

**THE FIGHT IS THE COACH:
CREATING EXPERTISE DURING
THE FIGHT TO AVOID ENTREPRENEURIAL FAILURE**

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Abstract

Purpose – The purpose of this paper is to explain how the process that occurs *before* an entrepreneurial failure event either occurs or is avoided, provides a coached learning setting that creates entrepreneurial expertise.

Design/methodology/approach – This is a conceptual paper drawing on the literatures of expert information processing theory and deliberate-practice expertise development to suggest a model and propositions that flow from the analysis.

Findings – Adding to the expert performance literature—specifically our introduction of the notion of *emergent* practice—this paper proposes that the intensity of the fight to avoid entrepreneurial failure, the duration of the fight, the content required in that fight, and the clarity and rapidity of feedback received, are associated with the creation of entrepreneurial expertise.

Research limitations/implications – This paper complements research on learning from failure by exploring how significant learning *before* entrepreneurial failure either occurs or is avoided, can lead to the creation of entrepreneurial expertise.

Practical implications – This research provides guidance for entrepreneurs engaged in the fight to avoid entrepreneurial failure, and suggests ways for prospective supporters to better assess entrepreneurs with failed ventures in their history.

Originality/value – The paper applies the deliberate practice concept, common in sports, games, and the arts, to an “emergent practice” setting; that is, within a real-life (marketplace) setting within which the “fight” to avoid entrepreneurial failure functions as the “coach”; and it describes how the learning necessary for the creation of entrepreneurial expertise likely takes place.

Keywords – Entrepreneurial failure, entrepreneurial cognition, deliberate practice, entrepreneurial expertise

Paper Type – Conceptual Paper

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Introduction

There is a growing consensus that in many instances, failure is a better source of learning than is success (e.g. McGrath, 1999; Sitkin, 1992), which has helped to motivate the study of unique learning opportunities that arise in connection with business failures (e.g. Baum and Dahlin, 2007; Byrne and Shepherd, 2015; Chuang and Baum, 2003; Cope, 2011; Eggers and Song, 2015; Haunschild and Sullivan, 2002; Kim and Miner, 2007; Madsen and Desai, 2010; Minniti and Bygrave, 2001; Mueller and Shepherd, 2016). Ucbasaran and colleagues (2013), however, assert a counterpoint to this rosy view, insisting that “business failure represents both an opportunity to learn [but] a context in which it is difficult to do so” (p. 185). It is the difficulties encountered that are of interest in this paper.

In this regard, we argue herein that the traumatic experience leading up to entrepreneurial failure (or its avoidance)—often seen as a complex and idiosyncratic learning context—is in reality a simple and generalizable learning context, when viewed through the lens of expert information processing theory (Baron & Henry, 2010; Mitchell, 1994, 2005; Charness *et al.*, 1996). We suggest simplicity rather than complexity in learning from the failure avoidance fight because—as distinguished from the failure event itself—the *fight to avoid* entrepreneurial failure takes place in practice-like context commonly experienced by those who acquire expertise within a given skill domain (Charness *et al.*, 1996). Within this processual context, the fight itself may act as a type of coach. Thus, in this paper, we focus on how the fight to avoid a potential failure event leads to the creation of entrepreneurial expertise.

Specifically, to develop a useful conceptualization of the fight as a coach, we apply to our analysis the elements of the deliberate practice model of learning to become expert, as utilized within the expert-performance literature (Charness *et al.*, 1996). Expert-performance scholars identify deliberate practice, a notion that has been applied increasingly in entrepreneurship research (Baron and Henry, 2010; Mitchell, 2005; Read and Sarasvathy, 2005; Unger *et al.*, 2009), as an important explanation for the creation of expertise (Charness *et al.*, 1996; Ericsson, 2005; Ericsson *et al.*, 1993). Helpfully, Ericsson and colleagues (2007) explain that “the development of genuine expertise requires struggle, sacrifice, and honest, almost painful self-assessment” (p. 116)—activities traditionally initiated by a skilled coach. In this paper we argue that deliberate practice-based learning has an analogue in the entrepreneurial domain. Because skilled coaching is absent or relatively absent for many would-be entrepreneurs (Chrisman *et al.*, 2002; Gray and Black, 2003), and yet the results of coaching (struggle, sacrifice and the requirement for honest, almost painful self-assessment) are almost universally present in the fight to avoid entrepreneurial failure (Cope, 2011; Shepherd, 2003; Ucbasaran *et al.*, 2013), we suggest that this fight, itself, serves as an effectual coach in a processual expert-learning context we term *emergent practice*. In this paper we therefore suggest that gaining expertise through the fight to avoid entrepreneurial failure offers a simple and generalizable explanation for the creation of entrepreneurial expertise in entrepreneurs who engage in this fight. In a sense, these entrepreneurs become *rebels with a cause*: they rebel against failure, all the while becoming more expert as entrepreneurs.

Our analysis suggests four contributions. First, we complement extant research on learning from failure and answer calls to investigate the development of entrepreneurial cognitions through experience (Grégoire *et al.*, 2011; Shepherd *et al.*, 2015). Second, we develop

the idea that learning is possible *before* failure (or its avoidance), complementing the current focus on entrepreneurial sense-making (Ucbasaran *et al*, 2013). Third, we offer a simple and generalizable means to assess contextual differences in the interpretation of failure experiences. Fourth, we suggest application of the deliberate practice concept in a real-world, emergent practice context. Similar to the mentored deliberate practice required for athletic and artistic development (Ericsson, 2006), this emergent practice context also requires a demanding coach. In this conceptualization, however, the entrepreneur's coach in the learning quest (toward becoming an expert entrepreneur) is not a person, but is instead a real-life experience: the fight to avoid entrepreneurial failure.

Theory Development

In this section we trace our theorizing from its information processing theory origins, through the notion of entrepreneurial expertise, to the learning model of emergent practice that we suggest is enacted through the fight to avoid entrepreneurial failure. Four propositions flow from this analysis.

Entrepreneurial Learning

Information processing theory. As we have noted in the Introduction, the notion of entrepreneurial expertise is set within the information processing theory literature—a relatively new field. As Mitchell *et al.* (2009, pp. 100-111) observed in their history of entrepreneurial expertise research, scholars from the late 1930s through the 1950s suggested that the acquisition of human knowledge depends upon explanations that render data into information (Hayek, 1937)—an idea that motivated Miller's (1956) theory of information. In the 1970s, as computing was developing, Newell and Simon (1972), Shiffrin and Schneider (1977) and Lachman *et al.*, (1979) suggested, respectively, that the notion that humans “process” information affords a

theoretical framework wherein types of processing (e.g., automatic or controlled), can be differentiated; and in fact, that the computer metaphor offers an apt way to describe *human* information processing. During the ensuing decade—roughly from 1986 to 1996—the computer metaphor further developed, as humans were then conceptualized as information processing systems, and several of these frameworks became prominent in the management literature (e.g., Lord and Maher, 1990), including a model based on *expert* information processing theory.

