# "Bouncing Back" From a Loss: Entrepreneurial Orientation, Emotions, and Failure Narratives

Marcus T. Wolfe
Dean A. Shepherd

In this study, we explore how failure in the form of the first lost game of the college football season for a team influences specific content within the narratives constructed regarding that loss and how those narratives are associated with subsequent performance. Building on theoretical perspectives regarding sports management, entrepreneurial orientation (EO), emotions, and the use of narratives for sensemaking, we develop and test an EO-related sports management model of failure narratives. Using computer-aided text analysis of transcripts from head coaches' press conferences directly following their team's first loss of the season as well as regression analysis, we found that the narrative's EO content has a U-shaped relationship with subsequent (i.e., next game) performance. Additionally, negative emotional content had a similar U-shaped relationship with subsequent performance. Finally, positive emotional content exhibited an inverse U-shaped relationship with subsequent performance. We discuss the implications of these results on the literatures regarding EO, emotions, and sports management as well as possible avenues for future research.

**E**ntrepreneurial activity in the form of opportunity recognition, development, and exploitation can occur for a number of different reasons (e.g., social entrepreneurship [Austin, Stevenson, & Wei-Skillern, 2006], environmental entrepreneurship [Dean & McMullen, 2007], etc.) and can take place in a variety of diverse industries. Indeed, recent research has made the case for the importance of sport-based entrepreneurship as a stream of research (Ratten, 2010, 2011). In this perspective, "entrepreneurship is an integral part of sports management and creates a competitive advantage for people involved in sports" (Ratten, 2011, p. 58). Several parallels between sporting events and entrepreneurial initiatives can be made, including that both involve significant levels of uncertainty that often result in project failure—a project outcome that falls short of its intended goal (Hoang & Rothaermel, 2005; McGrath, 1999). Project failures allow organizations, including sports teams, to develop a better understanding of their overall position within the competitive environment and to take actions to improve that position (Popper & Lipshitz, 2000). However, developing understanding is predicated on the notion that

---

Please send correspondence to: Marcus T. Wolfe, tel.: (812) 361-5674; e-mail: mtwolfe@bsu.edu, and to Dean A. Shepherd at shepherd@indiana.edu.

organizations are able to make sense of failure experiences and take the appropriate steps necessary to reduce the likelihood that they will make the same mistakes again. Moreover, while failures and negative short-term outcomes can result in a reduction in entrepreneurial initiatives (March, 1991), for organizations that operate in high-velocity, dynamic environments, such as prominent sports leagues, maintaining entrepreneurial activities can be a critical factor in determining long-term success (Ratten, 2011). Making sense of one's failure experiences and maintaining an entrepreneurial orientation (EO) represents an important challenge for organizations, a challenge that can be managed through the use of *narratives*.

Narratives can give meaning to events, not only communicating past processes but also shaping future behaviors (Orr, 1995). In addition, they have been shown to be critical for a variety of purposes throughout the entrepreneurial process (Fletcher, 2007; Martens, Jennings, & Jennings, 2007)—none perhaps more important than the role they play in the sensemaking process (Brown, Stacey, & Nandhakumar, 2008). However, while considerable research points to the importance of narratives in sensemaking (Weick, 1995; Weick, Sutcliffe, & Obstfeld, 2005), a relative paucity of research remains on precisely how narrative elements differ in providing an understanding of past events as well as providing justification for future activities. We attempt to address this issue by building on past research on failure, EO, and emotions to theorize about how specific narrative elements are communicated after failure and how narratives are associated with subsequent performance (i.e., "bouncing back" with improved performance at the next project, initiative, or game).

In developing and testing an EO-related sports management model of failure narratives, we make three primary contributions. First, a substantial stream of research has found a generally positive relationship between EO and performance (Rauch, Wiklund, Lumpkin, & Frese, 2009)—which is moderated by the external environment (Covin, Slevin, & Heeley, 2000; Lumpkin & Dess, 2001) and internal characteristics (Wang, 2008; Wiklund & Shepherd, 2003)—and recognizes the potential for a nonlinear relationship (Kreiser, Marino, Kuratko, & Weaver, 2013; Wales, Patel, Parida, & Kreiser, 2013). Indeed, research has contributed to our understanding of EO by theorizing and finding an inverted U-shaped relationship, demonstrating that moderate EO is associated with superior performance for either low or high EO (Tang, Tang, Marino, Zhang, & Li, 2008). Interestingly, more recent efforts at examining the influence that EO has on performance within the context of small- to medium-sized enterprises (SMEs) suggests that in these contexts, the EO–performance relationship could take on an opposite U-shape (Kreiser et al.). Rather than exploring EO as a relatively stable attribute (Wiklund, 1999) and investigating its association with performance as an average over the past several years (Covin, Green, & Slevin, 2006; Lumpkin & Dess), we explore the EO content of a narrative immediately after a failure/loss event and its association with performance only 1 week later. We theorize and find a U-shaped relationship between the EO content of the failure narrative and subsequent performance: high or low EO content of the failure narrative is more associated with "bouncing back" than moderate EO content. Therefore, we complement research on the long-run, average nonlinear relationship between EO and performance by investigating the short-run, event-based (failure/loss) nonlinear relationship between EO content (of the narrative) and performance. Additionally, whereas most research regarding EO looks specifically at behaviors, we instead examine the importance of EO as a narrative element. Extending upon existing narrative research regarding the use of narratives to inform decisions and actions (Boje, 1991), provide influences on strategic action (Dunford & Jones, 2000), and serve as a mechanism for organizational change (O'Connor, 2000), we examine specifically how EO content as a narrative element can

influence subsequent actions and performance. This perspective provides a novel insight into the EO attitude–behavior link within organizations.

Second, prior research has recognized the role of both negative (Shepherd, Patzelt, & Wolfe, 2011) and positive (Tugade & Fredrickson, 2004) emotions in "bouncing back" from adversity like failure events. Complementing studies on how negative emotions can facilitate (Weick & Sutcliffe, 2001) or obstruct (Maitlis & Sonenshein, 2010) sensemaking, we theorize and find that when it comes to failure narratives, low or high negative emotional content is more associated with "bouncing back" than moderate content. We also complement the broaden-and-build theory of positive emotions by theorizing and finding an upper bound to the positive emotional aspect of narrative content: More positive emotional content is associated with enhanced performance; however, after a point, further increases of positive emotional content are associated with diminished performance.

Finally, although there have recently been efforts to develop and incorporate entrepreneurship into the field of sports management (Ratten, 2010, 2011), there remains a need to further develop how EO relates to the field of sports management and how these two areas of research can inform each other. By examining the influence of failure narratives on subsequent performance in the area of collegiate football programs, we contribute not only to the study of EO but also to the field of sports management as well as the intersection between the two.

The remainder of this paper proceeds as follows. First, we begin by developing the relevant theoretical background relating failures to narratives, and utilizing a sensemaking perspective, we discuss how narratives facilitate the understanding of failure and communicate that understanding to improve subsequent performance. Second, we detail the methods involved in testing the stated hypotheses followed by reporting the results of the analysis. Next, we discuss the significance and implications of the results from both academic and practical perspectives. Finally, we discuss the limitations of the current study and suggest areas of future research that could be beneficial in building on and further enhancing the presented results.

## Research Context

It has been noted that the phenomenon of entrepreneurship has long since expanded beyond the boundaries of individuals creating new business ventures (Covin & Slevin, 1991). As a part of this evolution, the concept of EO has become a central focus of research within the domain of entrepreneurship (Covin & Wales, 2012). While there are a number of definitions for EO, each with its own specific nuances, for the purpose of this study, we define EO as "a propensity to act autonomously, a willingness to innovate and take risks, and a tendency to be aggressive towards competitors and proactive relative to opportunities" (Lumpkin & Dess, 1996, pp. 136–137). While the undertaking of these activities is most often examined from the perspective of for-profit businesses, this does not appear to represent a boundary condition of the theory. If EO is indeed an "organizational" phenomenon and organizations are "understood to be systems of coordinated and controlled activities that arise when work is embedded in complex networks of technical relations and boundary-spanning conditions" (Meyer & Rowan, 1977), then there is potentially a number of different contexts in which organizations might benefit from EO activities. For example, Pearce, Fritz, and Davis (2010) found EO to enhance religious institutions' performance, and the growing stream of research on social entrepreneurship has demonstrated that EO is beneficial in nonprofit organizations as well

(Austin et al., 2006). These findings support the idea that EO is not strictly a "for-profit" business concept but rather an organizational concept. Therefore, examining areas in which "other" organizational forms benefit from activities that are innovative, proactive, competitively aggressive, risky, and autonomous can provide a richer understanding of EO.

Our research context—Division I college football programs—offers several unique aspects related to EO activities. These programs can be viewed as more or less entrepreneurial organizations (Napier & Nilsson, 2006; Sperber, 2004). That is, these football programs likely incorporate the various dimensions of an entrepreneurial organization into their operations to maintain a high level of performance and promote future success. First, in terms of the innovation dimension of EO, major college football programs often develop novel strategies in the form of new plays, formations, and personnel configurations with the hopes of increasing their performance. Additionally, the development of technology that can be exploited to enhance performance has substantially impacted the field of college football (Chen & Ji, 2012). Whether it involves the use of advanced materials for equipment, advanced video examination, rule changes, or the introduction of instant replay, college football has experienced a number of technological advancements that have added to the turbulence and velocity of change within the overall environment. All these factors serve to amplify the need for college coaches to be able to successfully innovate to keep pace with current trends and hopefully enhance performance.

