

Fear and Entrepreneurship: A Review and Research Agenda*

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A systematic review of the entrepreneurship literature on fear published up to 2014 highlights several key characteristics. First, the predominant focus in research examining the emotion of fear in entrepreneurship is on the specific concept of fear of failure. However, this literature shows a lack of precision in the conceptualization and operationalization of this construct. The impact of the experience of fear on individual cognition and behaviour can be beneficial as well as detrimental. Despite this dualistic nature, to date, fear is examined as only a barrier to entrepreneurial behaviour. This review reveals a clear dichotomy in the literature, with significantly more focus on fear as a trait that distinguishes between people than as a temporary state that is commonly experienced by many people. Defining fear of failure as a context-specific phenomenon, this paper explains the importance of focusing on the temporary cognitive and emotional experience of fear and use conceptual observations as a platform to develop an agenda for future research.

Introduction

The entrepreneurial journey starts with jumping off a cliff and assembling an airplane on the way down. (Reid Hoffman, founder of LinkedIn)

Like base-jumpers, entrepreneurs take a plunge into uncertainty. This metaphor captures the leap of faith that surrounds the entrepreneurial process, and depicts the decision to jump as an act of courage. In base-jumping as well as in entrepreneurship, courage is not the absence of fear; rather, it is the ability to take action to achieve a worthy goal, in spite of the presence of fear (Kilmann *et al.* 2010). An emerging view is that entrepreneurship is an emotional journey (Baron 2008; Cardon *et al.* 2012; Morris *et al.* 2012; Schindehutte *et al.* 2006) and there are important ‘entrepreneurial emotions’ (Cardon *et al.* 2012, 3) that can positively relate to entrepreneurial behaviour

such as entrepreneurial passion, optimism and vigour (e.g. Cardon *et al.* 2005, 2009; Hahn *et al.* 2012). Research has also identified emotional elements that can work against entrepreneurial tasks and entrepreneurial efforts such as grief, doubt and fear (Foo 2011; Grichnik *et al.* 2010; Shepherd 2003; Shepherd *et al.* 2007, 2009, 2011; Welpe *et al.* 2012).

Consideration of the role of fear in entrepreneurship opens unexplored avenues for understanding entrepreneurial motivation. Fear reflects the appraisal of threats in the external environment that causes changes in brain and organ function, and that can be manifested in qualitatively different behavioural responses: approach the threat aggressively (fight), escape from the threat (flight) or be paralyzed in front of the threat (freeze) (Gray 1971; Lazarus 1991). The nature of fear and the diverse cognitive and behavioural mechanisms that it triggers suggests that it could be a friend as much as a foe, by causing greater striving towards desired goals (Martin and Marsh 2003). Some studies of the impact of fearful emotions on opportunity evaluation and entrepreneurial actions do not specify the object of the affective arousal of fear (e.g. Grichnik *et al.* 2010; Foo

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2011). In other cases, studies explicitly relate the fearful emotional reactions to the possibility of failure of opportunity or outcome (e.g. Arenius and Minniti 2005; Hessels *et al.* 2011; Koellinger *et al.* 2013; Mitchell and Shepherd 2010; Wagner 2007; Wennberg *et al.* 2013; Wood *et al.* 2014). Regardless of whether fear is treated in a general or specific sense, prior research has largely identified it as a psychological barrier to entrepreneurship (e.g. Arenius and Minniti 2005; Martins 2004; Sandhu *et al.* 2011; Shinnar *et al.* 2012), emphasizing only its inhibitory effects on entrepreneurial action. This restrictive perspective on the role of fear has led researchers to think that fear is not or should not be part of the entrepreneurial journey.

Nevertheless, the possibility that fear may also stimulate greater striving represents an intriguing paradox worthy of examination (Mitchell and Shepherd 2011). Fear can motivate increased engagement in a task as well as withdrawal from it (Atkinson 1957; Elliot 1997; Elliot and Church 1997). However, the quality of that engagement, the goals that are chosen and how they are pursued are influenced by the nature of the motivation (Atkinson 1957; Elliot 1997; Martin and Marsh 2003). Furthermore, the ways in which individuals respond to negative performance feedback and small setbacks are also influenced by the degree to which they are motivated by fear (e.g. Dweck and Leggett 1988; Martin and Marsh 2003). A more nuanced view of the effects of fear would reveal the different qualities of motivation and their potential outcomes for well-being and performance.

Unfortunately, fully understanding the role of fear remains difficult because of the diversity and ambiguity of definitions and components attributed to this construct within the entrepreneurship literature. This literature makes clear that we can examine affect in terms of both temporary states as well as enduring dispositions (e.g. Lazarus 1991; Weiss and Cropanzano 1996). The distinction between fear as temporary emotional state and as stable disposition has important implications for how the construct is conceived and studied in entrepreneurship. Studies that assume a motivational orientation describe fear as a cognitive process linking environmental cues with psychological and behavioural outcomes (e.g. Li 2011; Welpe *et al.* 2012). Studies that assume a personological orientation describe the tendency to experience fear, or fearful attitudes to an object, as a stable disposition that distinguishes one person from another (e.g. Arenius

and Minniti 2005; Hessels *et al.* 2011; Wagner and Stenberg 2004). Examining fear as a stable disposition vs. a temporary state reflects different research questions and might produce quite different inferences about the implications of fear for entrepreneurial actions and relevant outcomes. These issues highlight a need for greater clarity about the conceptual space and operationalization of this construct in entrepreneurship.

This paper makes several contributions. We review the literature on fear and entrepreneurship to understand the status of this construct within our field. We focus on the effects of fear as well as on the theoretical underpinnings adopted to define the nature of fear in entrepreneurship. A thorough examination of the existing entrepreneurship literature demonstrates that, among studies of fear in entrepreneurship, there is a pervasive tendency to focus on the fear of failure and its impact on the decision to start a business. However, avoidance of entrepreneurship as an occupational choice reflects a limited range of the potential behavioural and affective correlates of fear. We also acknowledge that inconsistency in the conceptualization and operationalization of fear of failure in entrepreneurship has affected the way we have theorized about the construct so far. Hence, we address the conceptual issues by bridging the personological and motivation approaches to fear of failure and discuss the features that make the entrepreneurship domain a unique achievement context. In so doing, we set the stage for framing the experience of fear of failure as a context-specific phenomenon. Our contribution to the literature is moving away from the simplistic categorizations of fear as either a discrete emotional state or a trait, and proposing a reconceptualization of fear of failure that is consistent with the process-oriented perspective of entrepreneurship (Dimov 2007). On the basis of these observations, we propose a research agenda.

Method

We conducted a systematic literature review following the process suggested by Tranfield *et al.* (2003), Denyer and Tranfield (2008) and Macpherson and Jones (2010) and applied in recent review articles (e.g. Lee 2009; Rashman *et al.* 2009; Wang and Chugh 2014). We started the systematic review process by tracing the conceptual boundaries of the relationship between fear and entrepreneurship (see Figure 1). We defined fear as a discrete negative

