (2016). Passionate bricoleurs and new venture survival. *Journal of Business Venturing*, *31*, 595–611.
- Sternberg, R.J. (1997). Construct validation of a triangular love scale. *European Journal of Social Psychology*, 27, 313–335.
- Stoeber, J., Childs, J.H., Hayward, J.A., & Feast, A.R. (2011). Passion and motivation for studying: Predicting academic engagement and burnout in university students. *Educational Psychology*, *31*(4), 513–528.
- *Stroe, S., Parida, V., & Wincent, J. (2018a). Effectuation or causation: An fsQCA analysis of entrepreneurial passion, risk perception, and self-efficacy. *Journal of Business Research*, 89, 265–272.
- *Stroe, S., Wincent, J., & Parida, V. (2018b). Untangling intense engagement in entrepreneurship: Role overload and obsessive passion in early-stage entrepreneurs. *Journal of Business Research*, 90, 59–66.
- *Stroe, S., Siren, C., Shepherd, D., & Wincent, J. (2019). The dualistic regulatory effect of passion on the relationship between fear of failure and negative affect: Insights from facial expression analysis. *Journal of Business Venturing*, in press.
- *Taggar, S., Domurath, A., & Coviello, N. (2019). Team entrepreneurial passion: Linking intra- and interpersonal influences with outcomes. Academy of Management 2019 Conference.
- The New York Times (2018). Why following your passions is good for you (and how to get started). Retrieved from https://www.nytimes.com/2018/10/10/smarter-living/follow-your-passion-hobbies-jobs-self-care.html.
- *Thorgren, S., Nordström, C., & Wincent, J. (2014). Hybrid entrepreneurship: The importance of passion. *Baltic Journal of Management*, 9(3), 314–329.
- *Thorgren, S., & Wincent, J. (2015). Passion and habitual entrepreneurship. *International Small Business Journal*, 33(2), 216–227.
- *Türk, S., Zapkau, F.B., & Schwens, C. (2019). How harmonious and obsessive passion affect social entrepreneurial intention differently. Academy of Management 2019 Conference.
- *Turner, T., & Gianiodis, P. (2018). Entrepreneurship unleashed: Understanding entrepreneurial education outside of the business school. *Journal of Small Business Management*, 56(1), 131–149.
- *Uy, M., Jacob, G.H., Antonio, T., Hasan, J., & Lam, S.S. (2017). Entrepreneurial passion heterogeneity and new venture team performance trajectory. Academy of Management 2017 Conference.
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- Vallerand, R.J., Blanchard, C., Mageau, G.A., Koestner, R., Ratelle, C., Leonard, M., Gagne, M., & Marsolais, J. (2003). Les passions de l'ame: On obsessive and harmonious passion. *Journal of Personality and Social Psychology*, 85(4), 756–767.
- Vallerand, R.J., & Miquelon, P. (2007) Passion for sport in athletes. In S. Jowette & D. Lavallee (Eds.), *Social psychology in sport* (pp. 249–263). Champaign, IL: Human Kinetics.
- Wang, C.C., & Yang, H.W. (2007). Passion and dependency in online shopping activities. *Cyberpsychology and Behavior*, 10(2), 296–298.
- *Wang, S., Dong, B., Si, S.X., & Dou, J. (2017). When it rains, it pours: A triple-pathway model of collective turnover based on causal mapping analysis. *Asian Pacific Journal of Management*, *34*, 461–486.
- *Warnick, B.J., & McMullen, J.S. (2018). Passion monetization in hobby entrepreneurship: Ideal job design or recipe for work-leisure conflict? Academy of Management 2018 Conference.
- *Warnick, B.J., Murnieks, C.Y., McMullen, J.S., & Brooks, W.T. (2018). Passion for entrepreneurship or passion for the product? A conjoint analysis of angel and VC decision-making. *Journal of Business Venturing*, *33*, 315–332.
- Wrzesniewski, A., & Dutton, J.E. (2001). Crafting a job: Revisioning employees as active crafters of their work. *Academy of Management Review*, 26(2), 179–201.
- *Yitshaki, R., & Kropp, F. (2016). Entrepreneurial passions and identities in different contexts: A comparison between high-tech and social entrepreneurs. Entrepreneurship & Regional Development, 28(3–4), 206–233.

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