

When Passion Fades: Disentangling the Temporal Dynamics of Entrepreneurial Passion for Founding

Veroniek Collewaert, Frederik Anseel,
Michiel Crommelinck, Alain De Beuckelaer and
Jacob Vermeire

Katholieke Universiteit Leuven, Vlerick Business School; Ghent University, ESSEC Business School; Ghent University; Radboud University, Ghent University; Vlerick Business School

ABSTRACT This study examines how and why entrepreneurial passion for founding changes over time. In particular, we propose that in the founding phase of a venture's lifecycle entrepreneurs' founding identity centrality will remain stable over time. We also propose, however, that in our sample and time period studied, entrepreneurs' intense positive feelings for founding will decrease over time. On the basis of theories of positive illusion, self-regulation and role theory, we further hypothesize that venture idea change, change in role ambiguity and entrepreneurs' feedback-seeking behaviour are factors that help explain the rate of change in entrepreneurs' intense positive feelings for founding. Using a three-wave longitudinal research design, we find that among a sample of 112 entrepreneurs' identity centrality does not change over time, whereas intense positive feelings for founding decrease over time. Moreover, the more entrepreneurs change their venture ideas, the weaker their decrease in intense positive feelings. Further, we show that entrepreneurs who frequently seek feedback suffer less from reduced positive feelings in response to higher increases in role ambiguity as compared to entrepreneurs who seek less feedback.

Keywords: entrepreneur, feedback-seeking behaviour, flexibility, role ambiguity, passion

INTRODUCTION

'I was a very public failure, and I even thought about running away from the valley. But something slowly began to dawn on me — I still loved what I did. The turn of events at Apple had not changed that one bit. I had been rejected, but I was still in love. And so I decided to start over'.

Steve Jobs — Stanford's commencement speech, 2005

Address for reprints: Veroniek Collewaert, Vlerick Business School, Area Entrepreneurship, Governance and Strategy, Katholieke Universiteit Leuven, Department of Managerial Economics, Strategy and Innovation, Reep 1, 9000 Gent, Belgium (E-mail: veroniek.collewaert@vlerick.com).

Recent theoretical and empirical developments in the literature on entrepreneurial passion have identified passion as a critical factor influencing entrepreneurial action. It can be an inner force that helps entrepreneurs to overcome the barriers they meet along their way, to persist in the face of challenges and failures, and to commit the necessary effort to succeed at their own ventures (Cardon et al., 2005). It is the ‘fire in the belly’ that makes entrepreneurs pursue their dreams and ‘that makes the improbable possible’ (Smilor, 1997, p. 342). An emergent body of empirical research corroborates passion’s value. Entrepreneurial passion has been found to positively impact venture growth by increasing entrepreneurs’ self-efficacy, vision and goals (Baum and Locke, 2004; Murnieks et al., 2014). Passion also relates positively to entrepreneurs’ persistence and creativity (Cardon et al., 2013), to the extent to which entrepreneurs are cognitively immersed in their entrepreneurial activities (Cardon et al., 2013), and to the time they spend on those activities (Murnieks et al., 2014).

Given its important effects on entrepreneurs’ behaviour and performance, it is crucial to understand how entrepreneurial passion develops over time. Is entrepreneurial passion an inexhaustible source of energy that replenishes itself, as it is depicted in Steve Jobs’ inspirational speech, or may it wane over time? To date, the growing literature on entrepreneurial passion is equivocal as to how entrepreneurs may succeed in maintaining their passion. As opposed to earlier stable trait-based approaches of entrepreneurial passion (e.g., Baum and Locke, 2004; Baum et al., 2001), Cardon et al. (2009) compellingly argued for a conceptualization of entrepreneurial passion that allows for variability over time. For instance, they suggested that some entrepreneurs may lose ‘the fire of passion as the venture grows’ because they may feel quite passionate about discovering new opportunities, but less so about exploiting them (Cardon et al., 2009, p. 526). Empirically, though, evidence concerning entrepreneurial passion’s temporal variability is less straightforward. To date, only two studies have examined entrepreneurial passion over time, with one study finding entrepreneurial passion to be relatively stable (Cardon et al., 2013), and another one finding it to vary significantly over time (Gielnik et al., 2015).

In this study, we extend this research stream by disentangling the dynamics of the different components of entrepreneurial passion over time. To this end, we build on Cardon et al.’s (2009) definition of entrepreneurial passion as an intense positive feeling towards entrepreneurial activities that are central for the entrepreneur’s self-identity. As such, entrepreneurial passion comprises two key dimensions or components: An intense positive feelings component (e.g., being the founder of a venture excites you) and an identity centrality component (e.g., being the founder of a venture is an important part of who you are) (Cardon et al., 2009). Both components are essential to the conceptualization and measurement of entrepreneurial passion (Cardon et al., 2009, 2013). To unravel the temporal dynamics of entrepreneurial passion hence requires us to conceptually consider *both* dimensions of entrepreneurial passion rather than focusing on only one (as in, e.g., Gielnik et al., 2015). Thus, a first contribution of our study is that we distinguish between the dynamics of intense positive feelings (which will decrease in our context) and identity centrality (which will remain stable) over time, shedding new light on the nonstatic nature of entrepreneurial passion.

A second contribution is that we identify and test three antecedents of change in entrepreneurs’ intense positive feelings over time. To this end, we start from the widely

accepted notion that contextual uncertainty is a defining characteristic of the entrepreneurial founding process (e.g., Venkataraman, 1997; Zahra and Dess, 2001). Uncertainty, however, may be interpreted, experienced and reacted to quite differently across individuals and across time (Choi et al., 2008; McMullen and Shepherd, 2006). Indeed, founding a venture is a highly individual experience involving continuous interaction between the individual entrepreneurs and their context, eliciting important cognitive and behavioural responses on the entrepreneurs' part (e.g., Morris et al., 2010; Schindehutte et al., 2006). Therefore, we first explain why we expect entrepreneurs' intense positive feelings for founding to decrease over time in our sample. Then, we go on to argue that adopting a dynamic, individual-level perspective on how entrepreneurs cognitively appraise and behaviourally deal with the uncertain context in which they operate may prove a fruitful lens to study the rate of change in entrepreneurs' positive feelings during the founding stages of their ventures.

With regard to behavioural responses, we specifically focus on the extent to which entrepreneurs change their venture ideas as this captures their flexibility and adaptability. Making more changes to their ideas will increasingly foster entrepreneurs' feelings of being in control and, as such, will positively affect the rate of change in their intense positive feelings towards founding. With regard to cognitive appraisals, we focus on role ambiguity as this captures the entrepreneurs' perceived uncertainty regarding what is expected of them. Higher increases in role ambiguity will negatively affect the rate of change in entrepreneurs' positive feelings towards founding as it will increasingly hinder entrepreneurs' ability to attain the personal and professional goals they have set for themselves during the founding stages of their venture. Finally, we advance feedback-seeking behaviour as a behavioural action entrepreneurs may engage in that could counter the negative effects of increasing role ambiguity, thus illustrating the interplay between cognitive appraisal and behavioural action (i.e., feedback-seeking as a moderator of the relation between changes in role ambiguity and intense positive feelings). Thus, we not only contribute to research on entrepreneurial passion, but also to the broader literature on work passion (e.g., Perrewé et al., 2014) by addressing the questions of whether and how passion can wane or be resuscitated over time.

In this study, we specifically focus on the venture's founding phase. This is important given that entrepreneurs may experience different types of passion related to each of the different phases of the entrepreneurial process, namely (1) a passion for inventing, reflecting entrepreneurs' passion for activities related to opportunity identification and exploration, (2) a passion for founding, reflecting entrepreneurs' passion for activities related to establishing a venture, and (3) a passion for developing, reflecting entrepreneurs' passion for activities related to venture growth (Cardon et al., 2009). Each type of passion is likely associated with its own set of antecedents and moderators (Cardon et al., 2009, 2013). Given our focus on the founding phase of the entrepreneurial process, we examine entrepreneurs' passion for founding.^[1] Passion for founding is linked to an entrepreneur's effectiveness in new venture creation (Cardon et al., 2009). Thus, it is this type of passion that will likely determine how effective an entrepreneur is in overcoming the key challenges inherent to the founding stage of a venture, such as trying to mobilize financial resources, hiring employees and finding customers. It is what will drive an entrepreneur's motivation and persistence to deal with and creatively solve the

challenges ahead in his/her pursuit of his/her goal to create a new venture (Cardon et al., 2009, 2013). Therefore, we argue it is the most relevant type of passion to focus on for entrepreneurs who are in their founding stages. A better understanding of the dynamics of passion in the founding phase is warranted given that early stage entrepreneurial efforts have a sizable impact on the venture's survival, development and success (Brush et al., 2008; Davidsson and Honig, 2003; Delmar and Shane, 2003). Thus, a third contribution of this study is that examining entrepreneurs' positive feelings in the founding phase might increase our insight into the reasons why some aspiring entrepreneurs persist and make the leap to venture creation while others do not (Brush et al., 2008; Cardon et al., 2013).