Expert information processing theory. De-Groot (1946) suggested an initial linkage between expert task performance and visual memory/visual perception, using chess mastery as an example. However, it wasn't until Chase and Simon (Chase and Simon, 1973a, b; Simon and Chase, 1973) observed that experts are different cognitively—specifically in terms of information processing—that the first general theory of expertise surfaced within the information processing theory literature, along with suggestions for how to study expert perceptions and the complex memory of experts. Expert information processing theory provided several foundational concepts, such as the ideas that skilled memory might explain expert performance (Chase and Ericsson, 1981, 1982; Fiske, *et al.*, 1983), that such differences exist between experts and novices, and that the learning processes leading to expertise (Glaser, 1984) are specific, such as the process of deliberate practice (Ericsson *et al.*, 1993). Further, the theory suggested that “entrepreneurial” learning (meaning mental activities directed at seeking and finding) might enable organizational experts to make sense of strategic issues (Day and Lord, 1992). At that time, scholars asserted that the expert information processing theory model could offer research opportunities for explanations in a variety of domains (Bourne *et al.*, 1986; Lord and Maher, 1990; Walsh, 1995), one of which became the research stream investigating entrepreneurial expertise.

Entrepreneurial expertise. On the basis of the foregoing foundational research, Mitchell (1994), and Sarasvathy, Simon and Lave (1998) advanced the ideas, respectively, that entrepreneurs possess cognitive/knowledge structures or *entrepreneurial expertise*, and that an expertise-based explanation might compete credibly with traditionally trait-based explanations for entrepreneurship. Entrepreneurial expertise is defined to be *the possession of a knowledge base and problem-solving knowledge structure that enables the holder to use new information within the entrepreneurship domain significantly better than other members of society* (Mitchell, 1994; Mitchell, 2005; Mitchell *et al.*, 2007). Deliberate practice has been recognized (e.g., Mitchell and Chesteen, 1995; Mitchell, 2005) as a primary learning mechanism for creating entrepreneurial expertise.

The Learning Mechanism: Deliberate Practice

Rather than innate talent or accumulated domain experience, researchers (e.g., Baron and Henry, 2010; Charness *et al.*, 1996; Ericsson, 2005; Ericsson and Charness, 1994; Ericsson *et al.*, 1993; Ericsson and Lehmann, 1996; Mitchell, 2005; Mitchell and Chesteen, 1995) have suggested deliberate practice, a specialized program of learning activities, as the primary factor leading to the development of an expert-level cognitive system. This cognitive system consists of both an expert-level knowledge base and expert-level problem-solving processes. Deliberate practice entails exacting repetitions of desired skills, using frank and ongoing feedback from coaches, who translate the requirements of the skill domain into the expert mental representations that constitute expertise in that domain. Deliberate practice is distinguished by (1) its differences from simply accumulating experiences in a domain, and (2) the specific attributes that determine learning effectiveness. The notion of context-generated deliberate

practice—or *emergent practice*—helps to justify our selection of entrepreneurial failure as the learning context for the creation of entrepreneurial expertise.

Differences from accumulating experience. The purposeful focus on the development of an expert-level cognitive system distinguishes deliberate practice from other domain-related experiences that simply accumulate over time. Individuals who are new to a domain (e.g. beginning a new job) learn the basic requirements; and for most individuals, once performance on these basic requirements reaches a satisfactory level, the learning rate slows, performance plateaus, and subsequent time spent in the domain (e.g. accumulating experience) does little to improve performance (Baron and Henry, 2010; Ericsson, 2006). Such performance plateaus have been observed among serial entrepreneurs, in their ability to recognize opportunities (Ucbasaran *et al.*, 2009), as well as among venture capitalists, in their ability to identify promising new ventures (Shepherd *et al.*, 2003). Continuous improvement demands a specialized program of deliberate practice tailored to challenge weaknesses and to reveal problematic elements of performance (Ericsson *et al.*, 1993).

Necessary attributes. Three key elements govern the effectiveness of deliberate practice: *intensity, duration, and content* (Ericsson *et al.*, 1993). Through intense practice of sufficient duration with appropriate content, skills become more automated and long-lasting (Ericsson, 2006) thereby enabling the individual to master critical nuances and improve performance in a building-block manner. Practice without accurate feedback is less effective because of the risk of practicing the wrong content. Expertise growth is maximized when learners engage in self-reflection and in honest assessment of performance outcomes (Baron and Henry, 2010). Figure 1 illustrates in the base/source model from which we draw the theoretical model for this paper.

Note the expertise-creation learning result of deliberate practice—a cognitive system comprised of both a knowledge base and problem-solving processes.

{Insert Figure 1 about here}

Implications for learning context. However, the foregoing expert learning model assumes one element of context that is not very practical in the entrepreneurial world: the hiring or engagement of a coach or team of expert coaches (Côté, 1999; Côté, *et al.*, 2005). In this way, the learning context for entrepreneurs is markedly different from learning contexts found in the arts and sciences, sports, and games (Ericsson, 1996). In sports, for example, coaching is a profession in itself, with levels of promotion (e.g. assistant basketball or football coach advancing to head coach), levels of league play (e.g., AAA, AA., A, B, etc.), standards for performance (e.g. won/loss record), and so on, providing the framework within which deliberate practice coaching is developed and made available to aspiring athletes. As far as we know, no such coach-development system exists within entrepreneurship. And yet, many entrepreneurs do evidence impressive growth in expertise. Consequently, we argue that the absence of a professional coaching pool from which to draw individuals who are qualified and compensated to—at the expert level—pay precise attention to most new ventures (the relatively rare venture capital context excepted) has, in all practical terms, adjusted the learning context for the creation of entrepreneurial expertise¹. However, in our search, we have identified an almost ubiquitous companion to every entrepreneur—one that can provide a close parallel to the precise attention and commitment required, and which, somewhat ironically, also brings into the context an economic equivalent to the “hired” coach. We suggest this companion to be the specter (or fear)

¹ We note the existence of Small Business Development Centers, SCORE programs, etc.; and we in no way intend by the afore-noted assertion to diminish their effects. But our own extensive experience, and our research within the venture formation space in many locations globally, suggests that the proportion of new entrepreneurs who have such access, or if so, avail themselves of this resource, is really quite low.

of failure (Mitchell, 1996), which then suggests the processes surrounding failure avoidance as a learning context.

