

Toward a Working Definition of the Construct of Fear in the Management Sciences

by

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**Integrated Scholarship Paper:
Toward a Working Definition of the Construct of Fear
in the Management Sciences**

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ABSTRACT

The purpose of this paper is to propose a working definition of fear in the management sciences. Given its pervasiveness in the workplace, fear needs to be systematically studied in the management sciences to understand its organizational impact. The experience of fear (e.g., of failure, of rejection) manifests in many ways, yet the true cost of fear at work is largely unknown. In this paper, I highlight issues with current perspectives on fear as well as contrast scholarly and practical perspectives of fear. Also included is the integration of views from a recent reconceptualization of fear in the cognitive sciences that alters previous conceptualizations of fear. Future research directions are briefly discussed.

Keywords:

Fear, emotion, cognition, threat response, workplace

Fear is pervasive in the workplace (Deutschendorf, 2015; Greenleaf Center for Servant Leadership, 2014; Keegan, 2015; Kish-Gephart, Detert, Treviño, & Edmondson, 2009; May, 2011; Welford, 2013). Fear is expressed in many other ways including but not limited to the fear of being judged, the fear of being wrong, the fear of humiliation, and the fear of rejection. For example, an employee having to speak up in a meeting can trigger implicit fears about incompetence. For other employees, working on stretch assignments or large projects can invoke the fear of failure. (See Table 1 for a suggestive list of types of fears.) The specific type of fear is less important than understanding the experience and impact of fear in the workplace. According to Ledoux (2014), fear is the most widely-researched emotion and yet there is no current systematic study of fear in the organizational sciences (Kish-Gephart et al., 2009). A search for the keyword “fear” in a publication title in several top management journals over the last fifteen years resulted in a mere six articles. Yet when the keyword “fear” is used to search text in the body of these outlets, over 700 articles reference fear.

Insert Table 1 about here

To-date, fear has largely been implied in the management sciences (see Kish-Gephart et al., 2009; Maner & Gerend, 2007 for clear exceptions) in that there are undertones of fear in many of our constructs. For example, in a study by Ashford and her colleagues, they highlight the “emotional, fear-based quality of [image] risk and its impact on the decision to [voice issues]” (Ashford, Rothbard, Piderit, & Dutton, 1998, p. 53). Resistance to change in the form of cognitive distortion (Coghlan, 1993) and competing commitments (Bowe, Lahey, Kegan, &

Armstrong, 2003) can both be triggered by threats which may be linked with embedded fear memories. In the specific case of competing commitments, Bove and her colleagues (2003) study the tension between the commitment to make a change and the resistance to that change driven in part by the competing commitment “to keep what they are afraid of from happening” (p. 716). And fear is a primary motivational force driving the need for psychological safety (Carmeli, Brueller, & Dutton, 2008; Kahn, 1990), which has been established as a valid and important construct in management studies (Edmonson, 1999). Finally, fear of negative evaluation is at the heart of impression management (Schlenker & Leary, 1982; Watson & Friend, 1969).

In contrast to the academic literature, the pervasiveness of fear in the workplace and its influence on work behavior has been an explicit topic of practitioners for decades. Fear has been implicated in the breakdown of learning, communications, productivity, and even the organizational ‘holy grail’ of innovation (Keegan, 2015; May, 2011; Ryan & Oestreich, 1991; Vince & Martin, 1993). A Google search on the key words “fear” and “workplace”—even after the elimination of very specific contexts such as, “economy,” “layoffs,” “bullying,” “violence,” “crime,” “terrorism,” and “guns”—results in nearly 1.5 million hits. A specific search on “fear of failure” and “workplace” results in 288,000 hits alone. Amazon lists 1,481 books when “fear” and “workplace” are listed in the search box¹. Why is there such a disconnect between the reality of fear in the workplace and what is actually studied by academics? Although great attention is paid to fear in the practitioner literature, the study of fear in the workplace is almost non-existent in the research literature. Is it too elusive a concept to study effectively in the management

¹ All Google and Amazon searches were conducted on February 5-6, 2016.

sciences? Or is it because there is no clear conceptualization of this construct in the organizational sciences?