Second, "sports organizations are proactive in managing their teams and developing better overall team performance" (Ratten, 2011, p. 61). In the context of major college football programs, evidence of proactive behavior can readily be observed in the aggressive manner in which programs recruit highly rated athletes (Dumond, Lynch, & Platania, 2008). This phenomenon, coupled with the growing trend for the most talented athletes to leave school early to seek professional careers (Edwards, 2000; McCormick & McCormick, 2006) and the need for college football programs to demonstrate proactiveness in ensuring they obtain the best recruits, is an important factor in determining a program's overall continued success. However, there are potential dangers to increasing proactiveness in certain areas as these activities often narrowly skirt the line of violating rules (Cullen, Latessa, & Byrne, 1990) and have resulted in several high-profile scandals involving illegal recruiting efforts by major programs (Aschoff, 2011; Carvell, 2012).

Third, risk taking in sports involves a number of different organizational members (Ratten, 2011) and is not merely exhibited by players on the field (Kedar-Levy & Bar-Eli, 2008). College coaches are also required to exhibit substantial levels of risk taking under certain conditions to increase the chance for success. Examples from the football setting can be seen in actions like attempting to convert a fourth down, going for a 2-point conversion, or making an onside kick. These types of activities demonstrate a high level of risk taking with the potential for high rewards. Indeed, statistical analysis suggests that employing risk-prone strategies can produce benefits over risk-averse strategies in a number of game-related situations (Jordan, Melouk, & Perry, 2009). Therefore, even though risk-averse strategies might be employed more successfully under certain conditions (Jordan et al.), in general, there are benefits to college coaches knowing and utilizing risk-taking behaviors as important components to the successful management of their programs.

Fourth, competitive aggression relates to the level and intensity of an organization's actions aimed at outperforming their rivals and is often expressed in the form of a combative posture and a sudden, forceful response to competitive actions (Lumpkin & Dess, 2001). This form of competitive aggression as it relates to entrepreneurial action is

evident in a number of actions in the football setting. Activities like attempting to recruit the highest profile players, trying to lure the most talented coaches, and developing strategies and playbooks focused on aggressive styles of play are all examples of how competitive aggression can play out within this particular setting. In fact, competitive aggression in areas like player recruitment has been shown to substantially enhance performance (Langelett, 2003). Because the top-rate recruits each year are a relatively scarce resource and the competition to acquire this resource is intense, competitive aggression is often rewarded.

Finally, it has been argued that EO requires "the exercise of autonomy by strong leaders, unfettered teams, or creative individuals who are disengaged from organizational constraints" (Lumpkin & Dess, 1996). Autonomy allows organizational members freedom and flexibility in determining their actions (Lumpkin, Cogliser, & Schneider, 2009). Examples of exhibitions of autonomy in the football setting include assistant coaches having the freedom to call their own plays, head coaches being afforded the opportunity to hire their own staff, and players calling audibles for specific plays during the course of the game. These actions are all demonstrations of how autonomy is exhibited within the context of college football and how it can substantially alter the overall performance of any given team.

## Theory and Hypotheses

Building on the narrative (Hjorth & Steyaert, 2004; Pentland, 1999), EO (Lumpkin & Dess, 1996), and emotions (Ashkanasy & Tse, 2000; Weiss & Cropanzano, 1996) literatures, we develop and test an EO-related sports management model of failure narratives. Our model investigates three specific aspects of the failure narrative that are theorized to influence the subsequent success of entrepreneurial initiatives: EO content, negative emotional content, and positive emotional content. Specifically, this study focuses on how each of these elements contained within the failure narrative can influence subsequent team performance.

### The Narrative

Whether they are used for obtaining funding (Martens et al., 2007), defining market boundaries (Santos & Eisenhardt, 2009), or conveying EO to shareholders (Short, Broberg, Cogliser, & Brigham, 2010), narratives provide an important mechanism for organizations to accomplish a number of crucial entrepreneurial activities. For the purpose of this research, we define narratives as themed accounts of sequences of interrelated events or actions undertaken by those who relate them or about whom they are related that convey meaning from the author to the reader (Barry & Elmes, 1997; Czarniawska, 1998; Gabriel, 2000). It is important to note that narratives contain three primary components: a subject, an object or goal the subject is attempting to obtain or accomplish, and a set of forces that enables or restricts the subject from obtaining the desired object or accomplishing the desired goal (Fiol, 1989). Furthermore, narratives contain some form of temporal sequencing—either implicit or explicit—that creates a sense of plot for the story being told (Barry & Elmes).

While researchers have investigated the usefulness of narratives for a number of purposes, one of the most fruitful areas of study is the use of narratives for sensemaking purposes (Weick, 1995). In fact, narratives have been referred to as "the preferred

sensemaking currency of human relationships among internal and external stakeholders" (Boje, 1991, p. 106). Narratives are not only used to retell past events but are also critical components of constructing present identity as well as justifying future actions (Czarniawska, 1997, 1998). As noted by Weick, narratives "allow the clarity achieved in one small area to be extended and imposed on an adjacent area that is less orderly" (Weick, p. 129), thereby affording the opportunity to mold the way in which stories are communicated and understood by prominent internal and external stakeholders. Key elements within narratives are used as precedent to inform decisions and actions (Boje) and influence organizational change (Dunford & Jones, 2000; O'Connor, 2000). From this perspective, we investigate how specific attitudes presented within the narrative context influence subsequent performance.

## EO Content and Bouncing Back

While prior research supports the general notion that EO positively influences performance (Rauch et al., 2009), evidence suggests that this relationship might not be linear in nature (Zahra & Garvis, 2000). Interestingly, a recent investigation into the EO–performance relationship in SMEs suggests that this relationship is in fact U-shaped in these organizations (Kreiser et al., 2013). From a sensemaking perspective, the use of narratives can represent an important link between effectively communicating the level of EO required to bounce back after a loss. The narratives constructed regarding failure give meaning to the events, actions, and objects involved in that failure (Orbuch, 1997; Scott & Lyman, 1968). Indeed, narratives are not merely used to reflect the past but are also influential in shaping future behaviors (Orr, 1995), and are especially important in enacting organizational change (Dunford & Jones, 2000). Therefore, when a sensemaking perspective of narrative use is adopted, it is likely that the EO content contained within a failure narrative could influence subsequent performance; that is, the EO content of the narrative represents a form of communication intended to portray key elements of how failure is interpreted and understood.

Regarding college football teams' failure narratives, we are interested in the extent to which EO content is associated with the team "bouncing back" in the next week's game. It is important to note that engaging in EO does not always prove beneficial (Hart, 1992). Undertaking EO initiatives requires substantial commitment of resources (Hornsby, Kuratko, Shepherd, & Bott, 2009). Therefore, it is possible that EO activities could potentially leech resources away from other important activities that are vital for organizational survival and success (Rosenbusch, Brinckmann, & Bausch, 2011). If this is the case, then participating in low levels of EO could allow organizations to invest critical resources in other, more beneficial areas, thereby enhancing subsequent performance. This low level of EO would be reflected in narratives that contain relatively few messages relating to the need to be proactive, innovative, risk taking, competitively aggressive, or autonomous with regard to future situations. Examples of such language include "We're going to find positives, and there is so much football left to play in the season; that's the thing about it. We'll watch tape, and we are going to move on. I really do believe we will get better" (Lynch, 2006) and "I think that's true for our football team if you look at the game. Whatever mistakes we made, we still had opportunities to score and put ourselves in position to win" (Roof, 2006).

While the benefits of EO on performance are well documented (Wiklund, 1999; Zahra & Covin, 1995), they do not come without a price. For teams that proactively pursue a lead (Lumpkin & Dess, 2001) or take risks to enhance overall performance (Covin & Slevin, 1989), they often find substantial costs associated with these types of activities (Li &

Atuahene-Gima, 2001; Rosenbusch et al., 2011). For instance, EO-related efforts often require a large *a priori* expenditure of organizational resources (Hornsby et al., 2009; Li & Atuahene-Gima) and are often associated with a higher likelihood of costly failures (Alvarez, 2007), thereby placing the chance for achieving rewards for such activities at risk (Freel, 2005). If the failure narratives report moderate levels of EO, this might reflect a lack of complete commitment to the EO initiatives, thereby might result in a lack of success as a result. This moderate variation might result in a reduction in the team's ability to execute during a given situation because they have not had adequate time to develop the necessary depth of understanding required to execute the given plays appropriately. Consequently, if the variations they have introduced are not different enough to confuse the opposing team, overall performance could suffer.

With high EO, it is possible for the team to make a sufficient investment of resources and commitment, such that the benefits of EO outshine the associated costs (Kreiser et al., 2013). Under these conditions, there are still relatively high costs associated with undertaking EO initiatives, but because the team has an appropriate clarity of goal, and allocates the necessary resources required to achieve that goal, the benefits of these activities outweigh the costs. For example, high EO content of failure narratives include statements like "(We've) got to have a totally different game plan (next) week" (Alvarez, 2005) and "There could be some scheme changes. We have to do something to try and create more offense. . . . We don't want to divulge all our new plans, but we will be a different looking offense" (Spurrier, 2006). Therefore, whereas a move from low to moderate levels of EO content likely results in actions for which the costs exceed the benefits, we propose that moving from moderate to high levels of EO content could result in advantages that exceed their respective costs. Based on this reasoning, we offer the following hypothesis:

**Hypothesis 1:** The EO content of head coaches' failure narratives will have a U-shaped relationship with teams' next game performance.