Failure as a Learning Context

In this paper we define entrepreneurial failure to be the voluntary or involuntary termination of an entrepreneur's involvement in a business that has fallen short of its goals (McGrath, 1999; Shepherd, 2003). Perhaps because failure is so common and can be a defining event for an entrepreneur, scholars have focused on the effects of the failure event itself on entrepreneurs. Ucbassaran and colleagues (2013) provide a useful review of the entrepreneur's plight after a failure, summarizing research findings regarding the financial, social, psychological, and learning consequences of failure. Individual-level antecedents that could affect entrepreneurial learning through failure have likewise drawn significant inquiry. Table 1 summarizes recent research about such individual-level factors, as well as the contextual aspects of a failure experience, and how context can influence learning. The summary in this table supports the idea that the processual context might be considered to be an emergent practice setting for the learning needed to create an individual's entrepreneurial expertise.

{Insert Table 1 about here }

Among the many discussions of entrepreneurial learning (Corbett, 2005, 2007; Holcomb *et al.*, 2009; Minniti and Bygrave, 2001), the view of entrepreneurial learning suggested by Minniti and Bygrave (2001)—as a dynamic process formed by iterative choices—best captures the concept of deliberate practice, but with two distinctions: (1) the dynamic process they suggest is likely to be non-coached, and (2) it only involves the deliberate practice that occurs through encounters with the real-world. In this conceptualization, entrepreneurs make a series of iterative choices; and when the choices work well, they are retained for future use. When a

choice yields a sub-par result, the entrepreneur discards those sub-par options and searches for new ones. This need for a new option can trigger deeper probing, risk taking, and a willingness to try untested solutions. We note that engagement in this iterative choice process is suggested to *precede* the actual entrepreneurial failure, which supports the idea of learning from the pre-failure context, and specifically from the context of the fight to avoid failure, in addition to learning from the effects of the failure event itself. This iterative choice learning process, set within a pre-failure fight, suggests that the fight itself might then be conceptualized to function as coach, within the revised deliberate-practice context we term “emergent practice.”

The Fight as Coach in an Emergent Practice Context

In this subsection, we present two ideas, and then synthesize them to lead to the theoretical model we present in this paper. We first identify the theoretical mechanism by which the fight to avoid entrepreneurial failure is expected to stimulate the kind of learning that leads to the creation of entrepreneurial expertise. We then develop the idea that the fight to avoid failure, as emergent practice, is a legitimate processual context, within which the deliberate practice expertise creation model might be expected to operate.

Theoretical mechanism: The fight-as-coach. The literature suggests that the increased arousal and psychological drive, increased motivation to adopt and pursue a task or goal, and increased allocation of effort to information processing that is associated with adversity (Kahneman, 1973; Ocasio, 1995) will result in learning. We suggest response to adversity, then, as the key theoretical mechanism animating the fight to avoid failure. It is reasonable to suppose that until an entrepreneurial failure either occurs or is avoided, effort will be expended to overcome the economic and psychological adversity that the threat of failure imposes. Here, as noted previously, our theoretical expectations differ from those in the learning-from-failure

literature in one key respect: we focus on the human response to adversity that emerges as a process *before* the actual or avoided failure, as compared to the human response to failure *after* the event.

With respect to the latter, Cardon and McGrath (1999: 2) suggest that, retrospectively, entrepreneurs tend to blame a failure event either on innate ability (a helplessness response) or on their level of effort (a self-mastery response). The first attribution leads to giving up, and the second to the creation of additional expertise. Shepherd (2003) observes a similar divergence in scholarly theories about coping with failure as an event. On the one hand, organizational learning theorists argue that negative emotions regarding failure lead to search processes, learning and adaptation (citing Cyert and March, 1963; Kiesler and Sproull, 1982; Lant and Mezias, 1992; Lant *et al.*, 1992; Morrison and Robinson, 1997). On the other hand, threat-rigidity theorists argue the opposite: negative emotions constrain cognitive processes, restrict decision making, and limit the number of options considered, which then inhibits learning, organizational change and/or adaptation (citing instead, Barker and Mone, 1998; D'Aunno and Sutton, 1992; Ocasio, 1995; Staw *et al.*, 1981; Sutton & D'Aunno, 1989). Thus selecting as a context for better theoretical explanation, the learning from failure that occurs *after* a failure event, is theoretically problematic due to competing and contradictory expectations regarding the learning result. Instead, we argue that a better explanation is possible by utilizing the processual context that occurs *before* a failure either occurs or is avoided. Such improvement in theorizing is possible because, as we have argued, the psychological response to expected adversity is more likely to consistently invoke the very behaviors that would be required by a deliberate-practice coach (i.e. emergent practice), were such a person to be available to a tractable entrepreneur.

Processual context: Emergent practice. The processual context we have identified as core to our theorizing, therefore, is the idea of emergent practice. We note many similarities between the general deliberate practice model and the concept of emergent practice in the fight to avoid entrepreneurial failure. Specifically, both types of practice respond to the desire to improve performance, but in the case of entrepreneurial emergent practice, the struggle to improve takes place in the real-world processual context (Ericsson, 2006; Minniti and Bygrave, 2001). Second, deliberate practice in both cases demands a high level of intense commitment (Charness *et al.*, 1996; Ericsson and Charness, 1994; Ericsson *et al.*, 1993; Ericsson and Lehmann, 1996). Like all deliberate practice, the fight to avoid entrepreneurial failure is seen as a consuming interactive experience (Shepherd, 2003; Shepherd *et al.*, 2009; Ucbasaran *et al.*, 2013). Third, deliberate practice is often neither fun nor enjoyable (Ericsson *et al.*, 1993; Ericsson, 2006), which certainly aligns with the time, effort, and emotion that must be invested to avoid entrepreneurial failure. Fourth, deliberate practice requires more than just hard work; it requires intense focus on addressing weaknesses that have been identified by some external source. In the general (deliberate) practice case, this external feedback source is usually a content expert or coach. The coach observes the learner, detects flaws or improvements, and provides information that a learner can use further to calibrate performance. For entrepreneurs, the failure-avoidance fight in the marketplace serves a similar function: actions of the entrepreneur are observed, often through self-reflection after trial and error actions in the marketplace; flaws or improvements are detected through this same process; and information that the entrepreneur can use to calibrate performance is thus provided. For example, when entrepreneurs focus on the weaknesses in the venture that are contributing to poor performance in the marketplace, they then calibrate their performance by making changes in the business to eliminate those

weaknesses (Minniti and Bygrave, 2001). Real-time feedback then takes the form of improved (or not improved) business outcomes, and entrepreneurs can then calibrate again. Over time, through this emergent practice, they develop expertise.