The purpose of this paper is to bring to conceptualize fear and to propose an explicit definition of fear in the workplace. In doing so, I synthesize literatures in psychology, cognitive and health sciences, sociology, and management. I present some of the issues related to defining fear, contrasting scholarly and practitioner definitions of fear. Included in the review of definitional issues is a recent reconceptualization of fear in the cognitive sciences that has the potential to alter how we have talked about fear—both academically and practically—for the last few decades. I then propose a working definition of fear, which attempts to integrate academic objectivity as well as the practical experience of fear. To then support a broader understanding of fear and its determinants, I provide a review of some of the literature on direct and indirect contributing factors to fear including unconscious threat detection and defensive response systems. Based on this review, I address potential measurement issues related to studying fear, which is a largely implicit phenomenon. Finally, some further conceptualizations of fear are discussed as well as some possible next steps in terms of research directions. My hope is to begin raising an awareness of fear in the workplace so that management scholars can study, and practitioners can help organizations navigate, fear and its potential impact on employees and organizations.

PERSPECTIVES ON FEAR

Issues with Construct Definitions

Definitions of fear in the popular press. Fear, as defined by the Merriam-Webster online dictionary (2016), is “*a*: an unpleasant often strong emotion caused by anticipation or awareness of danger, *b* (1): an instance of this emotion, (2): a state marked by this emotion”

when used as a noun, and “to be afraid of: expect with alarm” when used as a verb. In popular press, the word *fear* is used as both a verb (e.g., “the thing we fear most”) and a noun (e.g., a fear of failure). Fear is presented ontologically as an “enemy” (Deutschendorf, 2015), living “within [the company’s] own walls” (May, 2011), intruding (Schwartz, 2014), and able to see something as being risky (Britten, 2001), like a sentinel or internal watchman. Fear is described as being both powerful and challenging (Deutschendorf, 2015), and deep-seated and adaptive (Schwartz, 2014). Fear varies in degree of intensity and level (Deutschendorf, 2015), and in type (e.g., fears of insignificance, weakness or looking stupid; Maslow, 1968). It is created (Welford, 2013), produced (Deutschendorf, 2015), instilled (Metcalf, 2016), and even begets itself (i.e., fear creates fear; Greenleaf Center for Servant Leadership, 2014). Fear forms barriers (Britten, 2001; May, 2011), motivates (Britten, 2001), cripples (May, 2011), stifles and prevents (e.g., learning; Greenleaf Center for Servant Leadership, 2014), inhibits (Metcalf, 2016), blocks (e.g., growth, contribution; Deutschendorf, 2015), and thwarts (e.g., ability; Britten, 2001). It also guards (Britten, 2001), protects (Deutschendorf, 2015; Maslow, 1968), and warns (Deutschendorf, 2015), driving one toward self-preservation. Fear is seen as something that needs to be managed (Deutschendorf, 2015; Greenleaf Center for Servant Leadership, 2014), decreased (Greenleaf Center for Servant Leadership, 2014), and driven out (May, 2011; Ryan & Oestreich, 1991). It should be faced (Deutschendorf, 2015) and overcome (Britten, 2001; Deutschendorf, 2015; Maslow, 1968; Metcalf, 2016). Fear should be avoided, cast aside and kept at bay (Deutschendorf, 2015). Fear is something everyone has experienced in the workplace (Greenleaf Center for Servant Leadership, 2014) and it will always be present (May, 2011).

Whether protecting ourselves from our worst fears of inadequacy or greatness, fear in the practitioner literature is widely seen as an implicit method of self-preservation, regardless of