## Negative Emotions and Bouncing Back

Because firms that engage in entrepreneurial activities take risks (Covin & Slevin, 1991; Lumpkin & Dess, 1996), they are more prone to experience failure as a result of such activities (Wiklund & Shepherd, 2011). These types of failure experiences can result in negative emotions for the individuals involved (Shepherd et al., 2011). The negative emotional consequences of failure can have important influences on subsequent performance. From the affect-as-information perspective, in making judgments regarding a specific situation or event, people may simply ask themselves how they feel about that event and use that as information to influence subsequent actions (Schwarz & Clore, 1988, 1996). Negative emotions help maintain attentional focus (Bless, Bohner, Schwarz, & Strack, 1990), promote deeper information processing (Bless et al.; Schwarz, 1990), enhance spatial performance (Gray, 2004), elevate acceptable performance standards (Cervone, Kopp, Schaumann, & Scott, 1994), and increase the likelihood of subsequent goal attainment (Brown & Eisenhardt, 1997). Therefore, the absence of (or presence of low levels of) negative emotions could hinder subsequent performance.[1]

---

1. Emotions are not solely individual in nature but can be experienced at the group level as well (Barsade, 2002). The positive or negative tone that individuals display has been shown to impact the emotional state of those around them (Lewis, 2000), and the formation of such collective emotion may lead to common action with regard to attaining a group goal even though individual members of the group may experience different personal emotions (Barbalet, 1998).

However, there is also evidence suggesting that high levels of negative emotions generated from failure can have detrimental effects at both the individual (Pierce, Kostova, & Dirks, 2001) and group levels (Cannon & Edmondson, 2001). Overidentification, or rumination, on failure and the negative emotions that it produces can lead to negative outcomes (Segerstrom, Tsao, Alden, & Craske, 2000). Research has shown that when individuals place too much focus on negative events and emotions, they generate rumination, which inhibits effective problem solving (Lyubomirsky & Nolen-Hoeksema, 1995) and interferes with making sense of the failure experience (Borders, Earleywine, & Jajodia, 2010; Kross, Ayduk, & Mischel, 2005). Therefore, whereas a move from low to moderate levels of negative affective content in the failure narrative is likely associated with enhanced performance, a move from moderate to high negative affective content in the failure narrative is likely associated with diminished performance. Therefore, a moderate level of negative emotion in the failure narrative communicates sufficient information for future actions but not so much that individuals ruminate over the failure. Based on the earlier reasoning, we offer the following:

**Hypothesis 2:** The negative emotional content of head coaches' failure narratives will have an inverted U-shaped relationship with teams' next game performance.

## Positive Emotions and Bouncing Back

It is important to consider the role positive emotions play in the relationship between the failure narrative and subsequent performance. Positive emotions have been linked to improved performance in work (Lyubomirsky, King, & Diener, 2005) as well as entrepreneurship (Cardon, Wincent, Singh, & Drnovsek, 2009; Cardon, Zietsma, Saparito, Matherne, & Davis, 2005) via a number of different psychological mechanisms. Positive emotions elicit the "broaden-and-build" phenomenon, whereby they broaden thought–action repertoires to deal with adversity, which in turn serves to build enduring personal resources (Fredrickson, 1998, 2001) that can be beneficial in promoting future performance. Positive affect has also been shown to facilitate the integration of information as well as decrease potentially detrimental cognitive anchoring in reasoning processes (Lyubomirsky et al.), which allows for enhanced reasoning and decision making. Additionally, positive emotions can have somewhat similar effects at the group level as well (Fredrickson, 2003), with evidence supporting the notion that a leader's expression of positive emotions can be influential in predicting his/her entire group's subsequent performance (George, 1995). Based on this reasoning, it is likely that shifting the positive emotional content of the failure narrative from low to moderate levels would be associated with enhanced subsequent team performance.

However, although positive emotions can have beneficial influences on performance, particularly after experiencing failure, not all the effects they can produce may be advantageous. Positive emotions have been shown to enhance feelings of optimism after negative experiences (Fredrickson, Tugade, Waugh, & Larkin, 2003). While optimism can be useful, there are risks associated with extreme levels of optimism (e.g., becoming overoptimistic). Overoptimism is a prevalent cognitive bias among entrepreneurs (Baron, 2004) and has been shown to negatively affect entrepreneurial performance (Lowe & Ziedonis, 2006). Overoptimistic perspectives can lead to an unwillingness to recognize the need for improvement and can negatively alter the actions and activities to enact the necessary change. In turn, this overoptimistic perspective increases the risk that future entrepreneurial attempts will result in failure due to similar causes. The dangers that

overoptimism present are relevant with regard to the effects this cognitive bias might have on overall team performance.

While expressing some positive emotions after failure is necessary to gain the benefits these emotions produce, expressing even more positive emotions likely diminishes subsequent performance. Examples of more moderate expressions of positive emotions in head coaches' narratives are seen in statements like "The team played hard, but there were some signs of the things we can do offensively" (Dorrell, 2005) and "We're disappointed, but I'm really proud of the way our players played today. . . . There are no moral victories of course, but I'm really proud of the way our guys fought today" (Callahan, 2005). So, as was the case with the expression of negative emotions, a moderate level of negative content is likely associated with higher subsequent performance. Based on the earlier reasoning, we offer the following:

**Hypothesis 3:** The positive emotional content of head coaches' failure narratives will have an inverted U-shaped relationship with teams' next game performance.

## Method

### Sample

As previously mentioned, sports teams have been shown to provide examples of entrepreneurship (Ratten, 2010), and the benefits that teams can reap by adopting entrepreneurial perspectives can be important factors in determining their overall success (Ratten, 2011). One of the key factors involved in both entrepreneurial sporting teams and entrepreneurial firms is the ability to cope with failure. Because sensemaking has been shown to be an important process in understanding and coping with failure and because narratives and communication are vital components in sensemaking, we believe that analyzing narratives constructed about losses can provide an important insight into how failure is processed, understood, and communicated to increase the potential for future success. The sample for this study was constructed using written transcripts of postgame press conferences with head coaches of football programs following the programs' first loss of the listed season. While a case could be made that any interview regarding a failure could be considered impression management—where coaches attempt to convey a specific message to the media—it is unlikely to be the case in the current context. Postgame press conferences are viewed by a number of important stakeholders, including prominent alumni, university administrators, and the player athletes themselves, all of whom will have substantial "skin in the game," so to speak, in terms of the narratives coaches construct following a loss. Because of this wide and influential audience, we argue that coaches will tend to convey their thoughts and beliefs regarding the event as accurately as possible and that this will in turn be an adequate reflection of the overall narrative the team also constructs about the loss. This belief is empirically substantiated by the significantly high correlation between specific elements within the head coach's narrative and narratives from various other sources regarding the same event (this will be detailed further in subsequent sections).

With respect to the affiliations of the narratives sources, 12 narratives were from sources in the Atlantic Coast Conference, 7 were from sources in the Big East Conference, 12 were from sources in the Big Ten Conference, 9 were from sources in the Big Twelve Conference, 11 were from sources in the Pacific Twelve Conference, and there was 1 independent source. Transcripts for each narrative were gathered over the period of 2005–2009; however, two data points are missing due to teams going undefeated over

the course of the year (Texas in 2005 and Alabama in 2009). This sampling resulted in an unbalanced panel data set comprising 66 teams and a total of 328 individual observations. On average, narratives were 1,310.62 words long (standard deviation [SD] = 1,239.45), with teams recording 6.87 (SD = 2.63) wins per season on average as opposed to 5.04 (SD = 2.51) losses and the average point margin of the first loss being 12.83 (SD = 10.94).

## Dependent Variable

The dependent variable in this analysis—subsequent game performance—describes the team's point differential in the game following the first loss. This value was calculated by subtracting the opponent's score from the team's score in the game after the first loss of the season. While other potential measures could be used for performance, most suffer from certain disadvantages compared with this measure. For example, while a win/lose analysis can determine if the team was successful on the next attempt, it does not offer a more detailed account of how the team actually performed. Similarly, comparisons of points scored or points allowed afford a more detailed account of one specific aspect of performance but fail to capture overall performance as completely as the measure we have constructed.[2]

## Independent Variables

*EO content* is a variable intended to derive the EO-related terms that head coaches included in their postgame press conferences. EO as a construct has a long and well-established history as a variable of interest (Covin & Wales, 2012), and there are numerous previously detailed subjective measures that have been developed as operationalizations of this concept (for a more thorough review, see Covin & Wales). However, while these existing measures have proven to be invaluable in their usefulness, there has recently been a call to diversify the measures of EO employed to gain a richer understanding of EO (Miller, 2011). In his recent reflection on his seminal EO paper, Miller posits that "In fact, with daunting frequency, the same 'classic' scales have been used to assess EO, restricting the variety of operationalizations of the construct and thereby making it difficult to establish convergent validity of measures" (Miller, p. 878). Because of this, Miller calls upon scholars to attempt alternative operationalizations of the EO construct. We seek to address this challenge by providing a complementary, objective measure of EO by using content analysis. For this study, EO content is a variable constructed from computer-aided text analysis (CATA). We utilized Short et al.'s (2010) dictionary of terms relating to this variable, which contains a total of 244 words capturing EO and has been gaining interest as an alternative method of EO operationalization (Zachary, McKenny, Short, Davis, & Wu, 2011). In Appendix A, we offer a full list of each of the six subdimensions along with excerpts of terms within those subdimensions as they appeared in the actual narratives. We loaded this dictionary into the Linguistic Inquiry and Word Count (LIWC) program and analyzed the narratives based on the amount of content they contained that was listed in the EO dictionary of terms. One advantage of using the LIWC as opposed to other CATA programs is that it produces

---

2. As a robustness check, we constructed a "difference of differences" variable by subtracting the point differential of the first loss from the point differential of the subsequent game. Analyses with this variable as the dependent variable yielded results with no significant differences from those reported later.