In this way we see the process that underlies the fight to avoid entrepreneurial failure as being an intense, durable, content-specific process that parallels in many respects the process that underlies deliberate practice (Figure 1). These similarities enable us to draw on deliberate practice research to develop a model of how the fight to avoid entrepreneurial failure, as an emergent practice process, could be expected to create entrepreneurial expertise.

Proposed theoretical model. We are now positioned to argue for a systematic association between the components of the practice-to-expertise model and the creation of entrepreneurial expertise. In the following sections we will introduce and justify, in the form of four propositions, our expectations for theoretical relationships between the creation of entrepreneurial expertise and: intensity of the fight, duration of the fight, content-breadth of the fight, as moderated by the clarity and rapidity of feedback.

{ Insert Figure 2 about here }

Intensity of the Fight

In the deliberate practice model, coaches design arduous practice sessions, with “specific tasks...to overcome weaknesses” (Ericsson *et al.*, 1993: 368) that demand performance just beyond the current capability of the coached. The typical deliberate practice cycle includes four iterative steps: perform a task, receive feedback on task performance, reflect on the feedback and determine how to improve, then perform the task again (Ericsson, 2005, 2006; Ericsson *et al.*, 2007). This cycle continues until the person can perform reliably at a new and higher level; and it is then repeated, targeting additional weaknesses, as ever-higher levels of expertise are attained

(Ericsson, 2006). For the person coached, this practice regimen is intense and highly taxing (Ericsson *et al.*, 1993).

However, in the fight to avoid entrepreneurial failure, no human coach designs structured practice sessions. Instead, the fight for survival animated by adversity, reveals weaknesses in the expertise of the entrepreneur. Specific weaknesses are exposed in the business problems encountered, and the resulting deliberate practice varies in its intensity depending upon the levels of complexity and repetition required to resolve those problems (Ericsson, 2006; Minniti and Bygrave, 2001). We therefore define intensity of the fight to avoid entrepreneurial failure to be *the task complexity required for successfully improving task performance, combined with the necessary repetition of the required tasks.*

Intensity will be greatest when venture survival requires highly complex, multi-faceted tasks, particularly when the way to improve performance is not singular and may not be obvious. In such situations, we expect the accelerated learning that comes from increased arousal and psychological drive, increased motivation to adopt and pursue a task or goal, and increased allocation of effort to information processing—phenomena associated with adversity by Kahneman (1973) and Ocasio (1995). However, fight intensity can vary.

A less intense practice period, for example, one where only a few cycles rectify poor performance, is therefore limited in its potential to create expertise for at least two reasons. First, because entrepreneurs tend to retain for future use what worked in the past, a less intense fight may lead to the entrepreneur employing in the future, a sub-optimal choice: an act that is not indicative of expertise (Holcomb *et al.*, 2009; Minniti and Bygrave, 2001). Second, a less intense fight does not have the necessary repetitions to require the entrepreneur to stretch continually for the higher performance that is central to practice-created expertise. By contrast, an intense fight,

where an implemented choice yields some performance improvement, but also the need for further improvement, affords the opportunity to eventually reach a better solution and engage in sufficient repetitions to enable expertise.

Suppose, for example, a firm with solid revenue is experiencing a cash flow shortfall. The entrepreneur might quickly restore sufficient cash flow by uncovering a dishonest bookkeeper who is embezzling funds. This low-intensity fight might involve only one or a few cycles and perhaps would be a sub-optimum solution for other cash flow issues. Further, this solution demands only a small improvement in the entrepreneur's current performance level in financial oversight. Alternatively, the entrepreneur could elect to replace high cost debt with investor equity to solve the cash shortfall weakness. Here the entrepreneur would face the complex and multistage tasks of paying off the debt as well as finding, "pitching" to, and negotiating with potential investors. This higher level of intensity is likely to afford significantly more repetitions of the cycle, address incrementally more difficult tasks, and allow more opportunity to close in on a more optimal solution.

However, within the processual context of potential failure, the relationship between intensity and emergent practice is not likely to be linear. At very high levels of intensity, entrepreneurs may not be able to discern a way to improve performance or, even if they are implementing desperate choices, may not be able to create regular and meaningful performance improvements. Such entrepreneurs may, instead, begin to shut down instead of learn (Ocasio, 1995; Wincent and Örtqvist, 2009). Such shutting down due to excessive intensity would be expected then to impair the creation of expertise for several reasons. Practice-created expertise relies on stretching beyond the entrepreneur's current level of performance, but the gap between the current level and the next incremental level must be bridgeable (Ericsson, 2005, 2006;

Ericsson *et al.*, 1993). Too wide a gap is likely to compromise the entrepreneur's opportunity to develop expertise, due to being less able to concentrate, less attentive to feedback, and less willing to search for and implement choices to improve performance (Dutton and Duncan, 1987; Dutton and Jackson, 1988; He *et al.*, 2017; Ocasio, 1995). In short, in overly intense situations, the entrepreneur is expected to be saturated cognitively, and the resulting stress could even lead to the entrepreneur abandoning the fight (Wincent and Örtqvist, 2009).

Thus, we argue that the intensity of the fight to avoid entrepreneurial failure contributes to the creation of entrepreneurial expertise up to a point; but after that point, it becomes a detriment. Accordingly, we propose:

Proposition 1: The intensity of the fight to avoid entrepreneurial failure has an inverted U relationship with creating entrepreneurial expertise.

Duration of the Fight

Duration matters in the practice-based creation of expertise because expertise is created incrementally and over time (Baron and Henry, 2010; Ericsson, 2006). This graduated expertise creation occurs through the ongoing repetition central to effective practice. Duration is not to be confused with the length of any given individual practice period, but rather with the extent of the totality of practice periods over time (Baron & Henry, 2010; Ericsson, 2006; Ericsson *et al.*, 1993). In the case of emergent practice, we would therefore expect duration to be *the total number of days, weeks, months, etc. during which the entrepreneur is engaged in the fight to avoid entrepreneurial failure* (Charness *et al.*, 1996; Ericsson, 2006; Ericsson *et al.*, 2007).

As discussed earlier, the practice cycle entails four iterative steps: perform a task; receive feedback on task performance; reflect on the feedback and evaluate how to improve; perform the task again. In the operation of an actual business, it has been our observation that the completion

of one of these cycles can take many weeks, months, and sometimes years. Thus, unlike traditional deliberate practice sessions, in which feedback is virtually instantaneous, in the emergent practice setting, feedback takes time to receive. Not only does an increasing duration allow more cycles to address one particular problem, it affords the entrepreneur the time needed to address more problems in total. Also, an entrepreneur may be required to address several problems simultaneously, perhaps at the expense of slowing down the cycle rate for any individual problem due to divided attention (Ocasio, 1997). Or the entrepreneur may address the problems sequentially, when dictated by the temporal context. We therefore note the paradox that shorter fights may be desired to minimize value destruction (McGrath, 1999), but longer fights are likely to create more expertise.