whether the self actually needs preserving or not. Popular articles point to various fundamental fears as begetting other fears and fear-based behaviors. For example, in her book *Fearless Living*, Britten states, “Fear’s number one job is to guard you against any negative feelings that would confirm your worst fear—that you are not good enough” (2001, p. 21). One of Brené Brown’s (2012) definitions for shame is, “the fear of disconnection” (p. 68). Tom Rieger, the “chief architect of Gallup's global efforts to remove fear in the workplace”, reports the fear of loss as being the core driver of fear in the workplace (May, 2011). Based on an article in *FastCompany* (Deutschendorf, 2015), fears of rejection, being disowned, and isolation are seen as those we fear most. Maslow, the father of humanistic psychology, spoke of a general fear of knowledge as being, “...defensive, in the sense that it is a protection of our self-esteem... We tend to be afraid of any knowledge that could cause us to despise ourselves, or to make us feel inferior, weak, worthless, evil, shameful. We protect ourselves and our ideal image of ourselves by repression and similar defenses, which are essentially techniques by which we avoid becoming conscious of unpleasant or dangerous truths” (1968, p. 60). He also expounds on the fears of weakness and inadequacy when faced with our own greatness, “a denying of our best side, of our talents, of our finest impulses, of our highest potentialities, of our creativeness” (Maslow, 1968, p. 61). As the reader can see, from a practitioner standpoint fear is viewed as something much larger than a feeling.

Definitions of fear in the academic literature. Not surprisingly, fear is presented very differently across fields within the academic, peer-reviewed literature. Yet even within scholarship, there is significant disparity across definitions. Kish-Gephart and colleagues (2009), in one of the few articles on fear’s influence in the workplace in the organizational sciences, provide an excellent technical overview of some potential origins of fear and an understanding of

the role of fear in organizational silence, yet they do not define a specific construct of fear. Rather, they describe fear as a “powerful emotion that shapes many aspect of our lives” (p. 164). For the purpose of studying the climate of fear, Ashkanasy and Nicholson (2003) adopt a broad definition of fear to be “a generalised [sic] experience of apprehension in the workplace” (p. 24). Within the biological sciences, fear is more specifically defined. For example, one study defines fear as, “a sufficiently potent, biologically driven, motivated state wherein a single, salient threat guides behavior” (Bay & Algase, 1999, p. 105). In the psychological sciences, fear is defined as, “a reaction to an external stimulus...and appears to be associated with autonomic hyper-arousal when the individual is exposed to the stimulus...a common adaptive response to an immediate, threatening situation” (Pavuluri, Henry, & Allen, 2002, p. 273). For the purpose of developing his widely-cited Fear Survey Schedule-II in the field of psychology, Geer (1965) considers fear to be “a negative emotional response evoked by a relatively specific stimulus” (p.45).

Fear has been defined at a state level (Bay & Algase, 1999; Pavuluri et al., 2002); that is, it is a response to a “single salient threat” (Bay & Algase, 1999, p. 106) that might include a sudden change in environment, a negative facial expression, or some other event in which a threat is perceived as imminent. Others have focused on a more dispositional form of fear (e.g., Knaus, 2008; Lerner & Keltner, 2001). Lerner and Keltner (2001) distinguish dispositional or trait affect from an emotional state by indicating, “emotions trigger changes in cognition, physiology, and action that, although tailored to help the individual respond to the event that evoked the emotion, often persist beyond the eliciting situation” (p. 146). Taking this even further, Knaus (2008) refers to these types of persistent fears as ‘parasitic fears’ that stimulate “false alerts of fictional dangers” (p. 14).

Reconceptualization of fear. Joseph LeDoux (2012, 2013, 2015), the leading threat circuitry researcher in the neurosciences, has very recently sought to reconceptualize fear in the cognitive science and psychology literature to distinguish the autonomic threat detection and response systems from the conscious feeling of being afraid, in part for the purpose of distinguishing certain cognitive capacities between humans and animals. In others' work, including LeDoux's earlier work, fear is conventionally conceived as a broader cluster of effects in the face of threat, including autonomic behavioral and physiological responses (Davis, 1997; LeDoux, 1996; Öhman & Mineka, 2001; Ohman, 2012). And until recently, the amygdala was recognized as the seat of the "fear reaction system" (LeDoux, 1996, p. 165) and was thought to represent a single neural signature for fear. In LeDoux's recent reframing, the feeling of fear, when viewed from a neurological perspective, is now hypothesized to solely be a cognitive interpretation of the nonconscious neural components of a defensive motivational state (LeDoux, 2015). Stated another way, we feel afraid when the centers of the brain responsible for attention and working memory consciously interpret the separate threat detection and defensive responses. Thus, the feeling of being afraid is occurring simultaneously with our physiological and behavioral defense responses, yet LeDoux suggests the feeling is conscious and only indirectly related to what he now collectively calls our survival circuitry (LeDoux, 2015), which includes nonconscious threat detection and threat response systems. In this view, responses to *threat* are automatic, yet we potentially have more choice in how we react in fear. Consciousness of our brain's activities is required to construct a feeling (LeDoux, 2015); however, it is worth noting that the ability to *articulate* the feeling or interpretation of what is happening in the brain and body is not required.