Table 1

EO Dimension Means, Standard Deviations, and Correlations

| Variable | Mean | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. EO total content | 0.584 | 0.405 | 1.000 | | | | | | | |
| 2. Autonomy content | 0.010 | 0.033 | 0.161** | 1.000 | | | | | | |
| 3. Innovativeness content | 0.082 | 0.117 | 0.355** | 0.042 | 1.000 | | | | | |
| 4. Proactiveness content | 0.040 | 0.082 | 0.140* | −0.075 | −0.007 | 1.000 | | | | |
| 5. Aggressiveness content | 0.158 | 0.189 | 0.499** | 0.143** | 0.014 | −0.033 | 1.000 | | | |
| 6. Risk-taking content | 0.100 | 0.161 | 0.449** | −0.041 | 0.090 | −0.004 | 0.003 | 1.000 | | |
| 7. Miscellaneous EO content | 0.184 | 0.252 | 0.692** | 0.062 | 0.107* | −0.016 | 0.087 | 0.641 | 1.000 | |
| 8. Other sources' total EO content | 0.413 | 0.404 | 0.782* | 0.093* | 0.061 | −0.009 | 0.107* | −0.038 | 0.109* | 1.000 |

* $p < .05$, ** $p < .01$.
EO, entrepreneurial orientation.

results as a percentage of overall content and therefore normalizes answers and eliminates variance that could result from the overall length of an individual document. In order to analyze potential nonlinear relationships involving EO, the variable was mean centered and then squared, and the resulting second-order variable was included in the regression analysis.

In order to determine if we were truly seeing measurable levels of all of the included aspects of the EO dictionary, we further analyzed the narratives for the various subdimensions included in the original dictionary development. Results from this analysis in the form of the means, SDs, and bivariate correlations among the total EO construct as well as the six stated subdimensions are shown in Table 1. These results indicate that indeed, there were measurable levels of each of the subdimensions and that they were each significantly correlated with the total EO measure. As an additional robustness check of the total EO measure, we obtained additional transcripts from players interviewed after the loss. These additional narratives included interviews with at least two team players and, in some cases, as many as seven players and several assistant coaches. It is important to note that these interviews took place at the same time as the interviews of the head coaches, and focused on the same failure events as were discussed in the sample interviews analyzed from the head coaches. We analyzed these narratives for their EO content in a manner similar to that used for the coach's narratives. The results shown in Table 1 indicate that the EO content of these additional sources is indeed significant and highly correlated with the total EO found in the narrative of the head coach ($\rho = 0.782$; $p < .05$). This finding enhances the validity of using the EO content of the head coach's press conference narrative as a reliable measure of EO in this context.

*Negative emotional content* was determined using the LIWC dictionary (Pennebaker, Francis, & Booth, 2001). The LIWC negative emotion dimension consists of 499 entries and includes words like hurt, ugly, nasty, etc., which have been used previously in studies regarding the interpretation of written language (Burton & King, 2004). Again, to analyze potential nonlinear relationships involving negative emotional content, the variable was mean centered and then squared, and the resulting second-order variable was included in the regression analysis.

*Positive emotional content of narrative* was constructed in a manner consistent with previous studies regarding language analysis (Guastella & Dadds, 2006; Junghaenel,

Smyth, & Santner, 2008) using CATA and the LIWC dictionary analysis for positive emotions (Pennebaker et al., 2001). The LIWC list for positive emotions contains 406 separate entries and includes words like love, nice, and sweet. See Tausczik and Pennebaker (2010) for an extensive review of literature utilizing this operationalization.

## Control Variables

We included other variables in the analysis to control for possible alternative explanations for the hypothesized relationships, including the team's preseason rank, the rank of the team at the first loss, the rank of the opponent of the next game, the overall rank drop after the first loss, the timing of the first loss in the schedule (e.g., first game, second game, etc.), the location of the loss (e.g., whether the first loss was at home or away), the total point margin of the loss, the EO content of the head coach's press conference after the game prior to the loss, and the overall strength of the schedule for each team in a given year.

*Preseason rank, rank of the team at the first loss, and rank of the opponent of the next game* were all taken from the Massey Ratings for each team listed in the sample at the beginning of each season. While there are other polls that list rankings for college football teams, most notably the Associated Press and USA Today Coaches' polls, the majority of these alternative polls only list the top 25 ranked teams. The advantage of the Massey Ratings is that they are available for all 124 Division I football programs and therefore enabled us to track the rankings of teams outside the top 25 range.

*Overall rank drop after the first loss* was also calculated using the Massey Ratings. This control was calculated by taking the ranking of the team prior to their first loss and subtracting it from the ranking the team received the week immediately following the loss. This variable was included to determine the magnitude of effect the loss had from an external perspective with regard to the team's perceived ranking.

*Game of the first loss* represents the sequential point during the season the first loss occurred. This variable was included to control for potential differences in early versus late losses with regard to how such losses might influence subsequent performance.

*Home/away* was a dichotomous measure of whether the first loss occurred at a home or away game. This variable was coded 1 if the loss occurred at home and 0 if it occurred away and was included to control for potential effects that incurring the first loss at home versus away might have on the overall model.

*First loss margin* represents the total losing margin (in points). This variable was included to control for potential effects that might occur as a result of the magnitude of the loss.

*Prior EO content* represents the EO content of the head coach's press conference following the game prior to the loss. This variable was constructed by collecting the transcript from the head coach's press conference in the game directly prior to the loss and analyzing it for EO content. This variable was included to control for potential variances in overall entrepreneurial tendencies between individual coaches and the effects such tendencies might have on the overall model. There were a very limited number of instances for which the loss was the first game of the season. In these instances, we obtained the transcript from the first win of the season and analyzed it to construct this variable.

*Strength of schedule* was taken from the Massey Ratings for each team listed in the sample at the end of each season. This variable was included to control for the influence that having a relatively stronger or weaker schedule could have on the overall model.

## Analysis

A fixed-effects time-series cross-sectional regression model was used to estimate the models (Greene, 2003). A Hausman test indicated that the fixed-effects model was appropriate for this analysis. The sample contained 328 unique observations over 5 years, yielding an unbalanced time-series cross-sectional panel. As a robustness check, the models were also estimated using generalized least squares regression analysis controlling for heteroscedasticity, and the results were essentially the same. All models were estimated using Stata 12 (StataCorp, 2012).

## Results

Table 2 presents the means, SDs, and bivariate correlations for all study variables. Table 3 details the results of the models for the dependent variable—subsequent game performance. For the reason previously stated, we used fixed-effects time-series cross-sectional regression to estimate the models (Semadeni & Anderson, 2010) and performed additional robustness checks utilizing feasible generalized least squares estimation. To assess overall model fit, we calculated and reported the Akaike's information criterion (AIC) (a decrease in AIC indicates a better model fit [Akaike, 1974]).

The dependent variable for all models presented in Table 3—Models 1, 2, and 3—is subsequent performance. Model 1 represents the base model with only the control variables present. In the base model, both the game of the first loss ($\beta = -3.229$; $p < .01$) and the opponents rank in the following game ($\beta = -0.199$; $p < .01$) have a significant relationship with subsequent performance. Model 2 added the linear main effects of three aspects of the failure narrative: EO content, negative emotional content, and positive emotional content. Adding these linear main effects actually reduces the model's overall goodness of fit compared with the base model ($\Delta$ AIC $= -5.31$). These results suggest there are no significant linear main effects present between subsequent performance and the failure narrative's EO content, negative emotional content, or positive emotional content.

In Model 3 of Table 3, the second-order terms for the three independent variables—EO content, negative emotional content, and positive emotional content—were added to determine the presence of potential curvilinear relationships. Adding these second-order variables resulted in an improvement in overall model fit ($\Delta$ AIC $= 44.590$). The results of Model 3 show a significant relationship between the squared EO content and subsequent performance ($\beta = 15.672$; $p < .01$). A graph of this relationship is presented in Figure 1. These results indicate that the EO content of head coaches' failure narratives does have a U-shaped relationship with teams' next game performance, thus providing support for hypothesis 1.

Model 3 of Table 3 also shows a significant relationship between the squared negative emotional content and subsequent performance ($\beta = 0.843$; $p < .05$). However, although this relationship is significant, the graph of the relationship presented in Figure 2 shows it to be U-shaped. Therefore, the results do not indicate that the negative emotional content of head coaches' failure narratives has an inverted U-shaped relationship with teams' next game performance, so hypothesis 2 is unsupported. Finally, Model 3 shows a significant relationship between the squared positive emotional content and subsequent performance ($\beta = -1.089$; $p < .01$). A graph of this relationship is presented in Figure 3. These results indicate that the positive emotional content of head coaches' failure narratives does have an inverted U-shaped relationship with teams' next game performance, thus providing support for hypothesis 3.