Thus, we expect that a fight of relatively short duration, regardless of whether the fight ends in venture rejuvenation or in venture demise, is likely to create less expertise. We further expect that a fight of longer duration—that is, with more overall time spent in emergent practice—is more likely to create entrepreneurial expertise as time is invested to acquire marketplace feedback about a given venturing choice, evaluate whether that experiment yielded improved performance, and if not, reflect on why (Baron and Henry, 2010; Hayward *et al.*, 2006; Politis and Gabrielsson, 2009; Read and Sarasvathy, 2005). Accordingly, we suggest:

Proposition 2: The duration of the fight to avoid entrepreneurial failure is positively associated with creating entrepreneurial expertise.

Content of the Fight

The third factor in the practice model is the extent of substantive content involved in the fight. By content, we are referring to the actual domain-specific tasks required. Such content could be relatively singular in its substance, for example, the knowledge base and problem

solving processes needed for addressing the issue of the embezzling bookkeeper. Conversely, content could be broad, encompassing the knowledge base and problem solving processes needed for addressing multiple, concurrent sources of poor performance in a venture. These can be as vast as the functional domains addressed in a business plan, including marketing, human resources, operations, and so on (Politis, 2005; Read and Sarasvathy, 2005). We therefore define breadth of content to be *the number of functional domains that must be addressed in the fight to avoid entrepreneurial failure*.

Though related in the sense of task complexity, intensity and breadth of content are distinct, given that the repetitions required by the definition of intensity are not required by the definition of content, and also given that it is not variations in the complexity itself that is at issue, but rather the selection of appropriate or relevant content to practice. Thus, high intensity may be associated with multi-faceted tasks that fall within single functional content domain. Yet if only a few content domains are involved, low breadth of content would be indicated.

Thus, broader content in emergent practice comes from the need to address multiple functional or content domains to avoid entrepreneurial failure. The greater the number of entrepreneurial tasks in which an individual demonstrates reliably superior performance, the greater the level of expertise (Baron and Henry, 2010; Ericsson, 2005; Ericsson, 2006; Mitchell *et al.*, 2005). For entrepreneurs, expertise involves possessing a greater volume of knowledge about the constituent entrepreneurial tasks (Baron and Henry, 2010; Feltovich *et al.*, 2006; Unger *et al.*, 2009). Practice-like repetitions across a breadth of content are linked with enhanced cognitive resources (Baron and Henry, 2010), particular with an increased ability to learn more and learn faster (Feltovich *et al.*, 2006). Thus, it is reasonable to expect that as breadth of content requirements increase, so will the creation of entrepreneurial expertise.

However, this relationship is not likely to be linear. Accessing information from multiple content domains creates additional cognitive demands. For each domain, the entrepreneur must access knowledge, devise solutions, implement solutions, and seek and interpret feedback. At some point, these requirements could begin to overtax the entrepreneur's ability to address each problem with the attention required for effective deliberate practice (Ericsson, 2005; Ericsson *et al.*, 1993). In other words it is also likely that at some point, at the very time when the entrepreneur's ability to interpret new information is decreasing (Dutton and Duncan, 1987; Dutton and Jackson, 1988; He *et al.*, 2017; Ocasio, 1995), the volume of feedback could be increasing.

Thus, we argue that the breadth of content required in the fight to avoid entrepreneurial failure contributes to the creation of entrepreneurial expertise up to a point; but after that point, it likely becomes a detriment. Hence:

Proposition 3: The breadth of the content involved in the fight to avoid entrepreneurial failure has an inverted U-shaped relationship with creating entrepreneurial expertise.

The Moderating Role of Feedback

In the deliberate practice model, providing performance feedback is one of the important tasks for a human coach. Because the persons coached toward the creation of expertise are—by definition—required to function beyond their capability level (Ericsson, 2006), they depend on the coach to provide and interpret feedback on task performance. Flawed feedback would stymie the creation of expertise, as the practice is no longer pointing toward improved performance but rather toward some sub-optimal solution (Feltovich *et al.*, 2006; Hayward *et al.*, 2006; Minniti

and Bygrave, 2001; Read and Sarasvathy, 2005). But, as we have argued, the absence of a human coach in the fight to avoid failure suggests the fight itself delivers the feedback.

Such feedback most often would consist of information on the effectiveness of the choices implemented to improve performance (as suggested, for example, in the Minniti and Bygrave, 2001, model). Rather than turning to a human coach, entrepreneurs in the fight are likely to turn to the marketplace for feedback, specifically to their various stakeholders, such as bankers, community members, customers, employees, government, investors, and suppliers. Stam and colleagues (2010) explain that “market forces provide feedback to entrepreneurs in a more immediate, concrete, and blunt way than many other settings where expertise is attained” (Stam *et al.*, 2010: 1111). This observation suggests two important aspects of feedback are relevant to the operation of the emergent practice model: clarity of feedback and rapidity of feedback.

Clarity of feedback. As feedback becomes less clear, it is increasingly open to misinterpretation (Joseph and Gaba, 2015; Rerup, 2005; Ucbasaran *et al.*, 2013), leading to sub-optimal solutions rather than the creation of expertise (Minniti & Bygrave, 2001). In contrast, clearer feedback facilitates more accurate interpretation, which should enable the practice cycle to continue toward better outcomes and increased expertise. Clearer feedback should reduce the information processing overloads associated with content breadth and practice intensity, and should also better penetrate the negative affect associated with the fight to avoid entrepreneurial failure (Shepherd, 2003). Accordingly, we suggest that this clarity would shift the apex of expertise’s inverted-U relationship with both intensity and breadth of content upward and to the right. Hence, we propose:

Proposition 4a: In the fight to avoid entrepreneurial failure, more clear feedback is likely to moderate positively the relationship between intensity and creating entrepreneurial expertise.

Proposition 4b: In the fight to avoid entrepreneurial failure, more clear feedback is likely to moderate positively the relationship between the breadth of content and creating entrepreneurial expertise.