This clarification of fear is important from a research perspective in the biological, psychological, and cognitive sciences to allow for more precise dissection of specific elements of, “animal brains relevant to human behavior and psychiatric disorders without assuming that the complex constellation of states that humans refer to by the term fear are also consciously experienced by other animals” (LeDoux, 2013, p. 156). Yet for us to systematically study and measure the effects of fear in the workplace, I believe we should consider in its definition the ‘complex constellation’ of the overall experience of fear as constructed by employees and recognized in practice. McNally (2012) compares the *qualia* of pain—the inner subjective experience of pain—to the subjective experience of fear. Observable inputs and outputs of pain fail to disclose what it is actually like for an individual to be in pain (McNally, 2012). (Note: it is not my intent to argue for or against dualism, functionalism, or physicalism in this paper.) The pain experience has been well documented as encompassing both sensory and affective components, whether or not the sensation of pain and emotion associated with pain are inextricably linked (Fernandez & Turk, 1992; Rainville, Feine, Bushnell, & Duncan, 1992). In reference to the emotional dimension of pain, LeDoux (2015) suggests that these “affective properties are more akin to nonconscious processes that are subsumed within the brain systems that underlie nonconscious defensive motivation states than to conscious feelings of pain” (p. 143). I hope to show that fear, as it is experienced by employees and defined in this paper, is closer to the multidimensional pain experience as opposed to an isolated conscious, subjective feeling of fear as separate and distinct from all other nonconscious emotional and behavioral processes.

Related constructs. It is important that we distinguish fear from any other closely related constructs. Before introducing a working definition of fear, I briefly review and define anxiety as

it could be considered the closest construct to fear in the nomological network. There are several dozen words to express fear and related emotions (see Marks, 1987, p. 5). It is probably easiest to envision a continuum of fear with words like tense or unease at the lower level of intensity and duration and feelings like dread, panic, and terror at the highest levels of the spectrum. Feeling afraid would likely fall somewhere in the middle. Anxiety has been used interchangeably with fear in some of the existing academic, practitioner, and popular literature, yet they have been shown to be two separate constructs (Bay & Algase, 1999; Geer, 1965; LeDoux, 2015; Pavuluri et al., 2002; Walker, Toufexis, & Davis, 2003). And yet even though the two emotions have been clearly established as distinct, they are experientially related. LeDoux (2015) hypothesizes that it is, “probably impossible to feel fear without also being anxious—as soon as you are afraid of something, you begin to worry about what the consequence of the danger at hand will be...Likewise, when you are anxious, the perceived threat potential of stimuli related to your anxiety can rise such that things you typically encounter that might not usually trigger fear now do so” (p. 10). Thus, it is understandable that for some—in both the literature and for those experiencing fear—the terms have been synonymous. Those who are feeling fear are likely feeling anxious; the memories and the experience inevitably connect.

Definition of anxiety: A heightened state of uneasiness to a potential nonspecific threat that is inconsistent with the expected event and results when there is a mismatch between the next likely event and the actual event. (Bay & Algase, 1999, p. 105)

Within the psychology profession, fear and anxiety need to be disentangled because treatment modalities for each can look very different (e.g., LeDoux, 2015; Pavuluri et al., 2002). Distinguishing the two concepts in the workplace is important because supporting an employee with anxiety (focused more on a generalized anticipatory concern for the future) will look very

different than dealing with an employee experiencing fear (focused more on a perceived imminent threat to one's physical or psychological concerns). Pavuluri and colleagues posit that fear and anxiety are separate constructs and, through their study of psychologist perceptions of whether an item belonged to a fear scale or an anxiety scale, found that even clinicians struggle to distinguish between fear and anxiety, calling for clearer terminology and revised scales to properly differentiate the two concepts.