## Table 2

### Means, Standard Deviations, and Correlations

| Variable | Mean | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Preseason rank | 44.903 | 30.983 | 1.000 | | | | | | | | | | | | |
| 2. Game of first loss | 3.399 | 2.594 | 0.334** | 1.000 | | | | | | | | | | | |
| 3. Rank at loss | 34.585 | 20.019 | 0.899** | -0.543** | 1.000 | | | | | | | | | | |
| 4. Opponent rank | 34.447 | 24.823 | 0.223** | -0.206** | 0.239** | 1.000 | | | | | | | | | |
| 5. Home/away | 0.430 | 0.496 | 0.072 | -0.142* | 0.105 | 0.019 | 1.000 | | | | | | | | |
| 6. Rank drop | 11.930 | 6.156 | -0.256** | -0.460** | -0.174** | 0.071 | 0.169** | 1.000 | | | | | | | |
| 7. First loss margin | 12.912 | 10.929 | 0.095 | -0.058 | 0.146** | -0.258** | -0.094 | 0.157** | 1.000 | | | | | | |
| 8. Prior EO content | 0.477 | 0.410 | -0.050 | 0.037 | -0.066 | 0.011 | 0.014 | 0.022 | -0.003 | 1.000 | | | | | |
| 9. Strength of schedule | 34.761 | 20.955 | 0.137* | 0.002 | 0.076 | 0.220** | 0.058 | 0.035 | -0.111* | 0.024 | 1.000 | | | | |
| 10. EO content† | 0.584 | 0.405 | 0.118* | -0.045 | 0.085 | 0.083 | 0.066 | -0.038 | -0.158** | 0.814 | 0.012 | 1.000 | | | |
| 11. Negative emotional content† | 2.246 | 1.011 | -0.038 | -0.002 | -0.046 | 0.019 | 0.013 | 0.026 | -0.003 | 0.024 | 0.024 | -0.034 | 1.000 | | |
| 12. Positive emotional content† | 5.163 | 1.519 | -0.048 | 0.045 | -0.077 | -0.114* | 0.041 | -0.052 | -0.077 | 0.021 | 0.026 | 0.291** | 0.148** | 1.000 | |
| 13. Subsequent performance | 7.701 | 23.326 | -0.247** | -0.007 | -0.210** | -0.234** | -0.079 | -0.020 | -0.012 | -0.014 | -0.085 | -0.023 | 0.046 | 0.039 | 1.000 |

* $p < .05$, ** $p < .01$
† %
n = 66; obs. = 328
EO, entrepreneurial orientation; SD, standard deviation.

Table 3

Results of Fixed-Effects Regression Analysis for Subsequent Performance

| | Model 1 | | Model 2 | | Model 3 | |
|---|---|---|---|---|---|---|
| | β | (se) | β | (se) | β | (se) |
| Preseason rank | −0.026 | (0.119) | −0.023 | (0.120) | −0.034 | (0.117) |
| Game of first loss | −3.076** | (0.971) | −3.048** | (0.978) | −3.278** | (0.965) |
| Rank at loss | −0.164 | (0.158) | −0.159 | (0.159) | −0.172 | (0.155) |
| Opponents rank | −0.220** | (0.061) | −0.219** | (0.062) | −0.217** | (0.061) |
| Home/away | −2.875 | (2.750) | −3.048 | (2.780) | −2.958 | (2.709) |
| Rank drop | −0.520 | (0.358) | −0.495 | (0.363) | −0.571 | (0.355) |
| First loss margin | −0.123 | (0.145) | −0.123 | (0.148) | −0.082 | (0.146) |
| Prior EO content[†] | 1.285 | (3.411) | 1.367 | (3.445) | 1.114 | (3.359) |
| Strength of schedule | 0.007 | (0.081) | 0.006 | (0.082) | 0.023 | (0.081) |
| EO content[†] | | | −0.759 | (3.731) | −7.434 | (4.285) |
| Negative emotional content[†] | | | 0.217 | (1.419) | −2.300 | (1.736) |
| Positive emotional content[†] | | | 0.657 | (1.012) | 0.428 | (1.002) |
| EO content X | | | | | | |
|   EO content | | | | | 15.790** | (5.419) |
| Negative emotional content X | | | | | | |
|   Negative emotional content | | | | | 0.834* | (0.498) |
| Positive emotional content X | | | | | | |
|   Positive emotional content | | | | | −1.076** | (0.354) |
| AIC | | 2788.319 | 2793.697 | | 2749.034 | |
| ΔAIC | | | −5.378 | | 44.663 | |

* $p < .05$, ** $p < .01$
[†] %
Note: all reported coefficients are standardized.
n = 66; obs. = 328
AIC, Akaike's information criterion; EO, entrepreneurial orientation; se, standard error.

Figure 1

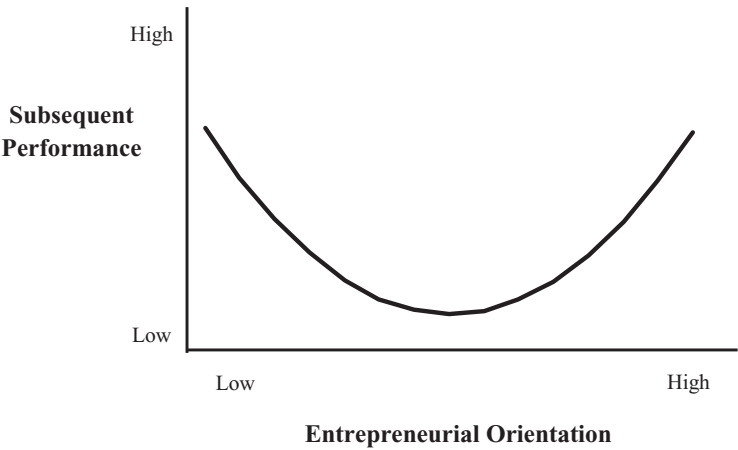Entrepreneurial Orientation (EO) and Subsequent Performance

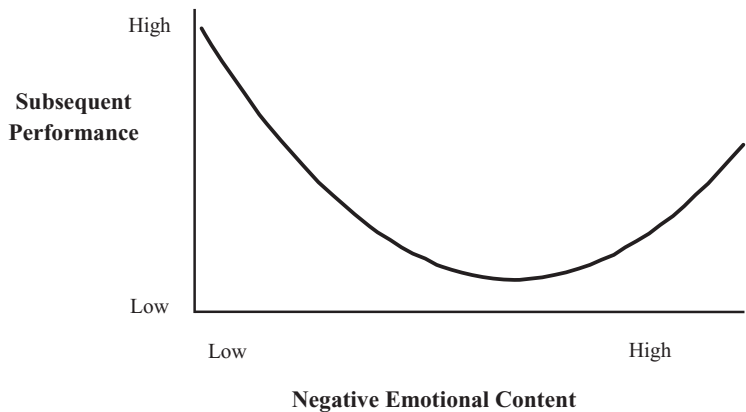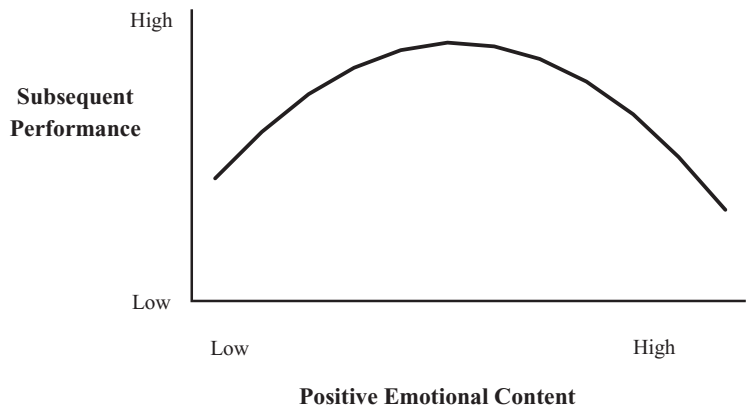Figure 2

Negative Emotional Content and Subsequent Performance



Figure 3

Positive Emotional Content and Subsequent Performance



## Discussion

### Implications for Research on Failure and Sensemaking

This paper makes a primary contribution in examining the role of failure narratives in sensemaking and how these narratives influence bouncing back in the form of subsequent performance. While the importance of sensemaking as it relates to failure (Cannon, 1999)—particularly within the context of entrepreneurship (Cardon, Stevens, & Potter, 2011)—has been well established, this study provides some new insights into the mechanisms underlying the relationship between failure narratives and subsequent performance.

First, although EO has been found to have a positive relationship with both firm performance (e.g., growth [Covin et al., 2006; Wang, 2008]) and firm failure (Wiklund & Shepherd, 2011), there has been little research on how EO is reflected after a failure event

and how this impacts subsequent performance. In the current study, we provided some new insights into these relationships. Specifically, we theorized and found a U-shaped relationship between the EO content of the failure narrative and subsequent performance. While this finding initially appears to contradict previous findings of an inverted U-shaped relationship between EO and performance, we believe our findings complement and extend this previous research. Rather than capture the relatively stable strategic orientation of a firm and its performance at least 1 year later, we capture the EO content of a narrative in response to a failure/loss event and capture subsequent performance typically 1 week later. Although some of these differences could be attributed to the sporting context (which can be tested by future research), we believe that a failure narrative is about "bouncing back" from a specific event and doing so quickly. In this way, our study (and the U-shaped relationship it reveals) contributes to a deeper understanding of how EO (as communicated in a failure narrative) influences resilience and/or recovery (in terms of next week performance), which complements and extends rather than contradicts research on the ongoing relationship of EO and performance. That is, perhaps moderate levels of EO are associated with being "stuck in the middle" and might therefore diminish organizational performance immediately after a failure/loss event. However, relatively low or high levels of EO might represent the organization's attempts to either "stay the course" or "right the ship," which appears to be more beneficial immediately following a failure/loss.