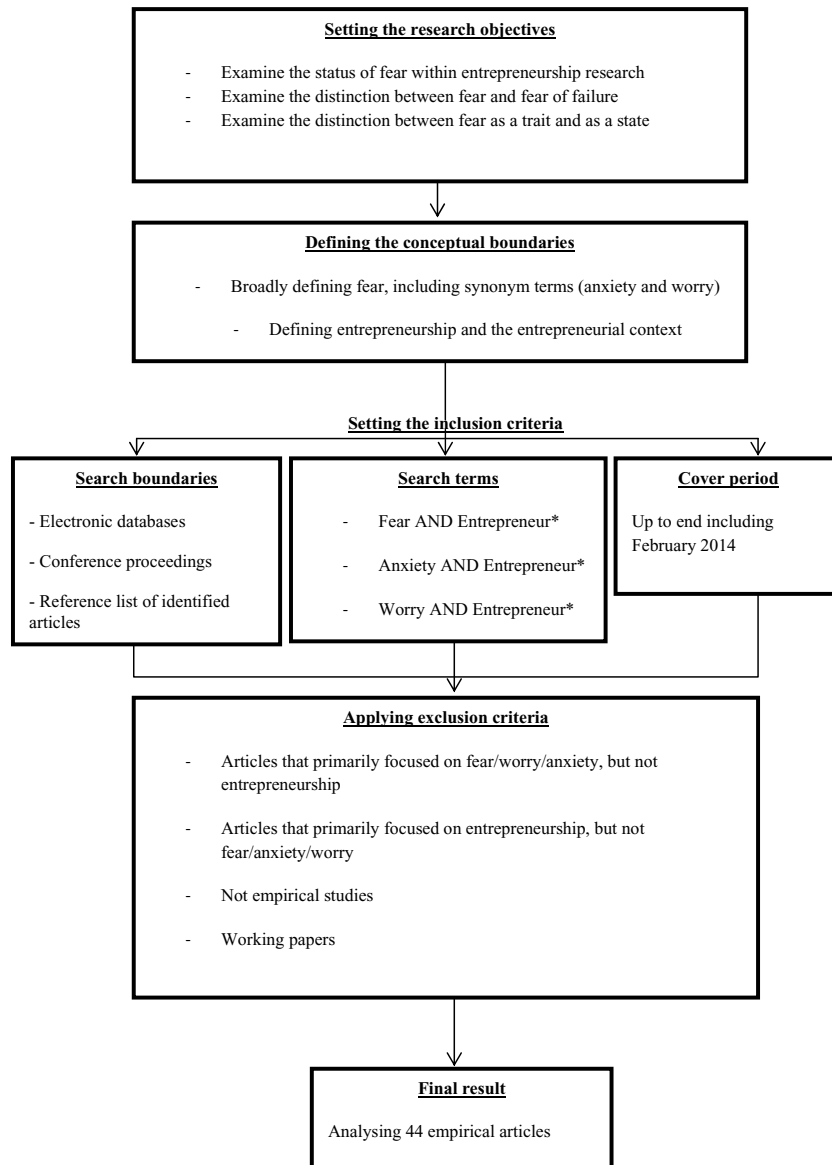


Figure 1. Summary of the systematic review process

emotion elicited by the appraisal of potential or actual threats, which involves physiological and behavioural reactions (Gray 1971). Although all negative emotions share the property of being reactions to harmful or threatening situations, we distinguish fear from anger, guilt or shame, because it is a separate and distinct reaction to specific forms of harm or threat with distinct patterns of neurological, physiological and behavioural correlates (Gray 1971; Lazarus 1991; Ortony *et al.* 1988).

Each negative emotion involves a specific person–environment relationship that comes together with

personal meaning and the appraisal process in the concept of a core relational theme (Lazarus 1991). For example, the core theme for fear is ‘the concrete and sudden danger of imminent physical harm’ (Lazarus 1991, p. 235), while for anger it is ‘a demeaning offense against me or mine’ (Lazarus 1991, p. 222). Within the psychology literature, the word fear has also been used to describe the appraisal of uncertain and existential threats, the core relational theme of anxiety. This association between fear and anxiety is due to the overlapping of their underlying brain and behavioural mechanisms

(Barlow 2000). Consequently, fear and anxiety are not necessarily presented as two distinct emotional processes, and are used interchangeably to describe the same psychological phenomenon.

Another term that is often associated with the fear–anxiety emotional state is worry. Unlike anxiety, worry is consciously directed at concrete concerns in daily adaptation rather than at existential sources of threat. However, it correlates with anxiety, because it can be treated as an attempt to make existential anxiety concrete and external in order to deal better with the unpleasant emotional state (Lazarus 1991). Drawing on this assumption, some studies started to conceptualize worry as a facet of anxiety and proposed that this facet could be expanded into different types of worries (e.g. Lacey 1967; Liebert and Morris 1967; Wigfield and Eccles 1990). Although the idea that anxiety is composed of various worries was never completely addressed within the anxiety literature, it inspired the work of Birney *et al.* (1969) and their elaboration of different worries or dimensions associated with the fear of failure (Conroy 2001b). Therefore, we recognized that fear, anxiety and worry have a common core of shared meaning and can be used with no distinction across individuals and contexts.

We define entrepreneurship as the process through which individuals recognize and exploit business opportunities by founding new ventures (Shane and Venkataraman 2000). To limit our scope, consistently with Baron (2008), we focus on entrepreneurs who ‘make decisions, take actions, and identify opportunities individually rather than as part of a team or group’ (p. 328). We also considered three different descriptions of entrepreneurial context where opportunities are explored and explained: start-up entrepreneurship or new venture creation; opportunity exploration and exploitation in established firms; and general entrepreneurship, where it is not specified whether opportunity exploration and exploitation take place in start-up or established firms (Ireland *et al.* 2005; Reuber and Fischer 1999). Furthermore, we assumed that fear can interfere with different entrepreneurial actions. Therefore, we did not constrain the search to specific phases of the entrepreneurial process (e.g. opportunity identification, evaluation or exploitation).

We then searched leading electronic databases relevant to this topic, such as ABI-Inform, Business Source Premier and the American Psychological Association’s databases. These databases include comprehensive collections of generalist and special-

ist journals that most frequently publish entrepreneurship and/or psychological research applicable to the entrepreneurship domain (e.g. *Journal of Business Venturing*, *Entrepreneurship Theory and Practice*, *Entrepreneurship and Regional Development*, *Journal of International Business Studies*, *Academy of Management Journal*, *Journal of Applied Psychology* and *Journal of Personality and Social Psychology*). We used the search terms ‘fear’ or ‘anxiety’ or ‘worry’ AND ‘entrepreneur*’ in titles and abstracts and covered the period up to and including February 2014. The search terms (‘fear AND entrepreneur*’=53; ‘anxiety AND entrepreneur*’=13; ‘worry AND entrepreneur*’=7) are sufficiently inclusive to capture most relevant articles within the conceptual boundaries, and exclusive enough to eliminate less relevant articles. This process resulted in 73 published articles. Among these, 43 did not focus on fear/anxiety/worry and entrepreneurship or were not empirical studies. Therefore, following our exclusion criteria (see Figure 1), we exclude these from the analysis.

To ensure that all relevant scholarly articles were included, we also considered the peer-reviewed conference proceedings of the Babson College Entrepreneurship Research Conference and the Academy of Management Annual Meeting where peer-reviewed work on this topic is likely to appear. This process resulted in four conference papers published in the *Frontiers of Entrepreneurship Research*. We also examined the reference lists of all studies found through our search to identify articles not discovered through a search of the databases. We found 11 additional published articles and one working paper, the latter of which we exclude because it had not undergone peer review. Therefore, our search results returned 44 empirical articles (‘fear AND entrepreneur*’=40; ‘anxiety AND entrepreneur*’=3; ‘worry AND entrepreneur*’=1) published between 1989 and 2014.

Fear and entrepreneurship: analysis of the literature

The analysis of the 44 empirical articles aims to reflect on the status of fear within entrepreneurship research. There are two important distinctions that characterize the current state of the existing literature: the distinction between fear and fear of failure and the distinction between fear as trait and state. We review them in the following sections.

Fear and fear of failure

The vast majority of empirical studies of fear in entrepreneurship (37 of 44) have addressed the fear of failure, although a small number (Crane and Sohl 2004; Fisher *et al.* 2013; Foo 2011; Grichnik 2008; Grichnik *et al.* 2010; Rahim 1996; Sigh 1989) focus on generic feelings of fear, anxiety and worry. Since emotions always have a definite cause and a clear cognitive content that influences cognition and behaviour (Baron 2008; Fisher *et al.* 2013; Forgas and George 2001), individuals who are afraid are always afraid of something, and that something represents the object of affect¹ that guides its impact (Lazarus 1991).

The source of fear does not have to be directly relevant to the task. For example, Foo (2011) and Grichnik *et al.* (2010) use experiments that involve the induction of emotional states from a judgement-irrelevant source to examine the impact of fear on opportunity evaluation. They found that fear, even when induced by external factors, influences individuals' judgement about the opportunity. These findings show that the fear influencing entrepreneurial judgement can be elicited by any type of source as the object to be evaluated (e.g. the opportunity) does not need to be the affect-inducing stimulus (Forgas 2000). Nevertheless, the majority of studies of fear in this review address fear of failure.

The identification of failure as an outcome to be avoided is deeply rooted in entrepreneurship research, where outcomes are often defined in terms of success and failure (Davidsson 2003). For many years, researchers have emphasized the costs of business failure and directed the theoretical focus to understanding how entrepreneurs could achieve success and avoid failing, through effective opportunity identification, selection or development, and performance on entrepreneurial tasks and action (Kets de Vries 1985; McGrath 1999; Reynolds 1987). Despite recent characterization of business

failure as a learning opportunity (e.g. Cope 2011), there is still a negative connotation attached to it (e.g. Landier 2008; Vaillant and Lafuente 2007). For example, social norms can render losing to be a shameful experience (Tezuka 1997) and expose entrepreneurs to the stigma of negative social judgements (Goffman 1963). This perspective on the role of failure in entrepreneurship may have reinforced a tendency to think that failing is what entrepreneurs fear the most.