This study uses latent growth modeling (LGM) to study change in entrepreneurial passion. Modelling change typically consists of two steps (e.g., Singer and Willett, 2003). First, predictions focus on within-individual change over time. Second, predictions focus on interindividual differences in change over time. The first step helps us address the empirical question of whether or not identity centrality and intense positive feelings change over time (i.e., is the slope significantly different from zero) and in what direction (i.e., sign of the slope). Exploring predictors of change is what we do in the second step of modelling change, i.e., modelling the slope; this helps us to explore predictors of differences between entrepreneurs in their change in intense positive feelings over time. In line with the traditional approach to study change, the latter hence reflects the magnitude or rate of change.

UNDERSTANDING THE DYNAMIC NATURE OF ENTREPRENEURIAL PASSION

Conceptualizing Entrepreneurial Passion

Although passion has since long been recognized as a significant source of empowerment for entrepreneurs to overcome the many challenges they are faced with over the course of their venture's lifecycle (e.g., Baum et al., 2001; Patel et al., 2015; Smilor, 1997), academic research on entrepreneurial passion is still in its infancy. Similar to the literature on passion in general (Vallerand, 2010), entrepreneurial passion research long suffered from the fragmented nature of definitions and theoretical frameworks adopted when studying passion. Cardon et al. (2009) advanced the field by integrating the psychology literature on passion, emotions and feelings with the entrepreneurship literature on passion and the entrepreneurial process to propose a coherent theory of entrepreneurial passion. In so doing, they defined 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). In line with this definition, Cardon et al. (2013) subsequently operationalized entrepreneurial passion as a superordinate formative construct consisting of two dimensions, i.e., intense positive feelings and identity centrality. Both the intense positive feeling component and the identity centrality component are essential to the conceptualization and measurement of entrepreneurial passion (Cardon and Kirk, 2015; Cardon et al., 2009, 2013). Thus, being passionate about founding activities

requires you both being excited about the role as a venture founder and the founder identity being an important part of who you are. As both dimensions have been shown to be theoretically and empirically distinct from one another, but central to the construct of passion (Cardon et al., 2013), theorizing about and understanding entrepreneurial passion requires one to consider both.

As such, entrepreneurial passion as defined by Cardon et al. (2009) is similar to Vallerand et al.'s (2003) dualistic model of passion in that both view passion as a concept involving the experience of positive feelings and the engagement in activities that are meaningful to the individual concerned. However, while Vallerand et al. (2003) suggest that identity meaning is important for understanding passion, they do not explicitly consider identities in their proposed definition of passion, nor is their definition specific to entrepreneurship' (Cardon et al., 2009, p. 516). In Cardon et al.'s (2009) view on entrepreneurial passion, identity centrality is considered an essential part of entrepreneurial passion and is, as such, also explicitly operationalized as an additional dimension of passion on top of the more traditionally considered positive feelings dimension. Additionally, entrepreneurial passion according to Vallerand et al.'s (2003) definition would refer to the role of an entrepreneur in general rather than to the three distinct roles Cardon et al. (2009) identified as being key to the entrepreneurial process. Another difference relates to Vallerand et al.'s (2003) model explicitly distinguishing between harmonious and obsessive passion. When harmonious passion is at play individuals engage in the passionate activity out of free volition, whereas with obsessive passion individuals feel an uncontrollable urge to do so; they cannot help but to engage in it. It is this latter form of passion that represents the darker side of passion in that it typically has more negative consequences for the individuals concerned such as decreased concentration or psychological distress (Vallerand, 2010). In an entrepreneurial setting, Ho and Pollack (2014) showed that obsessive passion in entrepreneurs was negatively related to their in-degree centrality, meaning that they were less likely to be approached by peers, resulting in reduced financial performance. While Cardon et al. (2009) also recognize that passion may have negative effects, they do not distinguish between a more functional versus dysfunctional form of passion.

We agree with prior studies in the field that both models have valence and that the choice for which one to rely on should ultimately be guided by one's research question (Ho and Pollack, 2014; Murnieks et al., 2014). Given our explicit focus on the dynamics of entrepreneurial passion in the founding phase of a venture's lifecycle, we believe it is important to relate passion as specifically as possible to the key activities entrepreneurs have to engage in during that stage and therefore use Cardon et al.'s (2009) framework. In line with their conceptualization and operationalization of entrepreneurial passion, we argue that the different nature of the two components of entrepreneurial passion, i.e., intense positive feelings and identity centrality, results in different trajectories for each in the founding stage of a venture's lifecycle. Figure 1 represents a summary of the theoretical model we outline below.

Entrepreneurs' Founding Identity Centrality over Time

The first component of entrepreneurial passion, identity centrality, reflects the relative importance an individual attaches to one identity compared to others (e.g., how

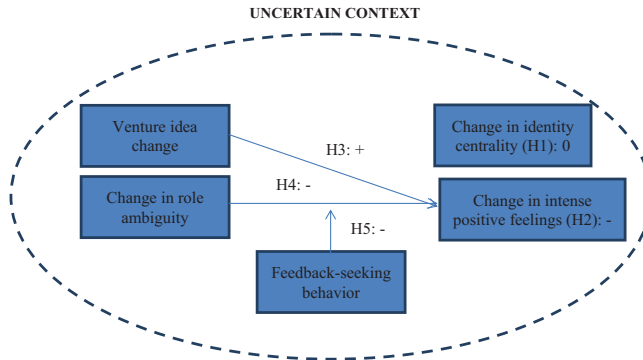


Figure 1. Theoretical model

important would an individual rate his identity as an entrepreneur vis-à-vis his identity as a father, football coach, etc.) (Stryker and Burke, 2000). Thus, if an entrepreneur scores high on founder identity centrality, being the founder of a business and being involved in activities targeted towards getting the business started are central and important aspects of who he is (Cardon et al., 2009, 2013). Previous research has demonstrated the central role of entrepreneurs' identities in transitioning from an employee to an entrepreneurial role (Hoang and Gimeno, 2010) and in determining the unique choices made in the early stages of entrepreneurial opportunity identification (Fauchart and Gruber, 2011).

Although changes in one's self-concept are possible (e.g., when encountering new life events such as entering parenthood), identity theory suggests relative stability in identities across time and situations (Serpe, 1987; Stryker and Burke, 2000). Research on self-identity has extensively shown that especially the most central self-views, that together constitute an individual's identity, are most resistant to change. For instance, people will resist persuasive messages that challenge closely held beliefs (Tormala and Petty, 2004), they will seek specific feedback that only confirms their closely held self-views (Pelham, 1991), will discount information that is inconsistent with their self-concept (Kwang and Swann, 2010), will gravitate towards interaction partners that see them as they see themselves (Robinson and Smith-Lovin, 1992) and will generally go out of their way to preserve their self-concept in order to experience a sense of coherence, stability and predictability of the self (Swann and Bosson, 2010). In an entrepreneurial setting, supporting evidence comes from Fauchart and Gruber (2011) who find that founders are inclined to take strategic decisions that match with their respective identities. Thus, people have a set of self-verifying strategies that help them in shaping an environment that supports their most central self-views, which makes their self-concept particularly robust to varying external influences and provides identity continuity over time.

Further evidence suggesting that an entrepreneur's identity centrality will remain relatively stable over time stems from Dobrev and Barnett (2005). They argue that, as a venture develops, the founder's identity – which initially was tightly intertwined with that of the organization – becomes decoupled from its context as the founder's charismatic authority has to make room for more bureaucracy and discipline. Rather than founders changing their identity in response to this evolution (e.g., by taking on a more

bureaucratic role in the organization), they are found to be more likely to change their context by leaving their current venture to go on to build a new one, thereby preserving their initial founder identity. Thus, in line with this relative stability of a founder's identity and insights from the broader identity literature, we do not expect any meaningful changes in founder identity centrality over time.

Hypothesis 1: Entrepreneurs' founding identity centrality will remain stable over time.

Entrepreneurs' Intense Positive Feelings for Founding over Time

The second component of entrepreneurial passion (intense positive feelings) is the one that captures the affective and emotional side, i.e., the exciting, enjoyable, motivating nature of experiencing passion. It is this positive feelings component that has provided mixed results in prior research on the temporal variability of entrepreneurial passion. In one study, conducted on 122 CEOs of relatively established, U.S. firms (on average 7.9 years old and 22 employees), intense positive feelings did not change significantly over time (Cardon et al., 2013). In another study, however, conducted on 54 German entrepreneurs in their pre-launch stage, 52 per cent of the variance in intense positive feelings was within-person variance, indicating significant temporal variability (Gielnik et al., 2015).