This study provides several implications for areas in need of further investigation. There is ample opportunity to explore the nature of EO in contexts like those with short time horizons as well as those in response to failure/loss events and perhaps with dependent variables more consistent with outcomes capturing resilience and/or recovery. Moreover, we have contrasted our findings in one context with other studies in different contexts, but future research can explore these contexts as moderators to better understand the nuances of the relationships. Additionally, whereas the majority of research on EO centers specifically on EO-related behaviors, this study provides an important first step in looking at EO from an attitude-based perspective, in an attempt to better understand the relationship between attitudes and subsequent behavior and performance. However, further investigation into this attitude–behavior relationship with regards to EO is necessary in order to more fully understand the nuances of these important relationships.

Second, while we theorized an inverted U-shaped relationship between the negative emotional content of the failure narrative and subsequent performance, we found a U-shaped relationship. This is interesting because it is the opposite of what we expected, affords us the opportunity to speculate on possible explanations, and opens up future research opportunities. The findings that low levels of negative emotional content are associated with performance benefits aligns with previous findings suggesting that negative emotions can result in individuals experiencing diminished affective commitment to the organization (Belschak & Hartog, 2009) which can in turn diminish performance (Sinclair, Tucker, Cullen, & Wright, 2005). Therefore, in situations where negative emotions are relatively low, affective commitment remains strong, however when more moderate levels of negative emotion are present, this commitment to the organization decreases, which could result in decreased performance. However, this might not hold true if the negative emotions present reach exceedingly high levels. Central to our arguments that a high level of negative emotional content of the failure narrative is associated with diminished performance was the notion that high negative emotions are associated with obsessive ruminations. However, while there is evidence that obsessive ruminations can produce detrimental outcomes (Rude, Maestas, & Neff, 2007), there is

some evidence that they can be beneficial (Miceli, Moore, & Scott, 1997)—this obsession with the failure may provide the motivation to improve and bounce back. It could be that while obsessive ruminations reflected by high negative emotions in narratives are detrimental in the long run, in the short run, they can be highly effective. Alternatively, while the team or firm might benefit from the high negative emotional content of the narrative, the narrator (e.g., the coach, the entrepreneur, the project leader) may "feel" the negative psychological and/or physiological costs of the obsession. We hope future research further explores the various consequences of high negative emotional content of failure narratives.

Third, we theorized and found an inverted U-shaped relationship between the positive emotional content of the failure narrative and subsequent performance. This finding complements and extends the positive psychology literature (Fredrickson, 2001; Tugade & Fredrickson, 2004) because although we found that more positive emotions are associated with enhanced performance in the context of failure narratives, this effect only occurs to a point, after which further increases are associated with diminished performance. It appears that a low level of positive emotions constrains the thinking underlying the narrative thereby reducing the potential to enact necessary change as a result of failure, whereas a high level of positive emotions may generate biases (e.g., overoptimism) that diminish performance (Baron, 2004; Lowe & Ziedonis, 2006). In this way, the current study provides some evidence of a boundary condition to the broaden-and-build theory of positive emotions—namely, that more positive emotion is not always better (at least in failure narratives) in terms of bouncing back quickly. Future research can further explore the upper boundaries of the broaden-and-build theory of positive emotions in narrative content.

## Implications for Coaches and Practitioners

Based on our findings, we present several practical implications for coaches. First, the EO content of head coaches' failure narratives will have a U-shaped relationship with the teams' next game performance. This suggests that coaches that are either relatively conservative or highly entrepreneurial in their post-loss narrative do better than coaches that are moderately entrepreneurial in their approach. In other words, it would seem as if adopting an "all-or-nothing" strategy is a useful heuristic for coaches as opposed to a more "middle-of-the-road" approach. Second, the negative emotional content of head coaches' failure narratives will have a U-shaped relationship with the teams' next game performance. Similar to our findings relating to EO and performance, when it comes to negative emotional content of the narrative, the "all-or-nothing" approach appears to be a useful heuristic to employ. That is, when it comes to negative emotions, being either emotionless or highly emotional are superior strategies as compared with adopting a more moderate approach which might be considered "wishy-washy" and therefore less effective. Finally, the positive emotional content of head coaches' failure narratives will have an inverted U-shaped relationship with the teams' next game performance. In contrast to EO and negative emotional content, coaches may need to communicate a more "balanced" approach with regards to positive emotional content. That is, it would seem as if adopting a more moderate "balanced" strategy might be a better approach than taking an extreme "we-can-do-no-right" or "we-can-do-no-wrong" approach.

While it is likely that the unique situational and contextual factors present in this specific setting provide substantial influence on the findings we present, there are some overarching themes that are potentially applicable on a broader scale. With this study, we present evidence suggesting that failure narratives can influence subsequent performance.

This is an important first step in developing a better understanding how the sensemaking process relates to processing, understanding, and communicating failure events. In showing how specific elements of failure narratives can vary, and how those variances can influence subsequent performance, we develop a deeper understanding of the underlying mechanisms between the relationship of failure, sensemaking, and subsequent performance within an entrepreneurial context. We recognize that in some ways, the sporting context is extreme, but we see this as an opportunity to push the boundaries of our new theories of entrepreneurship. Future research into other entrepreneurial contexts can further explore the generalizability of these relationships.

## Conclusion

Failure is often a common occurrence for entrepreneurial organizations, including sports teams. In addition, an organization's ability to understand and make sense of failure and effectively communicate that understanding to influential stakeholders is an important step in improving subsequent performance. We theorized and found that the level of EO content within a failure narrative has a U-shaped relationship with subsequent performance. We also theorized and found that the level of positive emotional content within the failure narrative has an inverted U-shaped relationship with subsequent performance. Interestingly and opposite to our theorizing, we found that the failure narrative's level of negative emotional content has a U-shaped relationship with subsequent performance. Overall, this study provides some preliminary evidence on the nature and outcome of failure narratives.

## Appendix A: Excerpts From Narratives Demonstrating EO Dictionary Dimensions

| EO dimension (Short et al., 2010) | Transcript excerpts |
| --- | --- |
| Autonomy | "(He) ran the ball very hard. He had a lot of broke tackles, got extra yards **on his own**." |
| | "But you have to go **do it yourself**, we have to coach better, we have to play better, and I have no doubt in my mind that we're going to get that done." |
| Innovativeness | "Do we need to make **changes**? Absolutely. There's going to be **changes** made; there's going to be some guys challenged." |
| | "We had an opportunity to play two similar teams back to back, and now we have a major **radical change** on what we are going to see as we open conference play and how we prepare for that." |
| Proactiveness | "I was dissappointed in our coaching staff as far as not better **anticipating** some of the things we saw and not putting our players in better positions to make plays." |
| | "We have to do a better job of getting our players to **expect** what other teams are going to do in those types of situations." |
| Competitive aggressiveness | "So, we've got to do what we feel we are physically capable of doing. And whether that's being very physically **aggressive** or not, we've got to determine week to week how **aggressive** we can be." |
| | "We evaluate [the team] each week. When they go out to practice, there's **competition**." |
| Risk taking | "You have to be able to stop the run, and then you have to take your **chances** after that." |
| | "(He) played a **gutsy** game, did a nice job keeping his composure against a very good defense." |
| Additional inductively derived words | "Again, for us to be effective, we've got to give our offense more **opportunities**." |
| | "We have an **opportunity** to bounce back, and what we saw tonight, we have a good football team." |

# REFERENCES

Akaike, H. (1974). A new look at the statistical model identification. *IEEE Transactions on Automatic Control*, *19*, 716–723.

Alvarez, B. (2005). Northwestern University post-game press conference: University of Wisconsin-Madison.

Alvarez, S.A. (2007). Entrepreneurial rents and the theory of the firm. *Journal of Business Venturing*, *22*(3), 427–442.

Aschoff, E. (2011). LSU gets one year probation from NCAA. Available at http://espn.go.com/blog/ncfnation/post/_/id/43970/lsu-gets-one-year-probation-from-ncaa, accessed 12 March 2013.

Ashkanasy, N.M. & Tse, B. (2000). Transformational leadership as management of emotion: A conceptual review. In N.M. Ashkanasy, C.E.J. Hartel, & W.J. Zerbe (Eds.), *Emotions in the workplace: Research, theory, and practice* (pp. 221–235). Westport, CT: Quorum Books.

Austin, J., Stevenson, H., & Wei-Skillern, J. (2006). Social and commercial entrepreneurship: Same, different, or both? *Entrepreneurship Theory and Practice*, *30*(1), 1–22.

Barbalet, J.M. (1998). *Emotion, social theory, and social structure: A macrosociological approach.* Cambridge, U.K.: Cambridge University Press.

Baron, R.A. (2004). The cognitive perspective: A valuable tool for answering entrepreneurship's basic "why" questions. *Journal of Business Venturing*, *19*(2), 221–239.

Barry, D. & Elmes, M. (1997). Strategy retold: Toward a narrative view of strategic discourse. *Academy of Management Review*, *22*(2), 429–452.

Barsade, S.G. (2002). The ripple effect: Emotional contagion and its influence on group behavior. *Administrative Science Quarterly*, *47*(4), 644–675.