While the research focus with respect to fear in entrepreneurship has been almost exclusively related to failure, it is not homogeneous with respect to conceptualization. Therefore, the following section focuses on the different conceptualizations of this construct and evidence of impact on the entrepreneurial process.

Fear of failure: trait vs. state

The literature can be divided into two approaches to the conceptualization of fear of failure. The first group of studies describe fear of failure as a stable disposition (e.g. Arenius and Minniti 2005; Helms 2003; Hessels *et al.* 2011; Ray 1994; Wagner and Stenberg 2004). A second, smaller group of studies defines fear of failure as an emotional state resulting from the perception of environmental threats (e.g. Li 2011; Patzelt and Shepherd 2011; Welpé *et al.* 2012). The first group takes a personological orientation, which refers to a stable propensity to experience fear of failure. The second group adopts a motivational orientation to the construct: fear is an emotional reaction, generated by the appraisal of specific events, and associated with certain psychological and behavioural responses. We analyse each group, focusing on the concept of fear of failure that is adopted and its theoretical underpinnings, and the main findings that stem from the study of the fear of failure–entrepreneurship relationship.

Personological approaches to fear of failure. A personological approach seeks to examine individual characteristics that explain why people behave differently in similar situations. Several studies define fear of failure in terms of motive disposition to avoid failure. Grounded in achievement motivation theory (McClelland 1953, 1958), the concept of motive dispositions refers to individuals' tendencies to achieve success and avoid failure that influence their level of aspiration, preference for risk, willingness to exert effort and to persist in an activity (Atkinson and

¹The word 'affect' is often used as a general label to refer to emotions and moods. However, emotions and moods differ in intensity, duration and specificity (Frijda 1986). While moods are relatively less intense, stable and generated by unknown events, emotions are more intense, short-lived and generated by specific events (Forgas 1992). Research into the role of affect on decision-making has shown that both moods and emotions affect cognitive processes according to some basic mechanisms (e.g. Hayton and Cholakova 2012). We acknowledge that the term 'affect' refers to both forms, and we use it when it is not necessary to specify between moods or emotions.

Feather 1966). When applied to entrepreneurship, a disposition to avoid failure is associated with the perceived risks involved in starting a business (Arenius and Minniti 2005; Bosma and Schutjens 2011; Rauch and Frese 2007). Fear of failure is often defined as an indicator of risk aversion (e.g. Wagner and Stenberg 2004) or as a general attitude to risk (e.g. Langowitz and Minniti 2007; Minniti and Nardone 2007; Morales-Gualdron and Roig 2005). A summary of the empirical studies adopting the personological approach is reported in Table 1.

With few exceptions (Ozdemir and Karadeniz 2011; Ray 1994; Verheul and Van Mil 2011), the empirical evidence from this perspective reveals that between-individual differences in fear of failure are related to differences in entrepreneurial behaviour (e.g. Arenius and Minniti 2005; Helms 2003; Sandhu *et al.* 2011; Shinnar *et al.* 2012; Verheul and Van Mil 2011; Wagner and Stenberg 2004). Several studies include fear of failure among the variables influencing the occupational choice of individuals (Arenius and Minniti 2005; Langowitz and Minniti 2007; Minniti and Nardone 2007; Morales-Gualdron and Roig 2005; Wagner 2007). They all report that fear of failure exerts a negative impact on the decision to become self-employed (Arenius and Minniti 2005; Morales-Gualdron and Roig 2005).

Negative influences of fear of failure have been also examined with respect to entrepreneurial intention (Shinnar *et al.* 2012), subsequent re-engagement in entrepreneurship (Autio and Pathak 2010; Hessels *et al.* 2011) and growth ambitions of early-stage entrepreneurs (Verheul and Van Mil 2011). In their comparative study of entrepreneurial intention across China, the US and Belgium, Shinnar *et al.* (2012) found that perception of fear of failure decreases the intention to become an entrepreneur. Evidence of this negative relationship was found in all three countries. Using data from the Global Entrepreneurship Monitor (GEM), Hessels *et al.* (2011) report that the probability of entrepreneurial engagement after exit is higher for individuals reporting lower levels of fear of failure. With the exception of the non-significant findings of Verheul and Van Mil (2011), this literature generally suggests that fear of failure inhibits entrepreneurship.

Viewing the same phenomenon from the other direction, there is evidence that fear of failure varies between entrepreneurs and non-entrepreneurs. Brixy *et al.* (2012) present evidence that the level of fear of failure distinguishes entrepreneurs from the rest of the population. Similarly, Arenius and Minniti

(2005) report that fear of failure is higher among non-entrepreneurs. Noguera *et al.* (2013) note that women have a higher degree of fear of failure than men do. In fact, researchers often report variation in fear of failure between men and women, and partially attribute observed discrepancies in entrepreneurship rates to differences in fear of failure (Koellinger *et al.* 2013; Langowitz and Minniti 2007; Minniti and Nardone 2007; Noguera *et al.* 2013; Wagner 2007; Wagner and Stenberg 2004). However, these studies do not provide an explanation for the source of group-level differences.

A significant limitation within this literature is the extensive reliance on GEM data (e.g. Brixy *et al.* 2012; Hessels *et al.* 2011; Wagner and Stenberg 2004), which measures fear of failure using a single item: 'Fear of failure would prevent me from starting a business' (Reynolds *et al.* 2005). Asking people whether fear of failure would prevent them from starting a new venture dictates the negative relationship between the perception of fear and the decision to start. It is also unclear whether individuals indicating disagreement do not perceive fear of failure, or perceive it, but continue to engage in entrepreneurial action.

Further limitations of these studies rest in the conceptual and empirical inconsistencies in the relationship between fear of failure and risk-taking behaviour. The fundamental assumptions, implicit in much of this literature, are that the fear of failure is intimately related to risk-taking propensity and that risk-taking propensity is, in turn, associated with entrepreneurship (Atkinson 1957; Brockhaus 1980; Kihlstrom and Laffont 1979; McClelland 1961). However, dispositional fear of failure and need for achievement were originally theorized as opposing determinants of risk-taking behaviour (Atkinson 1957). In an effort to avoid negative consequences, individuals high in fear of failure will prefer very safe tasks (where success is easily obtainable) or very difficult ones (where failure is less likely to be attributed to personal incompetence). In contrast, individuals high in need of achievement will prefer to bear a moderate degree of uncertainty and choose goals with intermediate risk and challenge (Atkinson 1957; McClelland 1961; McGregor and Elliot 2005). Research in other contexts suggests that fear of failure can also stimulate greater striving, since achieving success is often the best strategy to avoid failure (Birney *et al.* 1969; Martin and Marsh 2003). Rather than being inhibited or avoiding challenge and risk, individuals high in fear of failure might,

Table 1. Fear of failure and entrepreneurship: personological approach

Author(s)	Research question	Fear of failure definition	Fear of failure measure	Method and sample	Main results
Ray (1994)	What are the differences between entrepreneurs and non-entrepreneurs in the city-state of Singapore with regard to the risks involved in the decision to become an entrepreneur?	An aspect of risk: the potential loss of self-image and self-respect	Choice Dilemma Question: 'If the business failed, there would be a number of adverse consequences, such as the loss of money? Listed below are a number of consequences (loss of self-image and loss of self-respect=fear of failure). Assign a probability to each occurring should your hypothetical business fail.'	Choice Dilemma Questionnaire: 30 Chinese entrepreneurs and 44 Singaporean managers and engineers	Whereas job security is a critical variable that holds non-entrepreneurs to the status quo in Singapore, the potential loss of self-respect and self-image, the fear of failure, appears to be a force that drives Chinese entrepreneurs in Singapore to succeed.
Volery <i>et al.</i> (1997)	What are the triggers and barriers to business start-ups?	Not explicitly defined-psycho logical characteristic		Semi-structured interviews: 93 individuals with an intention to start (48 starters and 45 non-starters)	Fear of failure, as a barrier to establish a new business, is perceived to be minimal in this study.
Helms (2003)	How do Japanese managers view entrepreneurship as well as the challenges faced by their own personal self-employment?	Not explicitly defined. Associated to risk aversion		Open-ended survey: Ten managers	The lack of a risk-taking culture as well as fear of failure will continue to hinder rapid new business start-ups in Japan in the near future.
Wagner and Stenberg (2004)	Why and how do regional environmental factors influence entrepreneurial activities and the entrepreneurial attitudes of the local population?	An indicator of a high degree of risk aversion	In survey: 'Fear of failure would prevent me from starting a business'	Survey part of the Regional Entrepreneurship Monitor (REM) Germany 2001: 1000 people from 10 regions	Fear of failure in a region was negatively associated with start-up behaviour.
Arenius and Minniti (2005)	What are the variables significantly correlated with an individual's decision to become an entrepreneur?	An important component of the risk attached to starting a new business	In survey: 'Fear of failure would prevent me from starting a business'	GEM survey 2002: 3625 nascent entrepreneurs across 28 countries	Perceptual variables such as alertness to opportunities, fear of failure, and confidence about one's own skills are significantly correlated with new business creation across all countries and gender.
Morales-Gualdron and Roig (2005)	Which variables affect the new venture decision and what is the extent of their influence?	Attitude towards risk	In survey: 'Fear of failure would prevent me from starting a business'	GEM survey 2001: 7524 cases	A greater negative influence of the fear of failure can be seen in the group of emerging entrepreneurs born out of necessity than in the case of the group of emerging entrepreneurs through opportunity.