The emotions of fear and anxiety, although separate, share several base commonalities. Perceived threat is the primary similarity between fear and anxiety (Bay & Algase, 1999; LeDoux, 2015). However, the type and timing of the threat is where the two feelings diverge. With regard to fear, Bay and Algase (1999) specify that the threat must be to one's biological well-being; Lerner and Keltner (2000) simply state a primer of "an immediate, threatening situation" without identifying a threat to one's biological, psychological or other form of well-being. The work of Ekman (2004) and Frijda (2004) support the latter, more broad definition although Frijda would use the word *concerns* rather than *well-being* and include "social censure, emphatic distress, sympathy, valuing interpersonal relationships, and social harmony" (Frijda, 2004, p. 170). To potentially feel fear, the perceived threat must be specific and proximal. An example could be a manager calling on an employee to answer a question in the presence of executives, the threat being to the employee's psychological concern of social censure in the face of powerful authority figures. On the other hand, a less specific and more anticipated threat of some future occurrence is associated with feelings of anxiety (Bay & Algase, 1999; Eisenberger & Lieberman, 2004; LeDoux, 2015; Steimer, 2002).

There are also neurological differences in the circuitry that regulate defensive responses indirectly related to the two emotions (Davis, Walker, & Lee, 1997; LeDoux, 2015; Walker et

al., 2003). Whereas the amygdala had been previously thought to be the seat of both fear and anxiety, damaged amygdalae were found not to be an interference in tests to reduce anxiety. Rather, it was discovered that the brain primarily processes uncertainty through the bed nucleus of stria terminalis, and instinctive reactions based on identifiable threat (e.g., freeze, flight) are generally processed through the amygdala (Davis et al., 1997; LeDoux, 2015; Walker et al., 2003). Thus, there is also a biological basis for the distinction between fear and anxiety.

Although fear can include a sense of anticipation, the nature of anticipation in the context of anxiety is different. The impending or anticipated change—a perceived threat in the future like an announcement of potential layoffs—reflects the time dimension of anxiety whereas the presence of a real or perceived threat indicates a dimension of proximity for fear (Knaus, 2008). Anxiety is more of an internal expectation and, compared to the imminent perceived threat associated with fear, the actual occurrence of the expected threat causing the anxiety is less likely (LeDoux, 2015) and duration of anticipation is longer (Walker et al., 2003). Anxiety is fueled by uncertainty of future outcomes coupled with a lack of control (Steimer, 2002). A general sense of apprehension about being fired without any evidence of poor performance or impending management action would be an example of anxiety. The threat stimulus in this example is less specific and the occurrence of the termination is at best unpredictable, and more reasonably considered unlikely. In sum, although fear and anxiety can be considered related in the sense of both being responses to perceived threat, the temporal and neurological differences clearly substantiate separate and distinct constructs.

Working Definition of Fear

Based on an attempt to synthesize both scholarly and practical perspectives of fear while considering LeDoux's (2013, 2014, 2015) assertion that fear is separate and distinct from our

threat circuitry, my proposed definition of fear is as follows: *Fear is the lived experience of a defensive state constructed for the purpose of self-preservation.*

“Lived” refers to what can be an enduring quality of a specific, ongoing conscious or unconscious fear in the workplace (e.g., fear of looking foolish) as distinguished from *state* or *trait* fear. “Experience” is the emotional, cognitive, and behavioral elements taken together to embrace the broader context of how fear is fully lived and referenced in practice. “Defensive state” refers to a motivational state that gives rise to a readiness to act. “Constructed” denotes individual conceptualization based on one’s previous knowledge and experience of the emotion of fear (Barrett, 2006b), suggesting that fear does not just happen to someone but rather that meaning must be ascribed to the experience. “Self-preservation” is the mode of survival, whether preservation of physical self or psychological self. In this case, self-preservation most broadly represents preservation of the psychological self against fears of failure, inadequacy, incompetence, etc. Referring back to Table 1, an employee may have a fear of failure from a previous aversive experience, and they live in a state where they are continuously defending against being perceived as a failure. Positive and negative value is intentionally omitted from this working definition of fear. Rather, the intent is to build, without judgment, a knowledge of fear to understand its function and impact in the workplace.