Belschak, F.D. & Hartog, D.N.D. (2009). Consequences of positive and negative feedback: The impact on emotions and extra-role behaviors. *Applied Psychology*, *58*(2), 274–303.

Bless, H., Bohner, G., Schwarz, N., & Strack, F. (1990). Mood and persuasion: A cognitive response analysis. *Personality and Social Psychology Bulletin*, *16*(2), 331–345.

Boje, D.M. (1991). The storytelling organization: A study of story performance in an office-supply firm. *Administrative Science Quarterly*, *36*(1), 106–126.

Borders, A., Earleywine, M., & Jajodia, A. (2010). Could mindfulness decrease anger, hostility, and aggression by decreasing rumination? *Aggressive Behavior*, *36*, 28–44.

Brown, A.D., Stacey, P., & Nandhakumar, J. (2008). Making sense of sensemaking narratives. *Human Relations*, *61*(8), 1035–1062.

Brown, S.L. & Eisenhardt, K.M. (1997). The art of continuous change: Linking complexity theory and time-paced evolution in relentlessly shifting organizations. *Administrative Science Quarterly*, *42*(1), 1–34.

Burton, C.M. & King, L.A. (2004). The health benefits of writing about intensely positive experiences. *Journal of Research in Personality*, *38*(2), 150–163.

Callahan, B. (2005). Texas Tech University post-game press conference: University of Nebraska.

Cannon, D.R. (1999). Cause or control? The temporal dimension in failure sensemaking. *The Journal of Applied Behavioral Science*, *35*(4), 416–438.

Cannon, M.D. & Edmondson, A.C. (2001). Confronting failure: Antecedents and consequences of shared beliefs about failure in organizational work groups. *Journal of Organizational Behavior*, *22*(2), 161–177.

Cardon, M.S., Stevens, C.E., & Potter, D.R. (2011). Misfortunes or mistakes? Cultural sensemaking of entrepreneurial failure. *Journal of Business Venturing*, *26*(1), 79–92.

Cardon, M.S., Wincent, J., Singh, J., & Drnovsek, M. (2009). The nature and experience of entrepreneurial passion. *Academy of Management Review*, *34*, 511–532.

Cardon, M.S., Zietsma, C., Saparito, P., Matherne, B.P., & Davis, C. (2005). A tale of passion: New insights into entrepreneurship from a parenthood metaphor. *Journal of Business Venturing*, *20*(1), 23–45.

Carvell, M. (2012). Alabama acknowledges 27 NCAA secondary rules violations. Available at http://blogs.ajc.com/recruiting/2012/08/15/alabama-acknowledges-27-ncaa-secondary-rules-violations/, accessed 12 March 2013.

Cervone, D., Kopp, D.A., Schaumann, L., & Scott, W.D. (1994). Mood, self-efficacy, and performance standards: Lower moods induce higher standards for performance. *Journal of Personality and Social Psychology*, *67*(3), 499–512.

Chen, J. & Ji, Y. (2012). The application of carbon fiber reinforced material in sports equipments. *Advanced Materials Research*, *568*, 372–375.

Covin, J.G., Green, K.M., & Slevin, D.P. (2006). Strategic process effects on the entrepreneurial orientation-sales growth rate relationship. *Entrepreneurship Theory and Practice*, *30*, 57–81.

Covin, J.G. & Slevin, D. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, *10*, 75–87.

Covin, J.G. & Slevin, D. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship Theory Practice*, *16*, 7–25.

Covin, J.G., Slevin, D.P., & Heeley, M.B. (2000). Pioneers and followers: Competitive tactics, environment, and firm growth. *Journal of Business Venturing*, *15*(2), 175–210.

Covin, J.G. & Wales, W.J. (2012). The measurement of entrepreneurial orientation. *Entrepreneurship Theory and Practice*, *36*(4), 677–702.

Cullen, F.T., Latessa, E.J., & Byrne, J.P. (1990). Scandal and reform in collegiate athletics: Implications from a national survey of head football coaches. *The Journal of Higher Education*, *61*(1), 50–64.

Czarniawska, B. (1997). *Narrating the organization: Dramas of institutional identity*. Chicago: University of Chicago Press.

Czarniawska, B. (1998). *A narrative approach to organizational studies*. Thousand Oaks, CA: Sage.

Dean, T.J. & McMullen, J.S. (2007). Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action. *Journal of Business Venturing*, *22*(1), 50–76.

Dorrell, K. (2005). University of Washington post-game press conference: University of California, Los Angeles.

Dumond, J.M., Lynch, A.K., & Platania, J. (2008). An economic model of the college football recruiting process. *Journal of Sports Economics*, *9*(1), 67–87.

Dunford, R. & Jones, D. (2000). Narrative in strategic change. *Human Relations*, *53*(9), 1207–1226.

Edwards, H. (2000). Crisis of black athletes on the eve of the 21st century. *Society*, *37*(3), 9–13.

Fiol, C.M. (1989). A semiotic analysis of corporate language: Organizational boundaries and joint venturing. *Administrative Science Quarterly*, *34*(2), 277–303.

Fletcher, D. (2007). "Toy Story": The narrative world of entrepreneurship and the creation of interpretive communities. *Journal of Business Venturing*, *22*(5), 649–672.

Fredrickson, B.L. (1998). What good are positive emotions? *Review of General Psychology*, *2*(3), 300–319.

Fredrickson, B.L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, *56*(3), 218–226.

Fredrickson, B.L. (2003). Positive emotions and upward spirals in organizations. In K.S. Cameron, J.E. Dutton, & R.E. Quinn (Eds.), *Positive organizational scholarship: Foundations of a new scholarship* (pp. 163–175). San Francisco, CA: Berrett-Kohler.

Fredrickson, B.L., Tugade, M.M., Waugh, C.E., & Larkin, G.R. (2003). What good are positive emotions in crisis? A prospective study of resilience and emotions following the terrorist attacks on the United States on September 11th, 2001. *Journal of Personality and Social Psychology*, *84*(2), 365–376.

Freel, M.S. (2005). Perceived environmental uncertainty and innovation in small firms. *Small Business Economics*, *25*(1), 49–64.

Gabriel, Y. (2000). *Storytelling in organizations: Facts, fictions, and fantasies*. Oxford: Oxford University Press.

George, J.M. (1995). Leader positive mood and group performance: The case of customer service. *Journal of Applied Social Psychology*, *25*(9), 778–794.

Gray, J.R. (2004). Integration of emotion and cognitive control. *Current Directions in Psychological Science*, *13*(2), 46–48.

Greene, W.H. (2003). *Econometric analysis*. Upper Saddle River, NJ: Prentice Hall.

Guastella, A. & Dadds, M. (2006). Cognitive-behavioral models of emotional writing: A validation study. *Cognitive Therapy and Research*, *30*(3), 397–414.

Hart, S.L. (1992). An integrative framework for strategy-making processes. *Academy of Management Review*, *17*(2), 327–351.

Hjorth, D. & Steyaert, C. (2004). *Narrative and discursive approaches in entrepreneurship*. Cheltenham, U.K.: Edward Elger.

Hoang, H. & Rothaermel, F.T. (2005). The effect of general and partner-specific alliance experience on joint R&D project performance. *The Academy of Management Journal*, *48*(2), 332–345.

Hornsby, J.S., Kuratko, D.F., Shepherd, D.A., & Bott, J.P. (2009). Managers' corporate entrepreneurial actions: Examining perception and position. *Journal of Business Venturing*, *24*(3), 236–247.

Jordan, J.D., Melouk, S.H., & Perry, M.B. (2009). Optimizing football game play calling. *Journal of Quantitative Analysis in Sports*, *5*(2), 1–34.

Junghaenel, D.U., Smyth, J.M., & Santner, L. (2008). Linguistic dimensions of psychopathology: A auantitative analysis. *Journal of Social and Clinical Psychology*, *27*(1), 36–55.

Kedar-Levy, H. & Bar-Eli, M. (2008). The valuation of athletes as risky investments: A theoretical model. *Journal of Sport Management*, *22*(1), 50–81.

Kreiser, P.M., Marino, L.D., Kuratko, D.F., & Weaver, M.K. (2013). Disaggregating entrepreneurial orientation: The non-linear impact of innovativeness, proactiveness and risk-taking on SME performance. *Small Business Economics*, *40*(2), 273–291.

Kross, E., Ayduk, O., & Mischel, W. (2005). When asking "why" does not hurt distinguishing rumination from reflective processing of negative emotions. *Psychological Science*, *16*(9), 709–715.

Langelett, G. (2003). The relationship between recruiting and team performance in Division 1A college football. *Journal of Sports Economics*, *4*(3), 240–245.

Lewis, K.M. (2000). When leaders display emotion: How followers respond to negative emotional expression of male and female leaders. *Journal of Organizational Behavior*, *21*(2), 221–234.

Li, H. & Atuahene-Gima, K. (2001). Product innovation strategy and the performance of new technology ventures in China. *Academy of Management Journal*, *44*(6), 1123–1134.

Lowe, R.A. & Ziedonis, A.A. (2006). Overoptimism and the performance of entrepreneurial firms. *Management Science*, *52*(2), 173–186.

Lumpkin, G.T., Cogliser, C.C., & Schneider, D.R. (2009). Understanding and measuring autonomy: An entrepreneurial orientation perspective. *Entrepreneurship Theory and Practice*, *33*(1), 47–69.

Lumpkin, G.T. & Dess, G.G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, *21*(1), 135–172.