Whereas Cardon et al. (2013) focused on relatively established, mature firms, Gielnik et al. (2015) focused on entrepreneurs in the early stages of their venture's lifecycle – as do we. The different nature of the firms studied is theoretically important because of the pervasive uncertainty inherent to founding a venture (Venkataraman, 1997; Zahra and Dess, 2001). When starting out, founders face significant uncertainties regarding customer demand (e.g., customer preferences, willingness to pay), technology and competition (McKelvie et al., 2011; McMullen and Shepherd, 2006). While entrepreneurs – regardless of the stage they are in – often find themselves dealing with a highly dynamic and uncertain context, it is reasonable to argue that uncertainty is an especially prominent force in the early founding stages of a venture when entrepreneurs are still in the midst of trying to identify their market, business model and positioning (Frese and Gielnik, 2014; Gruber, 2002; McMullen and Shepherd, 2006). Hence, given this pervasive uncertainty, we agree with Gielnik et al. (2015) that variability in intense positive feelings for early-stage entrepreneurs is likely.

The direction of this variability (i.e., whether intense positive feelings will, on average, increase or decrease over time), however, will likely be determined by the specific circumstances entrepreneurs are faced with. In our sample (i.e., founding entrepreneurs in Belgium) and time period studied (April 2012 to January 2013), we expect that intense positive feelings will, on average, decline over time. Specifically, due to the enduring economic crisis, a government policy that was perceived as inhibiting towards entrepreneurship, political instability and ensuing uncertainty regarding economic policy (e.g., the new socialist Di Rupo government had been sworn in on December 2011 after a record-breaking 541 days of negotiation), entrepreneurs' confidence in the Belgian economy steadily decreased to its lowest level since the worldwide economic crisis of 2009

during our focal time period (e.g., Bosma et al., 2013; Nationale Bank van België, 2015). This increasing pessimism regarding the prospects for entrepreneurial survival and success may have been quite salient to the current sample during the time period of the study, and, thus, declines in entrepreneurs' positive feelings towards founding their ventures may have been particularly pronounced.

This argument is also supported by literature on the relation between economic hardship and individuals' emotional experiences. For instance, as a result of the Great Recession in 2008–09, Americans reported sharp declines in life evaluation, positive affect and overall subjective well-being – which captures individuals' fear of the future associated with evolving economic news (Deaton, 2012). Macroeconomic conditions have indeed repeatedly been shown to negatively affect individuals' positive emotions (e.g., Di Tella et al., 2003). This effect should be even more pronounced for founding entrepreneurs who, as a consequence of an unfavourable and uncertain economic climate, may see their future as an entrepreneur endangered. As such, they may feel threatened in their identity as a founding entrepreneur. Given that such identity threats have been shown to negatively affect positive emotions (Marcussen et al., 2004; Shepherd and Cardon, 2009; Thoits, 1991), we believe a decrease in entrepreneurs' intense positive feelings towards founding is likely.

Hypothesis 2: During the time period of this study, entrepreneurs' intense positive feelings will decrease.

Despite their shared context, how entrepreneurs experience, process and respond to uncertainty is likely to vary significantly across individuals and time (Choi et al., 2008; McMullen and Shepherd, 2006; Morris et al., 2010; Schindehutte et al., 2006). Given that their cognitive and behavioural responses are likely to also elicit affective changes (Delgado Garcia et al., 2015; Gielnik et al., 2015), examining how entrepreneurs cognitively appraise and behaviourally deal with contextual uncertainty should provide a fruitful lens to study and explain the rate of decrease in intense positive feelings towards founding. More specifically, in this study, we focus on venture idea change, change in role ambiguity, and feedback-seeking behaviour as antecedents of change in intense positive feelings.

The effect of venture idea change. In the early stages of their venture, entrepreneurs are confronted with significant uncertainty regarding the technological and market feasibility of their idea. In response to such uncertainty, entrepreneurs may undertake actions such as experimenting and repeatedly changing their idea as faulty preconceptions are ruled out and new insights emerge (Dimov, 2007; Nicholls-Nixon et al., 2000; Sarasvathy, 2001). This is consistent with research on uncertainty and personal control which has shown that when individuals are confronted with new work environments wherein they lack experience, they may engage in behavioural tactics that they believe will help them steadily regain their feelings of being in control (Ashford and Black, 1996). A tactic of adaptation may fit this purpose for entrepreneurs in their founding stages; indeed, sensing and flexibly adapting to uncertainty is typically considered a key entrepreneurial competency (Edelman and Yli-Renko, 2010; Haynie et al., 2010; McGrath and MacMillan, 2000; Rasmussen et al., 2011; Sarasvathy, 2001). The iterative process of testing and changing their ideas as they go explains why entrepreneurs often end up

implementing an idea that differs quite significantly from their initial one. To use the words of Peter Drucker (1985, p. 189): ‘When a new venture does succeed, more often than not it is in a market other than the one it was originally intended to serve, with products and services not quite those with which it had set out, bought in large part by customers it did not even think of when it started, and used for a host of purposes besides the ones for which the products were first designed’. Illustrative of this quote is the example of one of our sample companies which had set out to launch unmanned aerial vehicles targeting mining and dredging companies as their customers, only to find out that – while interested in the offer as such- these target customers had no interest whatsoever in paying for the company’s services. After several trials with alternative customer segments, finally the entrepreneurs found a customer segment interested in and willing to pay for their services (i.e., land surveyors).

Entrepreneurs may thus behaviourally deal with their uncertain context by flexibly adapting their ideas over time. This is not to say that all entrepreneurs will behave in the same way – some may, in fact, feel fear and be paralysed by the uncertainty they experience (Cacciotti and Hayton, 2015). However, we argue that for those who do, the behavioural response of changing one’s venture ideas will have a positive effect on the rate of change in entrepreneurs’ intense positive feelings for founding. In the entrepreneurship literature, this idea is consistent with the theory of effectuation whereby entrepreneurs effectively reconstruct their own environment and actively shape the future of their venture by changing and further refining their ideas based on information received and partnerships formed along the way (Sarasvathy, 2001). Regardless of whether or not such iterative adaptation and business model change results in superior performance – which it often does (Andries and Debackere, 2007; Sommer et al., 2009) – it will more rapidly increase entrepreneurs’ understanding of what works and what does not work through trial-and-error learning (Nicholls-Nixon et al., 2000; Sommer et al., 2009). Moreover, as entrepreneurs make more changes, they build more and more confidence as the envisioned idea becomes more concrete and believable (Eisenhardt and Tabrizi, 1995; Sarasvathy, 2001).

Further support for a beneficial effect of entrepreneurs making more changes to their venture ideas can be found in the psychology literature. While especially strong when positive outcomes are attained, even in the absence of immediately observable results, the mere act of taking action may give individuals an illusion of control (Langer, 1975). Even in highly uncertain situations, people who behave as if the situation is determined by skill will experience a greater sense of control by taking action and will build confidence. Hence, responding through action on its own (i.e., making changes to venture ideas, without those necessarily resulting in actual business (model) improvements) can be an effective strategy to increasingly grow feelings of mastery and control (Greenberger and Strasser, 1986). There is a vast literature demonstrating that positive illusions, such as illusion of control, substantially contribute to mental health, positive moods and happiness (Taylor and Brown, 1988). This proposition is further corroborated with insights gathered from positive psychology research showing that actions focused on gaining control over a stressful work environment by making this environment more manageable lead to more rapidly increasing levels of vigor, dedication and energy at work (Bakker et al., 2014).

By taking charge and iteratively testing and adapting their ideas, entrepreneurs may thus become aware of risks and opportunities in the far future, but they do no longer appraise these as disturbing threats. Instead, by experiencing how they can respond to uncertainty by adapting their ideas along the way, they develop an internal locus of control and perceive difficult situations as learning opportunities (Dweck and Leggett, 1988). In such cases, entrepreneurs are less likely to feel helpless, but will increasingly develop a sense of feeling that they can master their situation and can initiate a constructive path of action to create opportunities for growth (Dweck and Leggett, 1988). By mastery and learning in their role as entrepreneur, they steadily build up resources that assure progress and purpose, which should positively affect their change in intense positive feelings over time as an entrepreneur. The latter is consistent with recent research demonstrating that more entrepreneurial effort positively predicted change in entrepreneurial passion through new venture progress (Gielnik et al., 2015). Thus, given its positive effects on entrepreneurs' feelings of control and mastery, we expect that by making more changes to their venture ideas entrepreneurs weaken the decline in intense positive feelings over time.

Hypothesis 3: The more changes made by entrepreneurs in their venture ideas, the weaker the decrease in intense positive feelings.