Table 1. Continued

Author(s)	Research question	Fear of failure definition	Fear of failure measure	Method and sample	Main results
Mimmiti and Nardone (2007)	Are differences in the rates of new business creation between men and women the result of personal characteristics of the individual and of the economic environment or the result of a universal and evolutionary phenomena?	Attitude towards risk	In survey: 'Fear of failure would prevent me from starting a business'	GEM survey 2002: 116,776 observations from 37 countries	Opportunity perception is an important factor in explaining gender differences, though self-confidence and fear of failure seem to have the dominant effects.
Langowitz and Minniti (2007)	What variables influence the entrepreneurial propensity of women and how those variables correlate with differences across genders?	Attitude towards risk	In survey: 'Fear of failure would prevent me from starting a business'	GEM survey 2001: 24,131 observations	Subjective perceptual variables (e.g. fear of failure) have a crucial influence on the entrepreneurial propensity of women and account for much of the difference in entrepreneurial activity between the sexes. Specifically, women tend to perceive themselves and the entrepreneurial environment in a less favourable light than men across all countries and regardless of entrepreneurial motivation.
Wagner (2007)	What are the differences between women and men in the <i>ceteris paribus</i> impact of several characteristics and attitudes on the decision to start a business in Germany?	Attitudes towards risk	In survey: 'Fear of failure would prevent me from starting a business'	Survey part of the Regional Entrepreneurship Monitor (REM) Germany 2003: 12,000 observations	The difference between men and women in both the extent and the effect of considering fear of failure to be a reason not to start one's own business explains the gap in entrepreneurship by sex.

Vaillant and Lafuente (2007)	Do different institutional frameworks condition the influence of local fear of failure and entrepreneurial role models over entrepreneurial activity levels in a rural area with strong industrial and entrepreneurial history vs. those that are not necessarily characterized by such a tradition? What are the variables significantly associated with the decision to start a business?	A social-cultural trait which originates from social stigma to entrepreneurial failure	In survey: 'Fear of failure would prevent me from starting a business'	GEM survey 2003: 843 and 4034 observations for Spanish rural and urban areas, respectively	The difference between entrepreneurial activity levels in rural Catalonia as compared to rural areas in the rest of Spain is in large part explained by the presence of entrepreneurial role models that favour entrepreneurial activity. Although the negative influence of social stigma to entrepreneurial failure is significant, there is no difference in such influence between rural and urban areas.
Koellinger <i>et al.</i> (2007)		A proxy for downside risk tolerance	In survey: 'Fear of failure would prevent me from starting a business'	GEM survey 2003: 74,000 individuals from 29 countries	Fear of failure seems to reduce the propensity to start a business. Entrepreneurs are less prone than non-entrepreneurs to state that fear of failure would stop them from starting a business.
Wood and Pearson (2009)	How do opportunity-related variables influence potential entrepreneurs' willingness to engage in entrepreneurship?	'The capacity or propensity to experience shame upon failure.' (Atkinson 1957, p. 360)	Adapted eight-item PFAI by Conroy (2001b)	Experimental design: 82 students from senior-level management courses	There is lack of support for the individual differences of general self-efficacy and fear of failure playing a significant role in the decision to engage in entrepreneurial action.
Klaukien and Patzelt (2009)	How does job stress influence the decision to exploit an opportunity?	'The capacity or propensity to experience shame upon failure.' (Atkinson 1957, p. 360)	PFAI by Conroy (2001b)	Conjoint-based experiment: 80 entrepreneurs	Fear of failure moderates the relationship between job stress and decision to exploit an opportunity, so that when fear of failure is low stress leads to a higher likelihood to exploit, and when it is high, stress decreases the likelihood to exploit.
Autio and Pathak (2010)	What is the effect of social norms on the growth aspirations of entrepreneurs with exit experience in their subsequent entrepreneurial activities?	Attitude towards risk	In survey: 'Fear of failure would prevent me from starting a business'	GEM survey 2000–2008: 902,533 observations from 63 countries	Previous entrepreneurial exit exercises a positive influence on individuals' entrepreneurial growth aspirations. Social group-level prevalence of fear of failure moderates positively this relationship and the social context constitutes an important influence on individual's entrepreneurial aspirations.

Table 1. *Continued*

Author(s)	Research question	Fear of failure definition	Fear of failure measure	Method and sample	Main results
Canizares and Garcia (2010)	What is the role of gender differences among potential entrepreneurs, their psycho-sociological traits and the incentives and principal obstacles women encounter when initiating a business activity?	An obstacle to setting up a company	Rank 'Fear of failure and ridicule' in a list of obstacles to setting up a company	Survey: 1400 Spanish students	Entrepreneurial initiative is lower among female students and that women are more likely to view the fear of failure as an obstacle to embarking on a business venture.
Mitchell and Shepherd (2010)	What are the differences in entrepreneurs and how do these differences affect their images of opportunities?	The heart of images of vulnerability. It is defined as the desire to avert the perceived consequences of the 'non-attainment of one's level of aspiration' (Bimey <i>et al.</i> 1969, p. 3)	Twenty-five item PFAI by Conroy (2001b) and Conroy <i>et al.</i> (2003)	Experimental design of a decision-making task: 121 executives of technology firms	Fear of failure would seem to lead to an increased focus on the internally focused desirability components of opportunities, and a decreased focus on certain externally focused environmental aspects. Those with a higher fear of failure are less likely to distinguish between an opportunity when many are present and an opportunity when few are present. Fear of failure and attitude towards risk do not moderate the venture success-entrapment relationship.
Wood and Rowe (2011)	Do differential levels of entrepreneurial success impact entrepreneurs' feelings of entrapment and is that relationship moderated by individual differences?	'The capacity or propensity to experience shame upon failure.' (Atkinson 1957, p. 360)	Five-item scale developed by Conroy <i>et al.</i> (2002)	Survey: 120 active entrepreneurs	
Mitchell and Shepherd (2011)	What effect do the three dimensions of fear of failure (fear of devaluing one's self-estimate, fear of upsetting important others, and fear of having an uncertain future) have on the relationship between human capital and self-efficacy and the propensity to entrepreneurial action?	Fears of devaluing one's self-estimate, upsetting important others and having an uncertain future	Relevant items of PFAI by Conroy (2001b) and Conroy <i>et al.</i> (2003)	Experimental design of a decision-making task: 127 small-medium sized companies	Fear of failure impedes as well as motivates the propensity for entrepreneurial action.