Rapidity of feedback. The rapidity of feedback, in contrast, is likely to affect the relationship between duration and entrepreneurial expertise. One of the underlying mechanisms in this relationship is the number of performance-feedback-reflection-performance cycles. The more cycles performed, the greater the level of expertise created. As noted in our second proposition, longer fight durations should be associated with greater expertise because they enables more cycles. Just as feedback may vary in its clarity, however, it may also vary in the rapidity in which it is given. Earlier we used the example of courting potential investors. Each attempted contact with investors should generate feedback, but there could be wide variance in the amount of time that elapses before potential investors communicate back to the entrepreneur. While the entrepreneur is not necessarily idle while awaiting investor feedback, that particular practice cycle is delayed until the feedback is received—meaning fewer cycles can be accomplished within a set time period. Thus, in the emergent practice context, more rapid feedback is expected to attenuate the relationship between fight duration and entrepreneurial expertise. Accordingly, we propose that:

Proposition 4c: In the fight to avoid entrepreneurial failure, more rapid feedback is likely to decrease the strength of the relationship between the duration of the fight and creating entrepreneurial expertise.

Discussion and Implications

Entrepreneurial failure is often viewed as valuable but “high tuition” education. In this paper, we have drawn on the expert performance literature—specifically the notion of real world, emergent practice—to propose that the intensity of the fight to avoid entrepreneurial failure, the duration of the fight, and the breadth of content created in that fight, as moderated by the clarity and rapidity of feedback, are associated with the creation of entrepreneurial expertise. Within this conceptualization, the fight serves in the coaching function, focusing entrepreneurs’ attention on information from stakeholders and the general marketplace. In this sense, the avoiding of failure helps entrepreneurs to detect flaws, notice improvements and interpret key information to create expertise. This theorizing has implications for both researchers and for entrepreneurs and their supporters.

Implications for Researchers

Several implications of our theorizing might be of assistance to scholars working in this research space. These include: (1) a shift in research focus from the failure event to (2) the pre-event failure avoidance process toward a new understanding of outsider impacts during the fight to survive, and (3) the inclusion of individual differences in the study of entrepreneurial growth. This theorizing also has implications for future testing.

Shift in focus. Focusing on the fight to avoid entrepreneurial failure expands the understanding of failure-driven learning by shifting the focus from some singular failure event to the processes that occur well before and even during the actual failure (or its avoidance). This shift especially can enable scholars to expand the study of failure to include “near death” experiences (Kim *et al.*, 2009; Kim and Miner, 2007; Miller, 2011), where the fight to avoid failure successfully turns the company around. We note that some seminal works on the virtues

of failure (e.g. McGrath, 1999; Sitkin, 1992) center on the idea of fighting, rather than on a process that requires firm failure as precondition. It therefore is reasonable to suppose that if an entrepreneur fights, and in the process improves survival prospects such that failure does not occur, it is *prima facie* evidence of some measure of expertise having been acquired during the fight process.

Outsider impacts. Within the emergent practice context, as we conceive it, specific human coaches are not necessarily present. Yet their impact could be important. We therefore pose for future research such questions as: How can the explicit introduction of deliberate-practice coaching better enable the creation of expertise by entrepreneurs? How can entrepreneurial expert mentors be developed; and could (for example) broad-use information technology (e.g., smartphones, artificial intelligence) have a role to play in expanding the availability of entrepreneurial expert mentoring both nationally and globally? To what extent can coaching during the failure process be helpful—augmenting the feedback from the marketplace with the feedback and emotional support (Charness *et al.*, 1996) of expert entrepreneur coaches? Scholars might in the future compare the efficacy of such *deliberate* practice coaching with the *emergent* practice coaching we highlight in this paper.

Individual differences. In addition to investigating variance that might arise due to *outside* impacts on the creation of entrepreneurial expertise during the fight to survive; it also is important to investigate the variance that arises from (so-to-speak) *inside* the entrepreneur. That is, future research could examine further how individual-level factors distinct to the entrepreneur (see 12 examples suggested in Table 1) affect the creation of entrepreneurial expertise through the fight to survive. Additionally, Corbett (2007) suggests learning asymmetries among entrepreneurs could affect their ability to correctly interpret feedback and devise new solutions,

which we argue offers a potentially fruitful pathway to continue both comparative and longitudinal individual-level investigations.

Testing. We also suggest there to be testing implications of the theorizing proposed herein. Einstein (1936) observed that it is the theory which decides what we can observe. But observations in the testing of entrepreneurial expertise have been limited to date, possibly due to a lack of breadth in theorizing concerning deliberate practice. For example, deliberate practice researchers have relied on detailed retrospective interviews (e.g. Cote *et al.*, 2007; Krampe and Ericsson, 1996); although survey research also has been effective in some cases (e.g. Chamberlain, *et al.*, 2015; Chow *et al.*, 2015; MacNamara *et al.*, 2014). Nevertheless, recently there have been recent explorations into entrepreneurial cognition research utilizing experiments (Mitchell, Mitchell, Mitchell and Alvarez, 2012), neuroscience concepts and measurement methods (Baucus, Baucus and Mitchell, 2014), and simulations (Mitchell, Mitchell, Zachary and Ryan, 2014)—all additional avenues for testing we view as promising within the emergent-practice fight-as coach context.

We therefore suggest that the theorizing in this paper—where the fight to avoid entrepreneurial failure is viewed as coach in an expanded processual context—enables some of these more recent advances in entrepreneurship research methods to be applied. For example, in-the-moment (real-time) research (Foo, Uy and Baron, 2009)—that utilizes information technology data gathering methods (e.g. cellphone texting to report affect-as-information) to penetrate emergent-practice contexts that heretofore have been “idiosyncratic data milieus” (MacMillan and Katz, 1992)—has now been shown to be practical. Such methods enable data to become more accessible than the previous methods of retrospective interviews and survey research. Real-time methods, then, in the real-life processual context of emergent practice that we

have theorized, can enable expertise creation theory testing to be more susceptible to expanded testing through, for example, the experimentation, neuroscience brain scanning, and simulation methods that also are now becoming available. As investigative opportunities for studying the antecedents and consequences of expertise creation continue to expand, we hope that our theorizing also provides expanded opportunities for testing through an expansion of what we can observe.

Implications for Entrepreneurs

This research also may provide entrepreneurs engaged in the fight to avoid entrepreneurial failure themselves, both incentive and structure either to persist or to make a termination decision more effectively. Rather than acting on some vague notion that failure can lead to later success, entrepreneurs—by considering the potential for a particular fight to act as coach—can assess that fight, either exit then or attempt improvements depending upon the conclusion drawn, thereby refine expectations for their companies and for themselves, and apply their energies toward expertise creation.

Specifically, the implications of our theory suggest that entrepreneurs who decide to persist in the fight to avoid failure should seek to understand the required intensity explicitly: to assess realistically the task complexity and feedback clarity required for successfully improving performance, combined with the repetition of tasks required (not too much; not too little). They also should assess their stamina for sufficient duration: the total number of days, weeks, months, etc. during which they will, of necessity, engage in the fight to avoid entrepreneurial failure, with an appropriate timeframe and rapidity of feedback in mind. Additionally, those who decide to create additional entrepreneurial expertise should assess the necessary and clarity of the content

required for the fight: the number of functional domains that must be addressed, realizing that, once again, too little or too much could compromise their learning benefits from their efforts.