The effect of change in role ambiguity. Given the uncertain context entrepreneurs operate in, role ambiguity represents a workplace stressor that is particularly relevant as it is probably the stressor that has most been associated with turbulence, uncertainty and change (e.g., Moore et al., 2004; Organ and Greene, 1974), including in new venture environments (Wincent and Orqvist, 2009). Role ambiguity refers to vague and unclear expectations, such that individuals are uncertain as to what is expected of them (Katz and Kahn, 1978). While stressors appear in many forms, such as time urgency, organizational politics, resource constraints (e.g., Podsakoff et al., 2007), we focus on role stress given the centrality of the concept of roles to entrepreneurial passion combined with the fact that it is Cardon et al. (2009)'s detailed approach to entrepreneurial roles that sets it apart from the more general concept of passion for work (Cardon et al., 2009; Ho and Pollack, 2014; Murnieks et al., 2014).

In its most general form, roles are defined as 'patterns of behavior required of all persons playing a part in a given functional relationship' (Katz and Kahn, 1978, p. 43). Role theory suggests that individuals, as part of a larger organizational system, continuously receive messages regarding role expectations from role senders, e.g., supervisors telling employees what they expect of them (Grant and Hofmann, 2011; Katz and Kahn, 1978). While most research on roles has focused on employees (e.g., Jackson and Schuler, 1985; Tubre and Collins, 2000), role theory also applies to entrepreneurs. Similar to employees, entrepreneurs take part in an organizational context where they face divergent demands or expectations from multiple stakeholders (e.g., customers, suppliers, media, investors and employees). However, these expectations are not always clear, which is when role ambiguity may manifest itself. For instance, entrepreneurs may doubt whether or not they have divided their time properly (e.g., across the sales, marketing, finance and logistics tasks they are faced with). They may have concerns about what the expectations of their co-founders or investors are (if they even know what those

expectations are) and may feel at unease with the lack of rules or clear guidelines about what to do as an entrepreneur. Finally, they face the continuous challenge of having to determine their own plans and objectives. Hence, even though the role of an entrepreneur is not the same nor is it as predefined as the role of an employee, just like employees, entrepreneurs may struggle to fulfil the demands imposed on them by their growing venture and their stakeholders.

Not knowing what is expected of them, as captured by role ambiguity, thus seems particularly relevant for entrepreneurs in the founding stages of their ventures. As entrepreneurs move from a mere idea to founding a profitable venture, not only are their venture ideas likely to change, their roles will also expand rapidly as they intrude predefined systems and structures for value creation. Entrepreneurs must make increasingly difficult decisions about how much time and energy they should dedicate to the different roles they are performing (e.g., figurehead, leader, liaison, spokesperson, negotiator, fundraiser), depending on divergent expectations from a growing scope of stakeholders. This is the very essence of being an entrepreneur; they create their own roles as their new ventures emerge and take shape, which inevitably leads to questions what is exactly expected of them in the various roles they are confronted with. Thus, as startups age and grow, external expectations and a lack of clear planned goals and objectives put increasing pressure on entrepreneurs (Dobrev and Barnett, 2005).

We posit that in the founding stages of a venture increasing role ambiguity experienced by the entrepreneur will have a negative effect on the change in intense positive feelings. Apart from a potential negative relationship between role ambiguity and intense positive feelings, we argue that especially change in role ambiguity will uniquely influence the rate of change in intense positive feelings. Prospect theory can help understand the unique nature and effect of change in role ambiguity. In prospect theory, the subjective value individuals attach to a particular outcome is influenced more by the change in that outcome (i.e., relative to a reference point) than by its absolute magnitude (Kahneman and Tversky, 1979). Hence, how individuals subjectively experience unpleasant circumstances, such as pain or discomfort, depends not on the absolute level of discomfort, but rather on the difference between the absolute level and a reference point (e.g., Kahneman et al., 1993; Varey and Kahneman, 1992). This phenomenon has also been demonstrated to apply to changes in work attitudes (Chen et al., 2011). By extension, *change* in role ambiguity is particularly likely to influence the rate of change in entrepreneurs' intense positive feelings, since increases or decreases in such subjective experiences at work are likely more salient to individual entrepreneurs. This is because different entrepreneurs may assign different subjective meanings to the same absolute level of role ambiguity at a given point in time, depending on how it has changed compared to its initial status.

We specifically expect a negative effect of change in role ambiguity because, among work stressors, role ambiguity is most likely to be viewed as a pure hindrance, with little challenge component (Gilboa et al., 2008; LePine et al., 2005). Thus, in relation to positive feelings, we believe growing role ambiguity to be particularly harmful, as it increasingly hinders individuals' ability to attain personal and professional goals at work (LePine et al., 2005). As individuals are more and more unable to achieve valued outcomes in their work role, they are likely to experience lower morale, as indicated for

instance, by reduced positive feelings at work (e.g., Chang et al., 2009; Harrison et al., 2006). This negative effect of increasing role ambiguity on the change in individuals' positive emotions would also be consistent with prior research that has indicated that increasing ambiguity is associated with rising physical and psychological demands and wasted energy expenditures, which in turn leads to an individuals' resources being depleted more rapidly and their energy levels being drained at a faster rate (Bakker et al., 2004; Stamper and Johlke, 2003). Conversely, the higher the decrease in role ambiguity, the better individuals should be able to achieve valued work outcomes and the less their resources and energy are being exhausted, hence the weaker their decline in morale should be.

Given that the main activities and personal goals at work for founding entrepreneurs are so closely tied to their founding identity (i.e., trying to convince others, establishing a new company, nurturing a new business), spill-over effects can be expected from experiencing change in positive feelings at work to their feelings towards their role as a founder. When people anticipate their future selves, as in the case of aspiring entrepreneurs, they are famously overoptimistic in predicting their future affective state (Wilson and Gilbert, 2005). When predicting how a desired experience will impact them emotionally, people typically overemphasize the positive aspects of the situation, leading to misconstrual of future events. As predicted by self-discrepancy theory (Higgins, 1987), the discrepancy between the anticipated idealized self-image of entrepreneurial life and the actual self-state (i.e., the realistic experience of increasing role ambiguity) should lead to dejection-related emotions around the self (e.g., disappointment, dissatisfaction, sadness). Thus, the evolution of entrepreneurs' positive feelings for the founding role will likely suffer more with increasing role ambiguity over time. Conversely, decreasing role ambiguity should weaken the decrease in intense positive feelings. Experiencing a decrease in role ambiguity should be more consistent with the general optimistic forecast that nascent entrepreneurs make about the success of their venture (Cassar, 2010). Observing that their initial predictions are more accurate may strengthen founding entrepreneurs in their conviction that the role of entrepreneur will fit them and will thus confirm them in their identity as a founding entrepreneur, thereby dampening the decrease in intense positive feelings. Taken together, we hypothesize:

Hypothesis 4: The higher the increase in role ambiguity, the stronger the decrease in intense positive feelings.

Feedback-seeking behaviour as a moderator of the effect of change in role ambiguity. Feedback-seeking behaviour is traditionally defined as the proactive search for evaluative information in the work environment (Ashford and Cummings, 1983). Through this behaviour individuals receive feedback about their functioning and about the correctness and adequacy of their behaviours for attaining personal goals (Ashford and Cummings, 1985). Feedback-seeking behaviour is a self-regulation strategy, used by employees in all industries and at all company levels, ranging from residents in health care (Teunissen et al., 2009) to CEOs in multinationals (Gupta et al., 1999). Creating a feedback-rich work environment has repeatedly been suggested as one of the preferential

strategies to weaken the negative effects of role ambiguity on well-being and satisfaction (Eatough et al., 2011; Whitaker et al., 2007). Indeed, several studies have shown that in the face of increasing role stressors, job feedback provided by colleagues or supervisors acts as a buffer to dampen the negative effects of increasing job demands on experienced vigor and intense, positive work-related feelings (for an overview, see Bakker, 2011).

However, different from employees, entrepreneurs face a unique employment situation wherein they lack a structured work environment with supervisors to provide them with feedback. Often, the only way to obtain feedback is to go out and get it themselves from others such as fellow entrepreneurs, investors, advisors and industry experts. For instance, entrepreneurs may look for feedback amongst a group of trusted peers, e.g., other novice entrepreneurs, who are in the same stage as they are, to see what they are doing, to compare themselves and to ask for their opinion about how well they think they are doing. They may also turn to experienced entrepreneurs to see if they can learn something from their failures and successes or they can reach out to industry experts or business coaches to get advice on how they are doing.