Bosma and Schutjens (2011)	What are the factors that determine the variations in regional entrepreneurial attitude and activity?	Attitude towards risk and component of entrepreneurial attitude	In survey: 'Fear of failure would prevent me from starting a business'	GEM survey 2001–2006: 127 observations over 17 European countries	Institutional factors and economic and demographic attributes determine the variations in regional entrepreneurial attitude and activity.
Verheul and Van Mil (2011)	What determines the growth ambition of Dutch early-stage entrepreneurs?	Attitude towards risk	In survey: 'Fear of failure would prevent me from starting a business'	GEM survey 2002–2007: 504 early-stage entrepreneurs	Fear of failure does not have a strong effect on the decision to grow the venture.
Ozdemir and Karadeniz (2011)	What is the effect of demographic characteristics of individuals (age, gender, income level, education level, and work status) and their perceptions about themselves (networking, fear of failure, alertness to opportunities, self-confidence) on their involvement to the total entrepreneurial activities of Turkey?	Attitude towards risk	In survey: 'Fear of failure would prevent me from starting a business'	GEM survey 2006–2008 and 2010: 9601 observations	Fear of failure is not found to be a significant factor that influences the likelihood of being involved in the total entrepreneurial activities of Turkey.
Sandhu <i>et al.</i> (2011)	What are the barriers that may hinder entrepreneurial inclination among Malaysian postgraduate students?	Attitude towards risk determined by high uncertainty avoidance	Five-item scale adapted and modified from Henderson and Robertson (1999), and Scott and Twomey (1988)	Survey: 267 postgraduate students from various Malaysian universities	Fear of failure is an important barrier to entrepreneurial inclination but not the main one.
Hessels <i>et al.</i> (2011)	How does recent entrepreneurial exit relate to subsequent engagement?	Attitude towards risk of failure	In survey: 'Fear of failure would prevent me from starting a business'	GEM survey 2004–2006: 348,567 from 24 countries	The probability of entrepreneurial engagement after exit is higher for males, for persons who know an entrepreneur and for persons with a low fear of failure.
Nawaser <i>et al.</i> (2011)	What are the motivational and legal barriers of entrepreneurship development?	Motivational barrier	List of factors to rank in survey	Survey: All researchers who participated in the 'National Conference on Entrepreneurship Management and Regional Development' in 2009	Fear of failure and other motivational and legal barriers discouraged the development of entrepreneurship in Iran.

Table 1. *Continued*

Author(s)	Research question	Fear of failure definition	Fear of failure measure	Method and sample	Main results
Anokhin and Mendoza Abarca (2011)	What are the human agency filters that impede the translation of objective entrepreneurial opportunities into entrepreneurial activity?	Perceived vulnerability	In survey: 'Fear of failure would prevent me from starting a business'	GEM survey 2002–2006: 68 countries	Fear of failure negatively moderates the relationship between perceived opportunities and entrepreneurial activity.
Shinnar, Giacomini, and Janssen (2012)	Do gender differences exist in the way university students perceive barriers to entrepreneurship and what effect does gender have on the relationship between perceived barriers and entrepreneurial intentions across nations?	Attitude towards risk	In survey: 'Fear of failure would prevent me from starting a business'. Adopted from GEM	Survey: 761 university students from China, USA, and Belgium	Significant gender difference in the perceived importance of the fear of failure barrier is identified in the US and Belgium (men perceiving these barriers as less important than women), but not in China. Moreover, gender has no moderating effect on the relationship between the perceived fear of failure barrier and the entrepreneurial intention for the three countries.
Brixy <i>et al.</i> (2012)	What are the determinants that impact the individual's decisions during the entrepreneurial process?	Attitude towards risk	In survey: 'Fear of failure would prevent me from starting a business'	German part of GEM Survey 2002–2006: 17,000 observations	For entrepreneurs, fear that a business might not be successful is much lower for all stages than it is for non-entrepreneurs.
Koellinger <i>et al.</i> (2013)	Why do women own significantly fewer businesses than men although women's failure rates are not significantly different from those of men across countries?	Not explicitly defined. Associated to risk aversion	In survey: 'Fear of failure would prevent me from starting a business'	GEM survey 2001–2006: 108,919 observations from 17 countries	Women are less confident in their entrepreneurial skills, have different social networks and exhibit higher fear of failure than men. After controlling for endogeneity, these variables explain a substantial part of the gender gap in entrepreneurial activity.

Noguera <i>et al.</i> (2013)	What are the main socio-cultural factors that influence women entrepreneurship in Catalonia?	Associated with risk aversion	In survey: 'Fear of failure would prevent me from starting a business'	GEM survey 2009–2010: 4000 observations	Fear of failure and 'perceived capabilities' are the most important socio-cultural factors on the probability of becoming a woman entrepreneur.
Wood <i>et al.</i> (2013)	Do source of unemployment, layoff in particular, and duration of unemployment stimulate entrepreneurial intent?	The capacity or propensity to 'experience shame or humiliation as a consequence of failure' (Atkinson and Feather 1966, p. 13)	Five-item scale developed by Conroy <i>et al.</i> (2002)	Survey: 100 unemployed individuals	Layoff and duration of unemployment are stimuli for higher entrepreneurial intent, and the source of unemployment–intent relationship is moderated by fear of failure and risk propensity.
Khefacha <i>et al.</i> (2013)	What are the factors that promote entrepreneurship in Tunisia?	Attitude towards risk	In survey: 'Fear of failure would prevent me from starting a business'	GEM Tunisia survey 2010: 1966 cases	Fear of failure negatively influences the decision to start-up.
Wennberg <i>et al.</i> (2013)	How culture moulds the effects of individual's self-efficacy and of fear of failure on entrepreneurship.	Attitude towards risk	In survey: 'Fear of failure would prevent me from starting a business'	GEM survey and GLOBE study 2001–2008: 324,566 observations from 42 countries	The negative effect of fear of failure on entry is moderated by the cultural practices of institutional collectivism and uncertainty avoidance.
Wood <i>et al.</i> (2014)	How are opportunity beliefs individualized and shaped?	'The capacity or propensity to experience shame upon failure.' (Atkinson and Feather 1966, p. 13)	Five-item scale developed by Conroy <i>et al.</i> (2002)	Conjoint experiment: 120 entrepreneurs for a total of 2880 decisions	Fear of failure moderates the relationship between founding rates and investment decision and that between dissolution rate and the decision to invest.

under certain conditions, be motivated to engage more actively in entrepreneurial behaviours. This suggests a more complex, non-linear relationship between fear of failure and risk-taking than has been adopted in existing research.

Seven studies have gone beyond the unidimensional conception of fear of failure as risk aversion to examine the impact of fears relating to diverse components of failure (Klaukien and Patzelt 2009; Mitchell and Shepherd 2010, 2011; Wood and Pearson 2009; Wood and Rowe 2011; Wood *et al.* 2013, 2014). These studies are still of the personological variety, as they define fear of failure as an individual difference in the capacity or propensity to experience shame upon failure (Atkinson 1957, p. 360). However, they refer to a more recent multidimensional conceptualization of fear of failure (Conroy *et al.* 2002). Conroy and colleagues identify five sources or dimensions of fear of failure: (1) experiencing shame and embarrassment; (2) devaluing one's self-estimate; (3) having an uncertain future; (4) important others losing interest; and (5) upsetting important others (Conroy *et al.* 2002, 2003). Fear of failure along these dimensions is viewed as a stable disposition that moderates the effect of contextual factors, resources, environmental cues and opportunities on entrepreneurial attitudes, beliefs and behaviours.

Klaukien and Patzelt (2009) examine the relationship between experienced job stress and opportunity exploitation decisions. They found that, for low (high) levels of fear of failure, stress leads to higher (lower) likelihood of exploiting an opportunity. Wood *et al.* (2014) report that fear of failure mitigates the expected positive effects of founding rates on entrepreneurial attitudes, while it amplifies the negative effects of dissolution rates on pursuit of opportunity. Wood *et al.* (2013) report that fear of failure moderates the effects of situational cues such as layoff and duration of unemployment on entrepreneurial intentions. Mitchell and Shepherd (2010) provide evidence that individuals' self-esteem and their fear of failure exert distinct influences on the evaluation of opportunities. All these studies provide general support for the proposition that fear of failure defined in terms of individual differences is associated with the interaction of individual with context. By examining the moderating effects of stable dispositions on the interpretation of context, these studies offer some insights into the relationship between stable dispositions and more malleable beliefs and attitudes.

Of all of the studies reviewed so far, only one has suggested the possibility of a positive influence of fear on entrepreneurial motivation. Mitchell and Shepherd (2011) report that, across different dimensions of fear of failure, the direction of the observed effects varies. They report that some sources of fear (fear of devaluing one's self-estimate, fear of having an uncertain future) have an inhibitory influence on behaviour, while the fear of upsetting important others has a positive influence on the decision to pursue an opportunity. This may be the first evidence within the field that fear of failure can produce both approach and avoidance behaviours.

The seven studies just highlighted all measure fear of failure with the Performance Failure Appraisal Inventory (PFAI) (Conroy *et al.* 2001, 2002, 2003). The PFAI assesses individuals' beliefs along five dimensions (Conroy *et al.* 2002, 2003). The measure appears to address stable beliefs with questions such as 'When I am failing, I worry about what others think about me' and 'When I am failing, it upsets my "plan" for the future'. Therefore, studies implementing this measure will inevitably be examinations of stable individual differences rather than being able to shed light on the transient emotional states and associated cognitive processes.