Lumpkin, G.T. & Dess, G.G. (2001). Linking two dimensions of entrepreneurial orientation to firm performance: The moderating role of environment and industry life cycle. *Journal of Business Venturing*, *16*(5), 429–451.

Lynch, B. (2006). Southern Illinois post-game press conference: Indiana University.

Lyubomirsky, S., King, L., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin*, *131*(6), 803–855.

Lyubomirsky, S. & Nolen-Hoeksema, S. (1995). Effects of self-focused rumination on negative thinking and interpersonal problem solving. *Journal of Personality and Social Psychology*, *69*(1), 176–190.

Maitlis, S. & Sonenshein, S. (2010). Sensemaking in crisis and change: Inspiration and insights from Weick (1988). *Journal of Management Studies*, *47*(3), 551–580.

March, J.G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, *2*(1), 71–87.

Martens, M.L., Jennings, J.E., & Jennings, P.D. (2007). Do the stories they tell get them the money they need? The role of entrepreneurial narratives in resource acquisition. *Academy of Management Journal*, *50*(5), 1107–1132.

McCormick, R.A. & McCormick, A.C. (2006). Myth of the student-athlete: The college athlete as employee. *Washington Law Review*, *81*, 71–157.

McGrath, R. (1999). Falling forward: Real options reasoning and entrepreneurial failure. *Academy of Management Review*, *24*, 13–30.

Meyer, J.W. & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, *83*(2), 340–363.

Miceli, M.P., Moore, K.S., & Scott, K.S. (1997). An exploration of the meaning and consequences of workaholism. *Human Relations*, *50*(3), 287–314.

Miller, D. (2011). Miller (1983) revisited: A reflection on EO research and some suggestions for the future. *Entrepreneurship Theory and Practice*, *35*(5), 873–894.

Napier, N.K. & Nilsson, M. (2006). The development of creative capabilities in and out of creative organizations: Three case studies. *Creativity and Innovation Management*, *15*(3), 268–278.

O'Connor, E.S. (2000). Plotting the organization: The embedded narrative as a construct for studying change. *The Journal of Applied Behavioral Science*, *36*(2), 174–192.

Orbuch, T.L. (1997). People's accounts count: The sociology of accounts. *Annual Review of Sociology*, *23*, 455.

Orr, J. (1995). *Talking about machines: An ethnography of a modern job*. Ithaca, NY: ILR Press.

Pearce, J.A., Fritz, D.A., & Davis, P.S. (2010). Entrepreneurial orientation and the performance of religious congregations as predicted by rational choice theory. *Entrepreneurship Theory and Practice*, *34*(1), 219–248.

Pennebaker, J.W., Francis, M.E., & Booth, R.J. (2001). *Linguistic Inquiry and Word Count (LIWC): LIWC 2001*. Mahwah, NJ: Erlbaum.

Pentland, B.T. (1999). Building process theory with narrative: From description to explanation. *Academy of Management Review*, *24*(4), 711–724.

Pierce, J.L., Kostova, T., & Dirks, K.T. (2001). Toward a theory of psychological ownership in organizations. *Academy of Management Review*, *26*(2), 298–310.

Popper, M. & Lipshitz, R. (2000). Organizational learning. *Management Learning*, *31*(2), 181–196.

Ratten, V. (2010). Developing a theory of sport-based entrepreneurship. *Journal of Management & Organization*, *16*(4), 557–565.

Ratten, V. (2011). Sport-based entrepreneurship: Towards a new theory of entrepreneurship and sport management. *International Entrepreneurship and Management Journal*, *7*(1), 57–69.

Rauch, A., Wiklund, J., Lumpkin, G.T., & Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice*, *33*(3), 761–787.

Roof, T. (2006). University of Richmond post-game press conference: Duke University.

Rosenbusch, N., Brinckmann, J., & Bausch, A. (2011). Is innovation always beneficial? A meta-analysis of the relationship between innovation and performance in SMEs. *Journal of Business Venturing*, *26*(4), 441–457.

Rude, S.S., Maestas, K.L., & Neff, K. (2007). Paying attention to distress: What's wrong with rumination? *Cognition & Emotion*, *21*(4), 843–864.

Santos, F.M. & Eisenhardt, K.M. (2009). Constructing markets and shaping boundaries: Entrepreneurial power in nascent fields. *Academy of Management Journal*, *52*, 643–671.

Schwarz, N. (1990). Feelings as information: Informational and affective functions of affective states. In E.T. Higgins & R.M. Sorrentino (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (Vol. 2, pp. 527–561). New York: Guilford.

Schwarz, N. & Clore, G.L. (1988). How do I feel about it? The informative function of affective states. In K. Fiedler & J.P. Forgas (Eds.), *Affect, cognition, and social behavior* (pp. 44–62). Gottingen, Germany: Hogrefe.

Schwarz, N. & Clore, G.L. (1996). Feelings and phenomenal experiences. In E.T. Higgins & A.W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 433–465). New York: Guilford Press.

Scott, M.B. & Lyman, M. (1968). Accounts. *American Sociological Review*, *33*(1), 46–62.

Segerstrom, S.C., Tsao, J.C.I., Alden, L.E., & Craske, M.G. (2000). Worry and rumination: Repetitive thought as a concomitant and predictor of negative mood. *Cognitive Therapy and Research*, *24*, 671–688.

Semadeni, M. & Anderson, B.S. (2010). The follower's dilemma: Innovation and imitation in the professional services industry. *Academy of Management Journal*, *53*, 1175–1193.

Shepherd, D.A., Patzelt, H., & Wolfe, M.T. (2011). Moving forward from project failure: Negative emotions, affective commitment and learning from the experience. *Academy of Management Journal*, *54*(6), 1229–1259.

Short, J.C., Broberg, J.C., Cogliser, C.C., & Brigham, K.H. (2010). Construct validation using computer-aided text analysis (CATA). *Organizational Research Methods*, *13*(2), 320–347.

Sinclair, R.R., Tucker, J.S., Cullen, J.C., & Wright, C. (2005). Performance differences among four organizational commitment profiles. *Journal of Applied Psychology*, *90*(6), 1280–1287.

Sperber, M. (2004). College sports, inc. In D.G. Stein (Ed.), *Buying in or selling out?: The commercialization of the American research university* (p. 17). Piscataway, NJ: Rutgers University Press.

Spurrier, S. (2006). University of Georgia post-game press conference: University of South Carolina.

StataCorp. (2012). *Stata statistical software: Release 12*. College Station, TX: StataCorp.

Tang, J., Tang, Z., Marino, L.D., Zhang, Y., & Li, Q. (2008). Exploring an inverted u-shape relationship between entrepreneurial orientation and performance in Chinese ventures. *Entrepreneurship Theory and Practice*, *32*(1), 219–239.

Tausczik, Y.R. & Pennebaker, J.W. (2010). The psychological meaning of words: LIWC and computerized text analysis methods. *Journal of Language and Social Psychology*, *29*(1), 24–54.

Tugade, M.M. & Fredrickson, B.L. (2004). Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of Personality and Social Psychology*, *86*(2), 320–333.

Wales, W.J., Patel, P.P., Parida, V., & Kreiser, P.M. (2013). Non-linear effects of entrepreneurial orientation on small firm performance: The moderating role of resource orchestration capabilities. *Strategic Entrepreneurship Journal*, *7*(2), 93–121.

Wang, C.L. (2008). Entrepreneurial orientation, learning orientation, and firm performance. *Entrepreneurship Theory and Practice*, *32*(4), 635–657.

Weick, K.E. (1995). *Sensemaking in organizations*. London, U.K.: Sage.

Weick, K.E. & Sutcliffe, K.M. (2001). *Managing the unexpected: Assuring high performance in an age of complexity*. San Francisco, CA: Jossey-Bass.

Weick, K.E., Sutcliffe, K.M., & Obstfeld, D. (2005). Organizing and the process of sensemaking. *Organization Science*, *16*(4), 409–421.

Weiss, H.M. & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of the structure, causes, and consequences of affective experiences at work. *Research in Organizational Behavior*, *18*, 1–74.

Wiklund, J. (1999). The sustainability of the entrepreneurial orientation-performance relationship. *Entrepreneurship Theory and Practice*, *24*, 39–50.

Wiklund, J. & Shepherd, D.A. (2003). Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic Management Journal*, *24*(13), 1307–1314.

Wiklund, J. & Shepherd, D.A. (2011). Where to from here? EO-as-experimentation, failure, and distribution of outcomes. *Entrepreneurship Theory and Practice*, *35*(5), 925–946.

Zachary, M.A., McKenny, A.F., Short, J.C., Davis, K.M., & Wu, D. (2011). Franchise branding: An organizational identity perspective. *Journal of the Academy of Marketing Science*, *39*(4), 629–645.

Zahra, S.A. & Covin, J.G. (1995). Contextual influences on the corporate entrepreneurship-performance relationship: A longitudinal analysis. *Journal of Business Venturing*, *10*(1), 43–58.

Zahra, S.A. & Garvis, D.M. (2000). International corporate entrepreneurship and firm performance: The moderating effect of international environmental hostility. *Journal of Business Venturing*, *15*(5–6), 469–492.

Marcus T. Wolfe is an Assistant Professor of Management at the Miller College of Business, Ball State University, Muncie, IN 47306, USA.

Dean A. Shepherd is the Randall L. Tobias Chair in Entrepreneurial Leadership, Professor of Entrepreneurship, Kelley School of Business, Indiana University, Bloomington, IN 47405, USA.