Here, in line with recent models of proactive self-regulation (e.g., Grant and Ashford, 2008), we argue that the negative effects of increasing role ambiguity on the decrease in intense positive feelings will be weaker for entrepreneurs who frequently seek feedback from external sources compared to their counterparts who seek feedback less frequently. The rationale for this effect is as follows. First, acquiring feedback from others plays an intrinsic motivational role as it fosters entrepreneurs' sense of mastery and learning, puts them in touch with valuable actors that provide social support and provides them with a sense of control and self-determination. As such, seeking feedback fulfils entrepreneurs' basic human needs (Deci and Ryan, 1985), such as their need for autonomy. This increased sense of control and self-determination should buffer the potential negative effects increasing role ambiguity has on these basic needs. Second, seeking feedback plays an extrinsic motivational role because it is instrumental in achieving work goals (Anseel et al., 2015). Creating a resourceful work environment (e.g., by joining supportive colleague-entrepreneurial networks and by seeking performance feedback) fosters the motivation to dedicate one's efforts to the work task. In such environments, it is more likely that the task will be completed successfully and the goal will be attained. This in turn is likely to lead to a sense of fulfilment and to entrepreneurs enjoying their work more intensely. Thus, by building connections and supporting goal focus, feedback-seeking behaviour may downplay the feelings of frustration that arise from increasing role ambiguity.

Whether through its intrinsic or extrinsic motivational role, entrepreneurs' feedback-seeking behaviour is hence likely associated with positive outcomes (Bakker, 2011). Specifically, we argue that through its motivational role, entrepreneurs' feedback-seeking behaviour can be expected to act as a buffer against the negative impact of increasing role ambiguity on the decrease in entrepreneurs' intense positive feelings.^[2]

Hypothesis 5: Entrepreneurial feedback-seeking behaviour will weaken the negative effect of higher increases in role ambiguity on the rate of decrease in intense positive feelings.

METHODS

Sample and Procedure

We collected our data through a Belgian network for entrepreneurs who are in the founding stages of their venture. The goal of this network is to help budding entrepreneurs who have the ambition to start their own venture in a maximum of three years' time. To this end, the network puts them in touch with other aspiring entrepreneurs, provides coaching by seasoned entrepreneurs and organizes workshops on early founding dilemmas such as how to raise financing. While defining the starting point of any entrepreneurial journey is a difficult endeavour, most research efforts have agreed on the importance of entrepreneurial effort or behaviour (rather than intentions only) to study and sample entrepreneurs in their earliest stages of venture creation (Davidsson and Gordon, 2012; Davidsson and Honig, 2003; McMullen and Dimov, 2013). By joining our network of interest, our sampled entrepreneurs have engaged in at least two behavioural activities typically used to identify nascent entrepreneurs: Taking workshops to help get one's business started and joining an organization that offers advice and support to start-ups (Davidsson and Steffens, 2011; Gartner et al., 2004). Both reflect the entrepreneur's effort to elicit support from others to help them get started, referred to as the initiation stage in the entrepreneurial journey (McMullen and Dimov, 2013).

Data were collected in three waves covering a period of ten months. Given all entrepreneurs are in the early founding stages of their venture, the ten-month period covered by our data collection captures one of the most crucial and likely turbulent stages in the venture's lifecycle. In the first wave, T1, we sent out e-mails to all aspiring entrepreneurs in the network inviting them to participate in an online survey. At this time, entrepreneurs were asked to complete survey items on demographic variables, passion, and role ambiguity. The use of response-enhancing strategies such as personalization, advanced notice and network sponsorship (Anseel et al., 2010) yielded a relatively high response rate; of the 511 entrepreneurs invited at T1, 274 responded (response rate: 53.6 per cent). Five months later, T2 (i.e., September 2012), a new survey was sent out to the 274 budding entrepreneurs who participated in the first wave. This resulted in 169 entrepreneurs who provided data on passion, venture idea change, role ambiguity, and feedback-seeking behaviour (response rate: 61.7 per cent). In the third wave, again five months later (T3), entrepreneurs were asked to provide data on their passion. Out of the 169 remaining entrepreneurs from the second wave, we received 114 responses in wave three (response rate: 67.5 per cent). Based on the total number of entrepreneurs initially targeted, this corresponds with a response rate of 22.3 per cent. Due to incomplete data, we had to drop two observations resulting in a final sample size of 112.

In our final sample, the entrepreneurs were on average 33 years old, male (83 per cent) and had a Master's degree and nine years of previous work experience at T1. Entrepreneurs were active in various industries, such as retail (e.g., selling ecological products), wholesale (e.g., selling oils, pharmaceutical products), manufacturing (e.g., production of chocolate pralines, electronic components or packaging machines), computer programming and computer consultancy activities and design activities (e.g., jewellery, baby clothing).

Dependent Variable

Entrepreneurial passion (T1, T2, T3) was measured using the scale from Cardon et al. (2013). As in Cardon et al. (2013), intense positive feelings for founding were measured using three items and identity centrality for founding was measured using one item. An example item of intense positive feelings for founding is 'Establishing a new company excites me'. The item for identity centrality was 'Being the founder of a business is an important part of who I am'. Items were scored using a seven-point Likert scale (1 = strongly disagree; 7 = strongly agree). Cronbach's α for the items measuring intense positive feelings was .81 (for T1 items), .78 (for T2 items), and .78 (for T3 items). To quantify intense positive feelings, we used the average indicator score.

Independent Variables

Change in Venture Idea (T2). We used the scale for venture idea change from the Comprehensive Australian Study of Entrepreneurial Emergence (CAUSEE) (Australian Centre for Entrepreneurship Research, 2012). Specifically, we asked entrepreneurs to indicate how many changes they had made over the past three months in terms of the products or services they sell or intend to sell, what customers they sell or intend to sell to, their method of promoting or selling and their method of producing or sourcing (on a scale from zero to five or more changes).

Change in Role ambiguity (T1, T2). We measured role ambiguity with the scale of Rizzo et al. (1970). Items were scored using a seven-point Likert scale (1 = strongly disagree; 7 = strongly agree). The items of Rizzo et al. (1970) were originally developed for a sample of employees. Of the original six-item scale, we excluded one item ('I feel certain about how much authority I have') because this item is much less applicable for entrepreneurs in the founding stage than for employees who are positioned in a hierarchical structure. We slightly adapted the original items to fit better with the context of this study. The items of the resulting scale are presented in the Appendix. Cronbach's α was .81 (for T1 items) and .85 (for T2 items). After averaging the items, we subtracted the T1 from the T2 score as we are interested in the effect of change in role ambiguity. Note that our model includes both this change variable and role ambiguity measured at T1 as both are needed to lead to adequate statistical inference regarding the effect of change in role ambiguity (e.g., Kaplan, 2000).

Feedback-seeking behaviour (T2). We measured feedback-seeking behaviour based on the scales of Ashford (1986) and De Stobbeleir et al. (2011). We used three items to measure feedback inquiry and five items to measure feedback monitoring. An example item of feedback inquiry is 'How often did you ask others for their opinion about your work as an entrepreneur?'. An example item of feedback monitoring is 'How often did you compare yourself with other entrepreneurs?'. Items were scored using a five-point Likert scale (1 = never; 5 = very frequently). To calculate a score for feedback-seeking behaviour, we first calculated the mean scores for feedback inquiry and feedback monitoring. In line with the majority of studies in the feedback-seeking domain we used an overall measure of feedback-seeking behaviour (Anseel et al., 2015) and took the unweighted average of these two mean scores. Cronbach's α for the overall scale, based on eight items, was .81.

Longitudinal Invariance

To check the longitudinal invariance of our multi-item scales we relied on a series of pairwise statistical comparisons of increasingly restrictive measurement models (Steenkamp and Baumgartner, 1998). The series contains three (nested) measurement models including the least restrictive configurable invariance model (a one-factor measurement model with no measurement parameters fixed across three time points), the metric invariance model (loadings of the item onto the construct fixed across three time points), and the most restrictive scalar invariance model (loadings of the item onto the construct as well as the scale origin fixed across three time points). A statistical comparison favouring the scalar invariance model across time over the other two invariance models offers an adequate psychometric basis to assess: (1) whether computed mean construct scores across time points adequately reflect actual differences and (2) structural relations between constructs are equally strong across time points. Using commonly applied statistical cut-off points for key fit measures (i.e., CFI, RMSEA, SRMR; see Chen, 2007), the scalar invariance model was found to be adequate for all individual multi-item constructs we measured over time (i.e., role ambiguity and intense positive feelings). This indicates that our data allows for across time comparisons of all multi-item constructs.