Motivational approaches to fear of failure. Rather than describing it as a stable disposition, a second group of studies describe fear of failure in terms of temporary emotional state (Ekore and Okekeocha 2012; Patzelt and Shepherd 2011; Welpé *et al.* 2012). Building on appraisal theories of emotions (e.g. Ellsworth 1991; Lazarus 1991; Lazarus and Smith 1988; Learner and Keltner 2001; Smith and Ellsworth 1985), these studies conceptualize fear of failure as a negative emotion resulting from the anticipation of the possibility of failure (Li 2011; Patzelt and Shepherd 2011; Welpé *et al.* 2012), and define it as a 'feeling that leaves a person discouraged and afraid that he or she will not succeed even before making an attempt' (Ekore and Okekeocha 2012, p. 516).

The basic premise of appraisal theories is that emotions are adaptive responses that reflect appraisals of specific events in the external environment that are significant for the organism's well-being. In this respect, the experience of emotions involves affect and perceptions of meanings that 'are bound together at a moment in time, producing an intentional state where affect is experienced as having been caused by some object or situation' (Barrett *et al.* 2007,

375).² As such, the emotional experience emerges from a process of appraisal and is associated with psychological and behavioural reactions (Lazarus 1991). Recognizing the centrality of affect in motivation and decision-making (e.g. Damasio 1994; Isen *et al.* 1988; Loewenstein *et al.* 2001), entrepreneurship studies (reported in Table 2) examine how this emotional experience influences entrepreneurial decision-making processes.

According to this perspective, the experience of fear of failure as a temporary emotional state decreases an individual's propensity to start a venture (Li 2011; Patzelt and Shepherd 2011; Welpel *et al.* 2012). Li (2011) suggests that fear of failure is a feeling about the outcomes of a new venture, which affects people's judgement of the value and probability of founding a new venture. Welpel *et al.* (2012) report that experienced emotions, including fear, moderate the decision to exploit entrepreneurial opportunities. Drawing on the literature on role requirements and role characteristics, Patzelt and Shepherd (2011) show that, for a sample of 2700 US citizens, entrepreneurs report less negative emotions than employees, but this is contingent on their self-regulatory coping behaviours. Ekore and Okekeocha (2012) note that fear of failure leaves university graduates discouraged from starting a business, even when the opportunity exists. In summary, empirical evidence from research focusing on fear of failure as an emotional state leads to conclusions similar to those of the earlier literature: fear of failure serves to inhibit entrepreneurial behaviour. With the exception of Ekore and Okekeocha (2012), the designs of these studies do not differentiate fear from other negative emotions such as irritation, anger, contempt, sadness, shame and disappointment, and measure it using combined scales such as the PANAS scale (Watson and Clark 1994). This operationalization focuses on affect rather than emotion, and ignores the unique features of each specific emotion (Lazarus 1991). Emotions differ in important respects, such as appraisal, antecedent events, behavioural responses and physiological correlates (Lazarus 1991). All these aspects interact in a process from which unique

emotional experiences emerge. This represents a significant limitation in the current literature in that it does not differentiate fear from other negative emotions.

Summary. We draw two general conclusions from the research on fear of failure and entrepreneurship conducted to date. First, most of the evidence indicates that fear of failure is a barrier to entrepreneurship. With few exceptions (Mitchell and Shepherd 2011; Ray 1994), the entrepreneurship literature on fear of failure has ignored the possibility for it also to drive greater effort, affect goal choices or goal pursuit. However, this presumption that fear of failure is always, or is only, an inhibitor of entrepreneurial action should be accepted with caution for at least two reasons. First, there are concerns over the construct validity of existing measures of fear of failure. Secondly, most of the research has focused only on the decision to start a business, limiting knowledge of how people experience fear of failure and cope with it throughout the entrepreneurial process. As noted by Atkinson (1957, p. 364), a person who perceives himself or herself constrained to remain in an achievement situation finds 'only one path open to him to avoid failure – success at the task he is presented'. The experience of fear by a practising entrepreneur may have entirely different outcomes from those of a potential or nascent entrepreneur. Do fears of failure experienced at different stages cause any positive outcomes, such as greater striving towards entrepreneurial goals? Does the experience of fear throughout the process have negative consequences for entrepreneurial task performance, individual satisfaction or well-being? Such questions have yet to be examined.

The second conclusion is that fear of failure has been treated as either a stable disposition or as a temporary emotional state, with little or no cross-citation among these streams of research.³ On the contrary, within the psychology literature, achievement motivation theory and appraisal theory of emotions are linked in fundamental ways to reflect the

²This definition highlights the connection between the experience of emotion and the emotional state. An experience involves the assignment of meaning to external and internal affective cues, which take on consistent themes (Lazarus 1991). When this happens, an emotion is triggered and results in 'a distinct kind of feeling state' (Barrett 2006, 22). We therefore refer to fear as state and experience interchangeably throughout our discussion.

³This resulted from a cross-citation analysis of these articles supported by UCINET software (available from the authors on request). The analysis aimed to understand the network of citation of the personological and motivational approaches. The subject clusters that emerged reflect our analysis of the literature on fear of failure and entrepreneurship, and the absence of cross-citations between them confirms the lack of connection between the two approaches within this literature.

Table 2. *Fear of failure and entrepreneurship: motivational approach*

Author(s)	Research question	Fear of failure definition	Fear of failure measure	Method and sample	Main results
Patzelt and Shepherd (2011)	Do self-employed more readily accept the negative emotional consequences of their career choice and/or learn to cope with these emotional consequences?	A negative emotion	Self-report measure of emotional experience developed in the study	1996 General Social Survey (GSS) of the Inter-University Consortium for Political and Social Research (ICPSR); 2700 US citizens	Over and above the effects of positive emotions, the self-employed experienced fewer negative emotions than those who are employed, contingent on their regulatory coping behaviours.
Li (2011)	How do people's feelings about the outcomes of a venture affect their subjective judgement on the value and probability of founding a new business?	A negative anticipated emotion	Bosman and Winden's (2002) emotion lists	Simulation heuristic method (Kahneman and Tversky 1982); 217 Chinese students	Those who show less fear of failure and lower surprise for the success tend to view a new venture as an opportunity.
Welpe <i>et al.</i> (2012)	How do people's feelings about the outcomes of a venture affect their subjective judgement on the value and probability of founding a new business?	A negative anticipated emotion	Six items from the PANAS-X fear subscale (Watson and Clark 1994)	Questionnaire-based experiment: 138 MBA and entrepreneurship students	Fear, joy, and anger influence evaluation's effect on exploitation with higher levels of fear reducing and higher levels of joy and anger increasing the positive impact of evaluation on exploitation.
Ekore and Okekeocha (2012)	Why are many university graduates in Nigeria reluctant to start a business even when the opportunity exists?	Feeling that leaves a person discouraged and afraid that he or she will not succeed even before making an attempt	Fear of entrepreneurship (fear of failure, fear of success, fear of criticism, and fear of change) scale developed for the study	Survey: 1100 university graduates in Nigeria	Core self-evaluations (locus of control, neuroticism, generalized self-efficacy, and self-esteem) influence fear of entrepreneurship. Pre-entrepreneurial intention, attitude, and capacity significantly predict fear of entrepreneurship.

interdependence between personological and motivational approaches to explaining fear of failure and associated psychological processes and behaviours (see Conroy 2001a). Motives represent individuals' dispositions to strive for goal attainment (e.g. avoid failure or obtain success), and provide the individuals with a basis for creating expectations and cognitive beliefs about personal harms or benefits in the external environment. When external circumstances are appraised (evaluated) as being harmful or beneficial to personal goal attainment, the emotional process is activated and prepares individuals to respond with impulsive behaviour. However, before following their action tendencies, individuals engage in coping processes, strategic actions or thoughts that can prevent harm, ameliorate it or produce additional harm or benefit. This would explain why fearful individuals approach a potentially harmful situation, despite being predisposed to avoiding such a situation. The failure of the entrepreneurship literature in establishing the connection between motives, appraisal, emotional experience and behavioural responses resulted in a poor understanding of the fear of failure phenomenon, which has certainly hampered our ability to observe its actual consequences. If the role of fear of failure in entrepreneurship is clouded by unresolved conceptual issues, it is time to find an answer to this problem in order to reassign this construct to a clearer picture. We attempt this endeavour in the next section.