Alternatively if expertise creation by and performance improvement are unlikely given the information surfaced by the foregoing analysis, then a credible reason will exist to terminate the venture swiftly. But even in the case of termination, the application of the emergent practice model to a given situation can still deliver the previously noted benefits of learning from the failure event itself—to consider retrospectively questions such as: What feedback did I receive from each decision? How correctly did I interpret the feedback at the time? Were there better opportunities I ignored? How deeply did I probe the problems? Or: did I correctly identify the root problems? While the intensity surrounding such counterfactual thinking may be somewhat lower than the intensity of the pre-failure cognitions discussed previously, we argue that according to the search, learning and adaptation stream of research at least (e.g., Lant and Mezas, 1992; Lant *et al.*, 1992; Morrison and Robinson, 1997), there might still exist some degree of duration and content, such that some entrepreneurial expertise creation might be salvaged from the experience.

Implications for Supporters

It is well known that many entrepreneurs who have failed in a venture indeed do launch new ventures (Stam *et al.*, 2008; Toft-Kehler *et al.*, 2014; Ucbasaran *et al.*, 2009; Ucbasaran *et al.*, 2010). How should potential supporters of subsequent ventures view past failure? While some see a prior failure as a badge of honor and an indication the individual is a “real” and “experienced” entrepreneur, supporters are understandably more cautious of backing an entrepreneur who has recently failed in a venture (Cope *et al.*, 2004; Shepherd *et al.*, 2009). The theoretical framework proposed in this paper suggests points for supports to consider. Such

questions as the following might assist: To what extent do indications of intensity, duration, and content in a previous fight to avoid entrepreneurial failure reveal expertise creation? To what extent can evidence be seen of improvements in entrepreneurial knowledge and problem solving “personal software”? If emergent-practice expertise creation can be identified, then the financial backers, for example, might expect increased entrepreneurial expertise to positively affect future entrepreneurial performance.

Limitations

We also suggest the following limitations in our theorizing. First, it is not sufficiently clear how best to bound the fight to avoid entrepreneurial failure. When does such a fight start? End? It might be argued that most businesses are faced with existential crises perennially, given the adverse selection mechanisms of the marketplace. Thus, the failure boundaries of our model are, of necessity, somewhat abstract. Future studies could be helpful in the development of more precise temporal and contextual specifications.

Second, given individual differences, the general notions suggested in the model—the impacts of intensity, for example—might differ widely across individuals within a given “fight” group (those who are fighting to avoid entrepreneurial failure). We therefore suggest attention to the within-person variations that arise due to the dynamics of cognition (e.g. the action, embodiment, socially situated, and distributed attributes of entrepreneurial cognitions [see Mitchell *et al.*, 2011]). Future research might therefore consider additional specification of our model using concepts from socially situated cognition research (see, Randolph-Seng, *et al.*, 2015).

Third, the idea of expertise being comprised of a knowledge base and problem-solving processes (Figure 1) that arises in part due to emergently-practiced “content” has not, in this

paper at least, been integrated with research that leads us to expect arrangements, willingness, and opportunity-ability cognitions or scripts (e.g., Mitchell *et al.*, 2000, 2002) to develop as components of new venture formation expertise. Additional theoretical and operational specification thus appears to be warranted.

Fourth, the notion of emergent practice—useful for enabling the parallelism between the failure avoidance and deliberate practice processes—is new to the literature; and because the notion of deliberate practice to date has included unvaryingly the influence of coaches, the “fight as coach” notion represents as yet, only a plausible assertion in need of testing.

Conclusion

Using the deliberate practice concept from the expertise literature, as modified to fit a real-world emergent practice processual context, we have argued that the “fight to succeed” actually *is* the “coach.” Thus, we cast the intense, durable, high-content experience leading up to entrepreneurial failure (or its avoidance), heretofore seen as a complex, idiosyncratic, and often threatening learning context, as in reality, a simple, generalizable, and tractable learning opportunity. This paper therefore provides a new point of departure for those who study, and who experience, the fight to avoid entrepreneurial failure, and for those who seek to learn from it.

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**TABLE 1 – A RECENT CHRONOLOGY:
SELECTED INDIVIDUAL-LEVEL FACTORS AFFECTING LEARNING THROUGH FAILURE**