Evaluation of Non-Random Sampling

A potential concern with the use of longitudinal research designs is the possibility of sample selection bias due to attrition. For instance, specific groups of entrepreneurs could have dropped out of our sample over time, resulting in a biased sample and thereby violating a key assumption in longitudinal research. To assess the possibility of non-random sampling, we first compared key descriptives of the remaining entrepreneurs in each time wave. Comparing age, gender, working experience and education (at T1), no differences could be detected, indicating a relative stability in the profile of our entrepreneurs across the three different waves. Second, we adopted the approach described by Goodman and Blum (1996). First, we ran multivariate logistic regression models including all variables of interest measured at T1 (or T2) and two additional controls for the entrepreneur's age and gender. The dependent variable took the value of one if the entrepreneur concerned disappeared from the sample in the next wave and zero otherwise. There were no statistically significant coefficients in the models predicting dropout at time 2 and time 3 (compared to time 1 and time 2, respectively). Hence, we can be reasonably confident that attrition does not bias our results.

RESULTS

Table I presents the descriptive statistics and bivariate correlations for all the study variables. The table demonstrates that even though T1, T2 and T3 levels of entrepreneurs' intense positive feelings towards founding are significantly and positively related to one another (r ranging from 0.51 to 0.63, $p < 0.01$), their observed means decrease over time. The observed means for founding identity centrality remain relatively stable over time, which would be in line with our expectations. Interestingly, the mean role

Table I. Means, standard deviations and bivariate correlations

Variable	M	SD	1	2	3	4	5	6	7	8	9
1. Role ambiguity T1	1.85	0.88	-								
2. Role ambiguity T2	2.21	1.15	0.57**	-							
3. Venture idea change	2.23	1.04	-0.00	-0.11	-						
4. Feedback-seeking behavior T2	3.42	0.69	0.00	0.00	0.44**	-					
5. Intense positive feelings T1	6.13	0.84	-0.44**	-0.17	-0.01	0.15	-				
6. Intense positive feelings T2	6.00	0.89	-0.45**	-0.24**	0.12	0.22**	0.54**	-			
7. Intense positive feelings T3	5.93	0.83	-0.45**	-0.14	0.14	0.14	0.51**	0.63**	-		
8. Identity centrality T1	5.15	1.37	-0.29**	-0.14	0.11	0.16	0.39**	0.39**	0.35**	-	
9. Identity centrality T2	5.04	1.59	-0.24*	-0.20*	0.28*	0.32**	0.20*	0.56**	0.43**	0.47**	-
10. Identity centrality T3	5.18	1.47	-0.32**	-0.23*	0.19	0.18	0.30**	0.50**	0.49**	0.67**	0.66**

*Notes: N = 112. * p < 0.05 ** p < 0.01.

Table II. Results of the latent growth model for the change over time (i.e., slope) in intense positive feelings^a

<i>Predictor variable</i>	<i>Model 1</i>	<i>Model 2</i>
Venture idea change (T2)	0.08*	0.08*
Role ambiguity (RA) (T1)	0.01	0.02
Change in role ambiguity (T1,T2)	0.04	0.08
Feedback-seeking behavior (FSB) (T2)	-0.07	-0.08
Change in RA \times FSB		0.14*
R^2	0.11	0.24

^aGiven an overall mean decrease of intense positive feelings over time, positive (negative) signs on coefficients should be interpreted as leading to a weaker (stronger) decrease in intense positive feelings.

* $p < 0.05$.

ambiguity rose over time (T1, $M = 1.85$, $SD = 0.88$; T2, $M = 2.21$, $SD = 1.15$) suggesting that the founding entrepreneurs experienced increasing role ambiguity.

Hypotheses were tested using LGM. With regard to Hypothesis 1, we were interested in whether identity centrality changed over time. To test this hypothesis, we examined the mean of the slope factor in a univariate LGM. The model depicting change in identity centrality over time showed adequate fit (i.e., $\chi^2 = 1.19$, $df = 1$, $p = 0.28$, CFI = 1.00, TLI = 1.00, RMSEA = 0.04, SRMR = 0.02). The mean slope for identity centrality was not significant ($\mu = .03$; $p = 0.58$), indicating that there was no significant change in entrepreneurs' founding identity centrality over time. This result thus provides support for Hypothesis 1.

To test Hypotheses 2 to 5, related to change in intense positive feelings, we first needed to assess whether there was significant variation in intense positive feelings over time. The LGM model depicting change in intense feelings over time showed excellent fit (i.e., $\chi^2 = 0.15$, $df = 1$, $p = 0.70$, CFI = 1.00, TLI = 1.00, RMSEA = 0.00, SRMR = 0.01). The mean slope for intense positive feelings was negative and significant ($\mu = -0.10$; $p = 0.01$), thereby supporting Hypothesis 2.

To test Hypotheses 3 to 5, we then first ran a main effects model (Table II, Model 1) and then added the interaction effect (Table II, Model 2).^[3] A diagram of this LGM model is presented in Figure 2. Based on an average decrease in intense positive feelings, significant positive predictors imply that these variables weakened the decrease in intense positive feelings, while significant negative predictors imply that they strengthened the decrease in intense positive feelings. As can be seen in Table II (Model 1), venture idea change was positively and significantly related to the rate of change in intense positive feelings ($B = 0.08$, $p < 0.05$). The more changes entrepreneurs had made to their venture idea, the more they were able to temper the decrease in intense positive feelings. Thus, we found support for Hypothesis 3.^[4] Next, change in role ambiguity did not have a significant effect on the rate of change in intense positive feelings ($B = 0.04$, $p > 0.05$). Thus, we found no support for Hypothesis 4.

Hypothesis 5 predicted that entrepreneurial feedback-seeking behaviour would temper the negative effect of higher increases in role ambiguity on the rate of change in

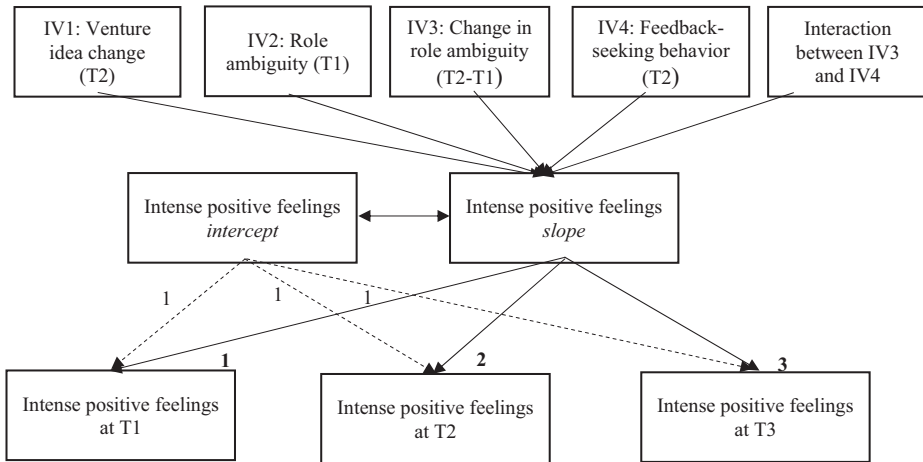


Figure 2. Latent growth model diagram

^a IV = Independent variable; single-headed arrows refer to assumed causal effects; a double-headed arrow refers to a covariance or correlation.

intense positive feelings. To test this interaction effect, we added the product term of change in role ambiguity and feedback seeking behaviour (after centring the scores on both variables) to our models. This interaction term was statistically significant (Table II, Model 2: $B = 0.14, p < 0.05$).^[5] To see whether this was consistent with Hypothesis 5, we plotted the interaction in Figure 3. More negative values on the Y-axis indicate a *stronger decrease* in intense positive feelings over time. A high change in role ambiguity denotes values above the mean change score of 0.36. With change in role ambiguity being calculated as the difference between role ambiguity at T2 and T1, this represents those entrepreneurs who experienced relatively high increases in role ambiguity. A low change in role ambiguity implies values below the mean of 0.36; this entails both relatively small increases (i.e., those smaller than 0.36) and decreases in role ambiguity (15 entrepreneurs). Moving from left to right on the X-axis hence implies higher *increases* in role ambiguity. Figure 3 shows that as entrepreneurs experienced higher increases in role ambiguity, their intense positive feelings for founding decreased more strongly when they did not seek feedback frequently (i.e., low FSB in Figure 3). Conversely, higher increases in role ambiguity were associated with weaker decreases in intense positive feelings when entrepreneurs did seek feedback frequently (i.e., high FSB). As such, Hypothesis 5 is supported in that more feedback seeking helps to buffer the negative effects of higher increases in role ambiguity.