Conceptual issues in entrepreneurial fear of failure

Each negative emotion involves a specific person–environment relationship (Lazarus 1991). This suggests that we cannot understand fear of failure solely from the standpoint of the person or the context as separate units. The relationship between the individual and the environment is fundamental to understanding how fear of failure influences human behaviour. However, we can think of two types of relationship: stable arrangements between the person and the environment or unstable arrangements between the person and the environment. While the first approach favours the concept of fear of failure as a personality trait, the second emphasizes the transient nature of the emotional state stimulated by environmental cues. A rigorous conceptualization of fear of failure must begin by establishing the relevance of one over the other.

In order to understand how dispositional factors influence behaviour, it is important to consider the

relevant environmental cues and stimuli and the process and outcomes of appraisal. This suggests that, although there is an inherent interdependence between the personological and motivational approaches to understanding psychological processes, the priority should go to understanding states. Therefore, we define fear of failure as temporary cognitive and emotional reaction towards environmental stimuli that are apprehended as threats in achievement contexts. By suggesting more focus on the temporary experience of fear of failure, we are not saying that dispositions should be ignored; rather, we are arguing that the temporary arousal of the construct should be considered at the centre of a theoretical framework, while dispositions contribute to shape the person–environment relation.

The concept of fear of failure as a state rather than a trait is better able to explain the dualistic nature of fear of failure, manifested in approach as well as avoidance behaviour. In this context, the dispositional approach alone is less useful, in particular because, without introducing additional variables, it cannot explain why individuals with traits associated with avoidance tendencies (e.g. trait anxiety) might also decide to approach. Within the entrepreneurship research tradition, studies on personal characteristics such as the need for achievement and attitude towards risk have already shown that trying to explain entrepreneurial behaviour from enduring personality differences lead to inconsistent and inconclusive findings (e.g. Brockhaus 1980; Hornaday and Aboud 1971; McGrath *et al.* 1992). Therefore, future research should prioritize the psychological state that anticipates the behavioural manifestation of fear of failure.

Second, conceptualizing fear of failure as a state highlights connections between the construct and other relevant variables, including dispositions, which can be expected to amplify or mitigate the arousal of fear of failure. For example the 'Big Two', extraversion and neuroticism, reflect dispositional approach and avoidance (McCrae and Costa 1987). Similarly, positive and negative affective dispositions and trait optimism and trait pessimism can be expected to influence how different individuals attend to similar environmental cues. Thus, a state approach helps to explain the mechanisms through which certain dispositional variables influence the cognitive, emotional and behavioural manifestation of fear of failure within the entrepreneurial process. Although research in the field of entrepreneurial personality has examined the direct relationship

between dispositions and entrepreneurial behaviour and outcomes (e.g. Ciavarella *et al.* 2004; Hmieleski and Baron 2009; Zhao and Seibert 2006), general dispositions are only distally related to approach and avoidance behaviours in specific settings and times (Rauch and Frese 2007). Therefore, while traits or dispositions are important, it is the cognitive and emotional experience that is central to understanding and explaining both the process and the consequences of fear of failure.

Third, if fear of failure is defined as a psychological state, it may be more appropriately treated as an event-based experience (Dimov 2007). Events are defined as 'important happenings' that occur in specific time and place, and that imply a 'change in what one is currently experiencing' (Weiss and Cropanzano 1996, p. 31). The experience of fear of failure results from the appraisal of significant events that might threaten an individual's sense of self and his or her esteem in the eyes of others (Birney *et al.* 1969). While individuals' appraisals are influenced by intrapersonal factors (Lazarus 1991), the impact of significant events is also a function of the achievement context in which they unfold. If we are interested in understanding fear of failure in entrepreneurship, we must consider those 'entrepreneurial events' that can generate individuals' fearful reactions. Therefore, we need to examine the features of the entrepreneurial setting to identify proximal causes of fear of failure.

It is important to understand the extent to which the entrepreneurial setting differs from other achievement settings, such as the educational and sporting contexts, where most research on fear of failure has been conducted (e.g. Conroy 2001a; Covington 1992). An achievement context is defined as a situation in which an individual sees her- or himself as responsible for a somewhat uncertain outcome and knows that this outcome will be evaluated against a standard of excellence (Atkinson 1957; Maehr and Sjogren 1971). Achievement situations involve the tasks that have to be performed, the standards against which the performance will be evaluated, and the competencies requested to carry out the tasks according to established standards. The specificity of the entrepreneurship domain can be analysed according to the unique characteristics of these three elements – tasks, standards and competencies.

First, unlike students and athletes, entrepreneurs face several tasks and are constantly exposed to the possibility of success or failure (see Hitt *et al.* 1998).

The entrepreneurial process is defined as a series of stages or events that follow one another, including the idea or conception of a business, the initiation of operations, the implementation of the business and its subsequent growth. The development of each stage requires actions aimed to acquire and organize resources and competences associated with idea discovery, evaluation and exploitation (Shane and Venkataraman 2000). From the perception of opportunities to the creation of organizations to pursue them, entrepreneurs are constantly exposed to potential setbacks and negative feedback that reduce the chance of success and increase the likelihood of failure. As such, in comparison with sports and education, the entrepreneurial setting is a more complex collection of events that offer diverse potential triggers to fear of failure experiences.

Second, entrepreneurs are evaluated by multiple stakeholders using diverse criteria. When individuals decide to start a venture, they are inevitably exposed to other people's judgement and criticism. They are judged by those whose approval and money they seek, including peers, mentors, family, friends, investors, venture capitalists, competitors and customers (Davidsson 2005). Because they use different parameters to measure performance, these evaluators have different expectations that might influence individuals' anticipated affective reactions to success and failure as well as their cognitive evaluations of the aversive consequences of failure (Passer 1983). Therefore, these evaluations play a significant role in shaping the meaning that entrepreneurs attribute to failure. Any analysis of entrepreneurs' fearful reactions should consider the role of different stakeholders, as their performance expectations represent possible sources of fear of failure within the entrepreneurship domain.

Third, entrepreneurs have to demonstrate competence, both in terms of personal skills and knowledge and in the quality or potential of the opportunity they pursue. Entrepreneurship is commonly defined in terms of the relationship between enterprising individuals and valuable opportunities (Shane and Venkataraman 2000). Individuals form beliefs about the existence of opportunities 'to sell products and services at a price greater than the cost of their production' (Autio *et al.* 2013, p. 1348). However, for them to act entrepreneurially, individuals also need to form beliefs about their ability to exploit these opportunities (McMullen and Shepherd 2006). When an individual decides that a discovered opportunity represents a desirable and feasible course of action

for her- or himself, she or he establishes the individual–opportunity nexus, and starts a process of identification with and attachment to the venture (Cardon *et al.* 2005; Shane and Venkataraman 2000; Shepherd *et al.* 2007). Entrepreneurs often refer to their business as ‘their baby’ (Cardon *et al.* 2005, p. 127), and assume responsibility for the successes and failures of their venture, which can be attributed to their personal abilities as well as to the potential and quality of the opportunity (Shepherd 2003; Ucbasaran *et al.* 2013). Thus, the nexus of individual and opportunity suggests the existence of both self-oriented and opportunity-oriented sources of fear of failure, an observation that deserves attention from future research.

In sum, as an achievement domain, entrepreneurship differs from educational and sport environments, where most of the research on fear of failure has been conducted. The events that follow one another, the multiple ‘evaluators’ and the individual–opportunity connection contribute to shape individuals’ cognitive evaluations of aversive consequences of failing that are specific to the entrepreneurship domain. If the features of the context are also important in shaping the fear of failure experience, they are indirectly related to the effects of fear and the intriguing paradox it may generate. Consistent with the idea of fear of failure as a context-specific phenomenon (e.g. Poczwadowski and Conroy 2002), we suggest caution in integrating previous research, and invite scholars to explore fear of failure explicitly within the entrepreneurial setting.

Building on our observations, the path forward should begin with the definition of fear of failure as a temporary emotional and cognitive condition. The view of fear of failure as a passing state that emerge and subside in response to changing environmental cues is consistent with the process and experiential view of entrepreneurship (Lazarus 1991; Weiss and Cropanzano 1996). Scholars have argued the importance of viewing entrepreneurship in terms of an ongoing process, manifested in ‘the unfolding dynamics between mind, environment, and action’ (Grégoire *et al.* 2011, p. 1456). Morris and colleagues emphasize the centrality of emotional states or feelings to the concept of entrepreneurial experience: ‘entrepreneurship represents a cumulative series of interdependent events that takes on properties rooted in affect and emotion’ (Morris *et al.* 2012, p. 11; see also Schindehutte *et al.* 2006). Such an approach is more realistic, more reflective of the experience of the entrepreneur, and more consistent

with the dynamic nature of the exploration, development and learning process, with evolving knowledge and insights. Understanding the connection between those events, the arousal, manifestation and transformation of fear of failure opens up a wider range of possibilities for the influence on entrepreneurship at different moments in the entrepreneurial journey. Only this perspective can emphasize the role and place that we want to give to fear of failure in entrepreneurship.