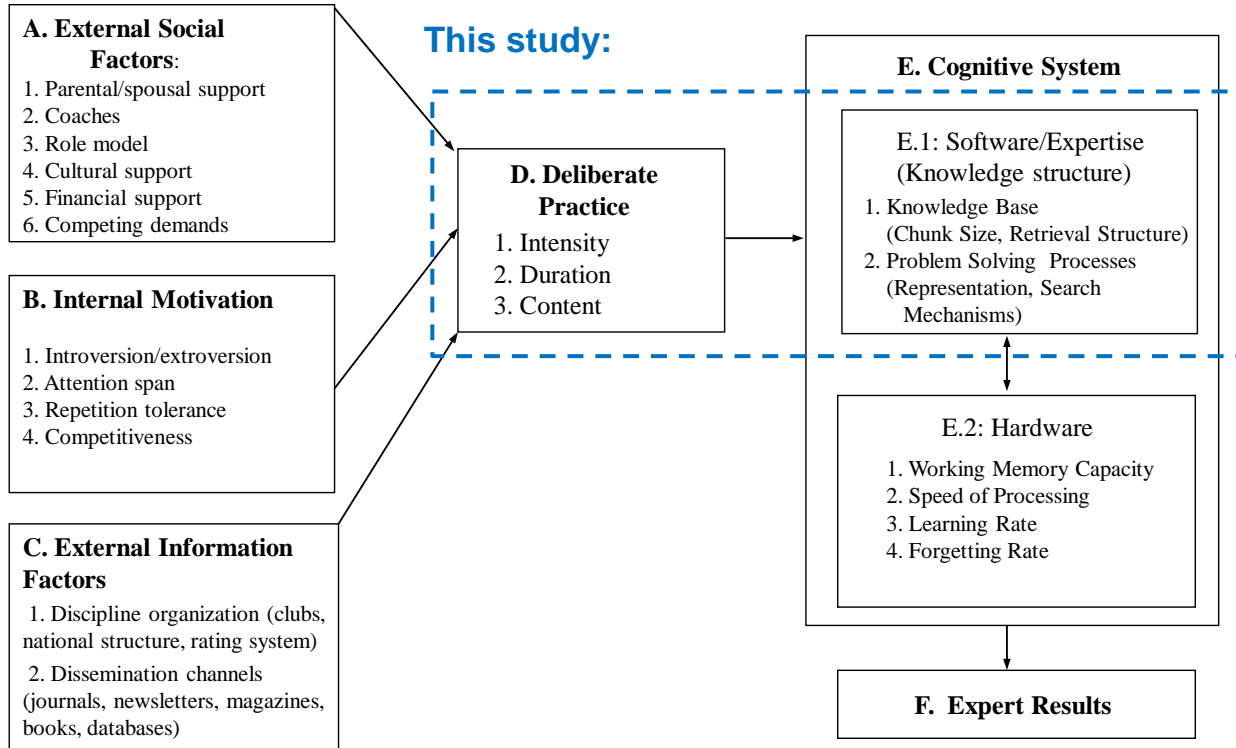
Author(s)	Quote	Developmental Narrative
Cardon & McGrath (1999: 62)	<i>Individuals with developmental goals and the associated mastery reaction to failure have an ability to sustain their resolve through periods of difficulty, to seek challenging learning opportunities, and to try to maximize their attainment in the long run.</i>	1. Individuals who view failure as a developmental opportunity are more likely to remain motivated and work hard during a failure experience.
Shepherd (2003: 321)	<i>Individuals with high levels of grief learn less from information about the loss of a business than individuals with low levels of grief, and grief's interference with learning is greater at high levels of information than at low levels of information.</i>	2. Individuals that can better reduce their level of grief associated with a failure are more likely to develop expertise through that failure.
Politis & Gabrielsson (2009: 365)	<i>A positive attitude towards failure can for example enhance the willingness to learn from a failure situation and help gaining insights and changing mindsets so that mistakes are not repeated (Cannon and Edmondson, 2005).</i>	3. Individuals who view failure positively are more likely to develop expertise through a failure experience.
Shepherd, Wiklund & Haynie (2009, 139)	<i>In the end, anticipatory grieving likely facilitates an owner-manager's process of emotionally coping with business failure, by better preparing the owner-manager to learn from the experience and reinvest their emotions elsewhere.</i>	4. Individuals who grieve in anticipation of a failure are less likely to allow grief to impede the learning associated with expertise through failure.
Ucbasaran, Westhead & Wright (2009: 101)	<i>Prior failure can hinder learning and restrict the motivation to try again (Shepherd, 2003). Conversely, prior failure may stimulate learning and adaptation (McGrath, 1999). The general cognition literature suggests that the nature of prior failure needs to be considered regarding the number of failure experiences (Brunstein and Gollwitzer, 1996) and the relevance of the failure to an individual's self-identity (Schultheiss and Brunstein, 2000).</i>	5. Individuals who have failed several times in the past may not be as likely to create expertise through the most recent failure experience.

Author(s)	Quote	Developmental Narrative
Ucbasaran, Westhead, Wright & Flores (2010: 552)	<i>Our evidence reveals significant differences in how sequential and portfolio entrepreneurs make sense of their experience of business failure. While portfolio entrepreneurs report a lower likelihood of reporting comparative optimism following business failure experience, sequential entrepreneurs appear to maintain their comparative optimism.</i>	6. The number of ventures an entrepreneur is currently engaged with may individually affect their level of optimism, which may be associated with the level of expertise they create through a failure experience.
Ucbasaran, Shepherd, Lockett & Lyon (2013: 179, 180)	<i>Conversely, experiencing failure in a domain relevant to an individual's self-definition has been found to heighten the motivation to compensate for self-definitional shortcomings and reassures the individual that he or she is capable of achieving the self-definitional goal (Brunstein & Gollwitzer, 1996). The only evidence of which we are aware on this issue is Cardon and McGrath's (1999) study of students who reported a "mastery reaction" to failure. This reaction involved attributing failure to a lack of effort (as opposed to ability) and, as a result, led them to redouble their efforts.</i> <i>Consequently, optimistic individuals are more likely to treat adversity as a challenge, transform problems into opportunities, attempt to adapt/develop skills, maintain confidence, rebound quickly from setbacks, and persist (Seligman, 2006).</i>	7a. Individuals who strongly identify themselves as entrepreneurs are likely to be highly motivated to try again and to attribute the previous failure to something that can be addressed by working harder. 7b. Optimistic individuals are more likely to overcome the grief associated with failure, aiding their expertise development and likelihood of future entrepreneurial success.
Ucbasaran, Shepherd, Lockett & Lyon (2013: 192)	<i>For example, perhaps dealing with business failure helps entrepreneurs build coping self-efficacy, emotional intelligence, and other sources of resilience. Another interesting possibility for understanding personal growth from business failure is the role of positive emotions and self-regulation</i>	8. Individuals who develop (or preserve) coping self-efficacy and resilience through failure may be better suited for future entrepreneurial efforts. Positive emotions and the ability to self-regulate emotions may also play a role.
Eggers & Song (2015, 1799)	<i>Consistent with work suggesting that managers need to agree on the cause of failure in order to learn from it (Cannon & Edmondson, 2001), our perspective suggests that such potentially erroneous attributions make learning in the context of entrepreneurial failure difficult.</i>	9. Individuals' ability to properly interpret feedback and make correct attributions is likely to affect the level of expertise they develop through failure.

Author(s)	Quote	Developmental Narrative
Yamakawa, Peng & Deeds (2015: 225)	<i>On the one hand, the results of our analysis support the view that internal attribution of the cause of failure can lead to greater performance (in the form of venture growth) when entrepreneurs have experienced a low number of failures. On the other hand, internal attribution of blame can lead to negative outcomes when entrepreneurs suffer from a high number of failure experiences.</i>	10. Individuals with a primarily internal attribution tendency through a failure experience are more likely to exhibit superior performance in future endeavors. This effect is muted as the number of past failures increases.
Byrne & Shepherd (2016: 396)	<i>We found that in entrepreneurs' narratives, high negative emotions followed by high positive emotions resulted in a cognitive process that facilitated sensemaking.</i>	11. Individual's emotional response over time may affect learning post-failure and thus the level of expertise developed.
Mueller & Shepherd (2016, 476)	<i>Cognitive tools such as opportunity prototypes and an intuitive cognitive style may be critical pieces of a "cognitive toolset" that better enable entrepreneurs to learn from their failure experiences (at least in terms of the use of structural alignment processes in attempts to identify opportunities).</i>	12. Differences in individual cognitive styles (intuitive versus analytical) may allow entrepreneurs to learn more about how to link product capabilities to market needs in subsequent ventures.

FIGURE 1: SOURCE MODEL

General Model of Expertise/Skill Acquisition



Adapted from Charness et. al., 1996; Mitchell, 2001

FIGURE 2: THEORETICAL MODEL