Post-hoc Analysis

Given that we focus on predictors of the rate of change in intense positive feelings, it may be informative to explore whether the effects of our predictors are similar for a model that more directly predicts direction of change. As explained, doing so is not possible in a traditional LGM. Therefore, we instead ran a complementary logistic

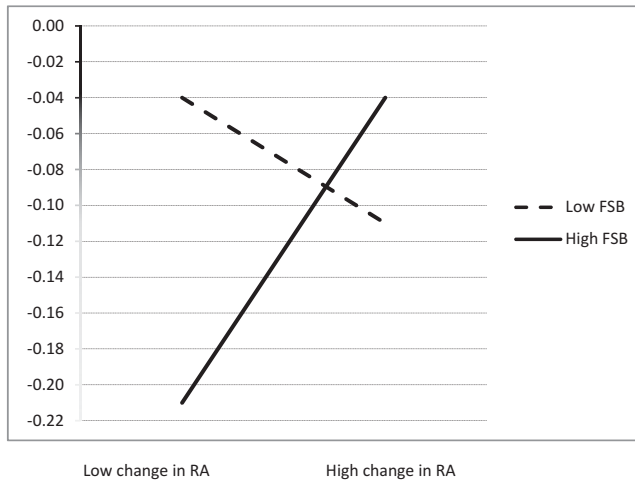


Figure 3. Interaction between change in role ambiguity (RA; T1,T2) and feedback-seeking behavior (FSB; T2) on the intense positive feelings slope^{a,b}

^a More negative values on the Y-axis indicate a stronger decrease in intense positive feelings.

^b High change in role ambiguity = values above the mean change score of 0.36 (relatively high increases in role ambiguity). Low change in role ambiguity = values below the mean change score of 0.36 (both relatively small increases (i.e., those smaller than 0.36) and decreases in role ambiguity). High FSB = feedback-seeking behaviour values above the mean score of 3.42; low FSB = feedback-seeking behaviour values below the mean score of 3.42.

regression model to predict the probability of intense positive feelings decreasing over time (versus increasing or no change). To this end we created a dummy variable taking the value of one in case the particular entrepreneur had a negative slope (i.e., decreasing positive feelings) and zero otherwise. Significant positive predictors in this model shape the conditions in which a pattern of decreased intense positive feelings over time is most likely. Table III shows consistent results with our main analyses; the more changes entrepreneurs made to their venture idea the lower the probability of intense positive feelings decreasing over time ($B = -0.75$, $p < 0.05$; Model 1). Moreover, whereas change in

Table III. Results of the logistic regression model modelling the probability of decreasing intense positive feelings over time (T1, T2, T3)^a

Predictor variable	Model 1	Model 2
Venture idea change (T2)	-0.75*	-1.14*
Role ambiguity (RA) (T1)	0.20	0.02
Change in role ambiguity (T1,T2)	-0.15	-0.95*
Feedback-seeking behavior (FSB) (T2)	0.83*	1.38*
Change in RA x FSB		-2.93*
McFadden Pseudo R^2	0.77	0.95

^aGiven an overall mean decrease of intense positive feelings over time, positive (negative) signs on coefficients should be interpreted as leading to a higher (lower) probability of intense positive feelings decreasing over time.

* $p < 0.05$.

role ambiguity did not have a statistically significant effect, the interaction effect shows that feedback-seeking behaviour served as a buffer against the negative effect of higher increases in role ambiguity. Thus, these exploratory analyses using a different, albeit simplified analytical model replicated our conclusions, boding well for the robustness of our findings.

DISCUSSION

In this study we considered how and why entrepreneurial passion for founding changes over time. In a longitudinal study of 112 budding entrepreneurs, we found that whereas entrepreneurs' founding identity centrality did not change significantly over the ten-month period covered by our study, their intense positive feelings for founding decreased significantly. Moreover, this decrease in intense positive feelings was weaker when entrepreneurs had made more changes to their venture ideas. Our results also show that entrepreneurs who frequently sought feedback suffered less from decreased intense positive feelings in response to increased role ambiguity as compared to their counterparts seeking less feedback. As such, our study has several theoretical implications.

Our finding that founding identity centrality remained stable over time, whereas intense positive feelings for founding did not, adds to the literature on entrepreneurial passion. Consistent with its conceptualization and operationalization as a superordinate formative construct, we show that in order to develop a more complete understanding of the evolution of entrepreneurial passion overall, one needs to consider both dimensions separately (i.e., intense positive feelings and identity centrality) because each has a different trajectory over time. The fact that entrepreneurs seemed to enjoy the activities associated with founding somewhat less over the course of the ten months of our study while founding remained a stable aspect of their identity would imply that the entrepreneur's overall passion for founding decreased over time – albeit to a lesser extent than the decrease in intense positive feelings alone. Different temporal patterns for the components of entrepreneurial passion are crucial to understand its impact in the entrepreneurial process. As the components of a formative construct have different antecedents and trajectories, they also have different outcomes. Thus, our findings suggest that to understand the potential impact of entrepreneurial passion on venture success in the founding process, one needs to examine both components separately, and preferably over time. Excluding either one might lead to under- (in the case of ignoring intense positive feelings) or overestimating (in the case of ignoring identity centrality) the temporal variability in entrepreneurial passion, thereby potentially distorting the results of such studies.

Further, by examining the effects of venture idea change, change in role ambiguity and feedback-seeking behaviour this study provides theoretical insight in antecedents of change in entrepreneurs' intense positive feelings over time. As such, this study addresses calls put forward by recent passion studies to broaden our understanding of determinants of entrepreneurial passion (e.g., Gielnik et al., 2015; Murnieks et al., 2014). In particular, our results suggest that the way founding entrepreneurs cognitively appraise and behaviourally deal with the uncertain context in which they operate matters in at least

three different ways. First, while many scholars have pointed to the capability to sense and adapt to uncertain circumstances as a key entrepreneurial competence, this study is among the first to show that changing one's venture idea – a potential response to contextual uncertainty – is indeed beneficial to founding entrepreneurs. Specifically, the extent to which entrepreneurs changed their venture ideas during their founding stages was associated with a weaker decrease in intense positive feelings. This, in turn, might help these entrepreneurs to persist (Cardon and Kirk, 2015; Cardon et al., 2013).

Second, at first sight our lack of a significant main effect of change in role ambiguity seems to suggest that it does not play a major role in determining entrepreneurial passion. While increasing role ambiguity did not directly affect the change in entrepreneurs' positive feelings towards founding, our results indicate that the (lack of a) main effect was qualified and explained by a significant cross-over interaction effect with feedback-seeking behaviour. When entrepreneurs were confronted with relatively high increases in role ambiguity their positive feelings decreased more rapidly in case they did not seek feedback frequently. In contrast, by extensively seeking external feedback, entrepreneurs were able to offset the detrimental effects of increasing role ambiguity. In combination with the effect of venture idea change, it points to the important effect of actions entrepreneurs take in response to uncertainty on the evolution of their entrepreneurial passion over time. This supports recent claims by Frese and Gielnik (2014) suggesting that individual action can also affect passion rather than the reverse path, which scholars have traditionally adhered to. It also provides a first important step towards integration of proactivity research from psychology (Grant and Ashford, 2008) into the entrepreneurship domain. Similar to employees in a more traditional work environment, entrepreneurs will not let their environment govern their professional lives. Rather, they will try to anticipate, change, organize, structure and shape their working conditions to positively impact themselves and their environment. Thus, rather than – as prior research has done – considering an entrepreneur's passion for founding as a given and as something entrepreneurs have to make the best out of, our findings point to a path with more opportunities for the entrepreneur to take initiative.

Moreover, these results should be informative for the broader literature on feedback-seeking behaviour. Several studies hypothesized that feedback-seeking behaviour should lead to a decrease in role ambiguity as it should be instrumental in clarifying role expectations (e.g., Callister et al., 1999; Morrison, 2002). However, a meta-analysis of feedback-seeking studies showed a non-significant relationship between seeking feedback and role ambiguity (Anseel et al., 2015). Similar to this meta-analysis, the present study found no significant relationship. However, on the basis of our theorizing, we hypothesized and found a significant interaction effect between increases in role ambiguity and feedback-seeking behaviour on the rate of change in intense positive feelings. This is the first study that proposed a moderated relationship and thus, could clarify inconsistencies between theorizing and empirical data in feedback-seeking studies. The cross-over interaction effect observed in our study suggests that frequently seeking feedback does not directly impact change in role ambiguity, but buffers against its potential negative effects.

Finally, the findings related to feedback-seeking behaviour also add to the entrepreneurship literature. Although entrepreneurship is conceived as a feedback-driven process (Bhave, 1994), limited research has looked into the role of feedback in the

entrepreneurial process. The current findings hence add to this literature by showing that feedback-seeking behaviour is indeed a personal resource for entrepreneurs to help them maintain their passion over time.