A research agenda

In this section, we outline a research agenda for fear of failure and entrepreneurship structured around the limitations that emerged from the existing literature. The conceptual ambiguity, the questionable construct validity and the exclusive focus on the inhibitory effects offer the opportunity to re-examine the nature and the role of fear of failure within the entrepreneurship domain. Building on our conceptual observations, we propose four steps for the systematic study of this construct in entrepreneurship.

First, the development of a theoretical framework that explains the arousal, manifestation and transformation of fear of failure within the entrepreneurial process requires an inductive investigation of the phenomenon. Psychological research emphasizes the importance of the achievement context and its characteristics in shaping the relationship between fear of failure and human behaviour (Conroy 2001a; Lazarus 1991). The entrepreneurship domain is a sufficiently distinct achievement context, characterized by the need for action under uncertainty; action that holds possibly severe consequences for individual well-being or even economic survival. By examining the phenomenon as it is experienced by entrepreneurs, and determining from the ground up what are the factors that cause entrepreneurs to experience fearful emotions, what thoughts, feelings and behaviours accompany such experiences, inductive research can help to make sense of an interesting phenomenon that has not received a satisfying explanation within the entrepreneurship literature.

Second, a new measure of fear of failure is needed that reflects a more complete conceptualization of fear of failure. Limitations of existing measures of fear of failure such as the GEM measure, the PANAS and the PFAI further justify the need for a new measure of fear of failure. The GEM survey item employed to assess fear of failure attitudes of

nascent, emergent and experienced entrepreneurs and the rest of the population imposes a unidimensional structure and asserts a unidirectional relationship between fear of failure and entrepreneurial behaviour. The item 'fear of failure would prevent me from starting a business' takes for granted that, if fear of failure is present, it will always have an inhibitory effect. On the contrary, fear of failure can also lead to approaching behaviour, and a valid measure of the construct should not hamper the assessment of its dualistic nature (Birney *et al.* 1969; Martin and Marsh 2003).

Like the GEM measure, the PANAS and the PFAI do not appear to represent accurately the concept of fear of failure. If fear of failure is an experience, it encompasses both cognition and affect. Making the distinction between fear of failure as cognitive judgement and emotional experience might lead to the conclusion that these components should be treated as separate phenomena with distinct and/or overlapping consequences. Therefore, a complete understanding of the construct must account for both cognitive and affective aspects of the experience. However, while the PANAS has been used to assess the emotional reaction associated with the fear of failure, the PFAI appears to capture its cognitive component (Conroy 2001a,b). This inventory measures the degree of individuals' presumably stable cognitive beliefs in five aversive consequences of failure (experiencing shame and embarrassment, devaluing one's self-estimate, having an uncertain future, important others losing interest and upsetting important others) without assessing the emotional reaction associated with the fear of failure experience. In addition, these five cognitive evaluations may not be fully representative of the entrepreneurship context, where individual's beliefs in the aversive threats of failure relate to both the self and the opportunity (McMullen and Shepherd 2006). We invite future research to address these issues and develop a measure that is able to assess the whole fear of failure experience within the entrepreneurial process. Another observation concerning the methodological limitations of the current literature on fear of failure and entrepreneurship is a prevalence of cross-sectional studies. Data on the level of an individual's fear of failure, its antecedents or consequences, have all been captured at one point in time, resulting in an evidence base of snapshots. Tracking the experience of fear of failure over time is challenging, but longitudinal research designs are needed to capture the temporal dynamics associated with

transitional states. This would complete our understanding of the arousal, manifestation and transformation of this phenomenon.

Third, future research should consider the impact of fear of failure on a broader range of behavioural outcomes. Existing literature on fear of failure and entrepreneurship focuses mostly on the influence of the construct on the decision to start a business (e.g. Arenius and Minniti 2005; Hessels *et al.* 2011; Li 2011; Welpé *et al.* 2012). However, the psychological state of fear can be experienced also throughout the entrepreneurial process, affecting nascent, emergent, experienced entrepreneurs' entrepreneurial action. For example, fear of failure might influence the type of task that is undertaken, and the level of efforts invested in the chosen task (Atkinson 1957). Future research should also be concerned with the influence of fear of failure on individuals' persistence with a chosen course of actions, despite negative results (Staw 1976). Another outcome that might be influenced by fear of failure is the level of physical and psychological health: striving behaviour driven by fear of failure is often accompanied by a high level of anxiety and psychological fatigue that damage individuals' well-being (De Castella *et al.* 2013). We encourage scholars to address these and other research questions on the influence of fear of failure on the entrepreneurial process in order to gain a complete understanding of this phenomenon and its behavioural consequences.

Finally, once the conceptual and operational issues have been fully addressed, it would be interesting to extend the analysis of fear of failure and entrepreneurial behaviour in related contexts such as corporate entrepreneurship and family business. This analysis would require the consideration of additional elements that might influence the cognitive, motivational and relational processes that result in the experience of fear of failure. For example, in corporate entrepreneurship, fear of failure may be relevant to the choices of middle managers to engage in seeking, developing or promoting potential new venture ideas, and to the behaviours of idea champions and sponsors (Hayton and Kelley 2006). In larger organizations, cultures, team dynamics and the psychological safety of the organizational environment might amplify or reduce employees' fear of failure (Hayton 2005). Another related context is that of family businesses, where the fear of failure resulting from perceived threats to long-term or trans-generational wealth preservation may amplify the importance of financial risks beyond that

experienced by non-family business entrepreneurs. Further, threats to socio-emotional wealth might represent a relatively unique source of threat appraisal relevant to fear of failing in family businesses (Gomez-Mejia *et al.* 2007). Because fear of failure is a context-specific phenomenon, differences in these diverse entrepreneurial settings may result in differences in sources of fear arousal, as well as the manifestation, and consequences of those fears. Further investigations on fear of failure in these contexts are needed in order to solve the complexities of this phenomenon and provide a more integrated and complete understanding of fear of failure in entrepreneurship. A general framework in the broad domain of entrepreneurial action would represent a starting point for such related explorations.

Conclusion

The fear of failure is an essential part of the entrepreneurial journey. Entrepreneurs are often described as passionate, enthusiastic, ambitious, resilient (e.g. Cardon *et al.* 2009; Hermans *et al.* 2013; Hmieleski and Carr 2007; Stam *et al.* 2012). However, we believe that underneath this invincible surface lies an inconvenient truth: entrepreneurs also experience fear regarding the potential failures, large and small, related to their ventures. During the journey, they might have to deal with fears of losing a client, not being paid, not delivering on time, out of control cash flow, as well as the fear of not having enough time to spend with family, friends and loved ones. Although it is not difficult to agree on the reality of this scenario, the experience of fear of failure is the least told chapter in the life story of an entrepreneur.

Within the entrepreneurship literature, fear of failure is viewed as simply a barrier to entrepreneurial action. Actually, fear of failure can be many different things – from the worst of enemies to the best of friends (Martin and Marsh 2003). It can be the barrier to individuals' entrepreneurial aspiration, or the source of entrepreneurs' determination to win. However, more than anything, the experience of fear of failure is a complex, understudied and highly nuanced issue. With this review, we have started to trace the contours of this interesting phenomenon.

We have argued that the lack of precision in the conceptualization and operationalization of fear of failure in entrepreneurship research does not imply that the construct lacks conceptual and practical utility. We have identified the unique attributes of

prior research that most occupy the conceptual space that we would call fear of failure in entrepreneurship. However, we have highlighted that the construct would be more useful if framed as a temporary cognitive and emotional experience. Fear of failure could be placed at the centre of a theoretical model where different variables (e.g. emotions, cognitions, dispositional factors and environmental cues) exist harmoniously in the service of behavioural explanation. In the absence of such a model, it is hard to develop relevant research hypotheses on the relationship between fear of failure and entrepreneurship without avoiding the flaws of current research.

We hope that this review helps researchers to have a firmer idea about the locus of the issue when they decide to study fear of failure, and we invite them to explore the construct in more depth, so that future research can more precisely identify the nature of the fear of failure construct that they are pursuing in entrepreneurship.

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