Despite our contributions, our study has a number of limitations, which also provide opportunities for future research. First, we focused exclusively on entrepreneurs in the founding phase of their venture's lifecycle and used the different nature in firms studied compared to Cardon et al. (2013) as a basis for our theorizing. A more explicit test of our theoretical arguments could include an empirical study that compares the change in passion over time between samples of entrepreneurs of more mature and young ventures. Moreover, we recognize that there is an additional difference between our study and that of Cardon et al. (2013) and Gielnik et al. (2015) that is noteworthy. Specifically, whereas we measure the evolution of entrepreneurial passion for founding over the course of ten months, Cardon et al. (2013) does so over 18 months and Gielnik et al. (2015) over two months. Hence, an alternative explanation of why the Gielnik et al. (2015) study and ours find a substantial change in intense positive feelings over time, whereas Cardon et al. (2013) does not, might be the aspect of shorter versus longer time periods studied. We used a ten month-period as we wanted to capture a prolonged increase or decrease in intense positive feelings. In that sense, we believe our study to be closer in nature to the period used in Cardon et al. (2013) and thus see the key differentiator to be in the nature of the firms studied (i.e., nascent versus established firms) rather than the period studied. However, we do believe a future study comparing different time periods would be a valuable addition to the field to shed more light on this question. Also, while we deliberately focused on passion for founding, it would also be interesting to explore to what extent our findings would hold for the other two types of passion, i.e., inventing and developing. One could, for instance, argue that those two types of passion speak less centrally to the key activities of entrepreneurs in that phase and thus, less change is to be expected.

Second, one threat to the conclusions of our study is potential self-selection in our sample. Indeed, budding entrepreneurs who choose to join a network could be more inclined to seek feedback compared to those entrepreneurs who do not join such a network. To assess the generalizability of our sample, we compared key means (i.e., mean feedback-seeking behaviour) and correlations (e.g., feedback-seeking behaviour and role ambiguity) with previous published work and found much similarity (more details available from the authors upon request). Thus, while we cannot rule out the presence of potential selection bias, we believe the risk of it distorting our results should be fairly limited. Moreover, it is important to note that tracing entrepreneurs who are in the founding stages of their venture is extremely difficult as official records only reveal those entrepreneurs who have been officially incorporated. Indeed, this is exactly one of the main criticisms uttered against traditional entrepreneurship research as focusing on existing ventures implies selecting only successful entrepreneurs or ventures, i.e., those that have emerged (Davidsson and Honig, 2003). Additionally, collecting data from even very young ventures about their founding stages would introduce hindsight bias. This is unfortunate as there is a lot to be learned from those entrepreneurs who are still in the earliest phases of emergence, an essential part of the entrepreneurial process. To date, most research attempting to circumvent this shortcoming has done so by relying

on large-scale random sampling of the adult population (Davidsson and Gordon, 2012). However, these large-scale datasets such as the Panel Study of Entrepreneurial Dynamics offer only limited options to examine research questions such as the ones put forward in our study. Hence, networks of budding entrepreneurs offer one of the only available alternatives to track starting entrepreneurs longitudinally without using firm emergence as a sampling criterion.

Third, another concern could be that over time the respondents retained in our analyses may be the 'survivors' that have kept on going. This may, for instance, imply that the real decrease in intense positive feelings may in fact have been stronger than what we observe in our sample. However, the attrition analyses we ran showed that there were no significant differences in respondent profiles across time waves nor could we detect a specific and significant profile of those who disappeared from the sample (e.g., those with lower levels of passion).

Fourth, although our study valuably introduced the concept of proactive feedback-seeking behaviour to the entrepreneurship literature, we confined ourselves to a relatively basic conceptualization of feedback-seeking behaviour. Future research could explore other aspects of feedback-seeking behaviour, such as the type of feedback received and sought (e.g., outcome versus process feedback, or positive versus negative feedback), as well as the sources from whom entrepreneurs seek feedback and how that may affect its impact. One puzzling issue regarding the effects of feedback-seeking behaviour that was not anticipated, is the weaker decrease in intense positive feelings for those seeking less feedback as compared to those seeking frequent feedback under low change in role ambiguity. We do not have an obvious explanation for this pattern. A speculative contention would be that in these cases frequent feedback-seeking behaviour could be an indicator of an underlying individual characteristic of insecurity. An underlying pattern of insecurity could make these individuals more likely to seek feedback although there is no clear need. Future research would need to disentangle these processes in more detail. Additionally, future research should also examine other proactive strategies (e.g., relationship building, breaking rules, issue selling) or existing factors (e.g., social support) that may potentially buffer the negative effects of increasing role ambiguity.

Fifth, the current study focused on venture idea change, increasing role ambiguity and feedback-seeking as direct antecedents of the dynamics of entrepreneurial passion. Our focus on these particular antecedents was inspired by the fact they represent important ways in which founding entrepreneurs may cognitively appraise and behaviourally deal with the uncertain context they operate in. We, however, do not assess environmental uncertainty directly. By measuring this uncertainty directly future research could explore the potential direct relationships between contextual uncertainty and venture idea change, experienced role ambiguity and feedback-seeking behaviour. For instance, as we posit venture idea change as one way in which entrepreneurs *may* behaviourally deal with uncertainty, it would be interesting to examine whether and how individual differences promote or deter such behavioural actions during the founding stage. Moreover, given its important effect on how entrepreneurs feel towards founding, it would be worthwhile to also explore other antecedents of venture idea change. Indeed, individuals differ in their responses to new environments and their associated experience of loss of

control. In addition to differing responses, individuals are also likely to differ in their motivation to actively engage their new environments.

Our study also has important practical implications, both for entrepreneurs and their key stakeholders. It is important that entrepreneurs are aware that their passionate feelings towards getting started may actually decrease over time, but that they can take action to keep their fire burning. The present research underscores the proposed value of flexibility and feedback-seeking behaviour for startup entrepreneurs. In light of our results, entrepreneurs can be encouraged to tweak their ideas and to seek feedback, for example by developing their learning orientation (Anseel et al., 2015). Alternatively, networks for entrepreneurs can take initiatives such as organizing regular feedback sessions to answer to the feedback needs of startup entrepreneurs. Similarly, entrepreneurship education and government initiatives can focus on iteratively testing and changing new venture ideas and stimulating feedback and feedback-seeking behaviour in order to keep entrepreneurs' fire burning.

Conclusion

Previous research on entrepreneurial passion has spent relatively little attention on passion's antecedents and its evolution over time. In this study we combined both by examining the change in 112 founding entrepreneurs' passion for founding over the course of ten months. Specifically, we showed that whereas identity centrality remained stable over time, entrepreneurs' intense positive feelings for founding actually decreased over time. Moreover, we found that how entrepreneurs cognitively appraise and behaviourally deal with the uncertain context they operate in during those early venture creation stages matters for the evolution of their feelings towards founding. As such, our study points to the key role founding entrepreneurs play in keeping their own fire burning.

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APPENDIX: ITEMS OF ENTREPRENEURIAL ROLE AMBIGUITY MEASURE

1. I know what my responsibilities are as an entrepreneur.
2. I know what is expected of me as an entrepreneur.
3. It is clear what I have to do as an entrepreneur.
4. I know that I typically allocate the time I invest in my venture well.
5. I have clear plans and objectives as an entrepreneur.

NOTES

- [1] Unless noted otherwise, we will use the terms 'passion' and 'passion for founding' interchangeably.
- [2] We do not expect that entrepreneur's feedback-seeking behaviour will affect a change in role ambiguity directly. Although early studies in the feedback-seeking domain hypothesized that seeking feedback

would be instrumental in decreasing role ambiguity, recent meta-analytic evidence (Anseel et al., 2015) shows that role ambiguity and feedback-seeking behaviour are actually unrelated ($\rho = 0.00$). Instead, we hypothesize an interaction effect with feedback-seeking behaviour dampening the negative effects of increasing role ambiguity on the change in intense positive feelings.

- [3] All analyses were rerun controlling for the entrepreneur's gender, age, education, entrepreneurial experience (number of companies founded), working experience (in years) and whether the venture was founded alone or in team. However, none of these helped in predicting the rate of change in intense positive feelings over time. None of the p-values approached .05. Furthermore, our main results remained exactly the same when including these control variables, which bodes well for the robustness of our findings. As there was neither strong theory nor previous empirical research suggesting their inclusion, we excluded these controls from the main analyses reported in the paper – as is in line with recommendations from Bernerth and Aguinis (2016).
- [4] We note that the structural model for our main effects LGM model (Table II, Model 1) showed excellent fit; the χ^2 was not significant ($\chi^2 = 3.91$, $df = 5$, $p = 0.56$) and the fit indices were excellent (CFI = 1.00, TLI = 1.00, RMSEA = 0.00, SRMR = 0.03).
- [5] The structural model including the interaction effect showed excellent fit; the χ^2 was not significant ($\chi^2 = 4.29$, $df = 6$, $p = 0.64$) and the fit indices were excellent (CFI = 1.00, TLI = 1.00, RMSEA = 0.00, SRMR = 0.00).

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