FEAR AND THE THREAT SYSTEM

The brain is a complex structure. Although the study of emotions would be simpler if there were one singular neural signature (e.g., a specific set of neural circuits) for each emotion, mounting evidence suggests that we do not have unique signatures for feelings like sadness, anger, happiness, disgust, and fear (Barrett, 2006a, 2006b). Rather, there is a network of circuits working together in the brain to directly and indirectly contribute to the elicitation of emotion.

Thus, whether fear is or is not evoked by one specific set of neural pathways, we do have evidence of a broader set of circuitry involved in threat detection and response that gives rise, at least indirectly, to the experience of fear (LeDoux, 2015; Ohman, 2012). Reviews of the threat detection and threat response systems have been covered in depth in numerous sources (see LeDoux, 2015 for a comprehensive review). For the purpose of this paper, I highlight key elements of threat circuitry that include detection of threat and autonomic defensive responses, and briefly discuss how fear is learned through threat conditioning, which uses some of the same circuitry.

Insert Figure 1 about here

Threat Detection. Our threat detection system signals danger; it is meant to keep us from harm (Ohman, 2012). We need it to respond quickly when someone runs toward us with a knife or when our foot slips off a rock during a mountain climb. If such reactions required conscious processing, we would most likely take too long to decide the appropriate course of action and become a victim of a violent crime or slide off the side of the mountain. Nonconscious scanning and processing is necessary for our well-being. In dangerous situations, relying on conscious processing is costly (Ekman, 2004).

According to Ekman (2004), a psychologist best known for advancing our understanding of nonverbal behavior (e.g., emotions through facial expressions), we have evaluative mechanisms or “autoappraisers” in the amygdala that are continually scanning the environment

for threats and opportunities. When a threatening stimulus activates our survival circuitry, our brain elicits a defensive motivational state (LeDoux, 2015). “Such states involve the whole organism (that is, body as well as brain) as part of the task of managing resources and maximizing chances of survival in situations where challenges or opportunities exist” (LeDoux, 2015, p. 44). The incoming stimuli are filtered through what Ekman (2004) refers to as the “emotional appraisal database” (p. 122), attempting to connect the present context with long-term memories. The more the existing circumstance resembles an aversive memory, the less conscious the processing and the stronger the response (Ekman, 2004).

Following is an example of how this scanning can take place in the workplace. Six months ago, a small marketing team had its weekly meeting and the team’s manager asked one of the employees to share their ideas for a new product line. After the employee proposed their idea, a colleague snapped back, “That’s ridiculous.” Other team members, including the manager, began to exchange glances with each other, shake their heads, and laugh. The employee felt humiliated and left the meeting feeling ashamed and embarrassed. Fast forward to the present where the employee is in a cross-functional meeting during which the employee is asked by one of the function managers to share some ideas on a competitor’s new product. In this case, the employee’s autoappraisers will unconsciously scan their memory bank for similar situations and will find the memory of the meeting six months prior where the employee felt embarrassed. Given this strong theme to which the appraisal system could attach, the scanning mechanism would bond to the memory and signal the neurophysiological systems that there is a strong threat to the employee’s psychological well-being, even if the current context poses no real threat. If instead the evaluative mechanism found a memory that was a variation on a theme—i.e., something that distantly resembled the present circumstance, such as being a child

amid a group of friends laughing with little consequence in the case of the employee—there would be a higher level of conscious processing, allowing for a more accurate appraisal of the present context.

In addition to threat detection that leads to threat responses, Ekman (2004) identifies eight pathways that lead to the triggering of emotions which can evoke conscious or unconscious behaviors. These include an extended appraisal of a stimulus with which our autoappraisers are less familiar, talking about a past emotional experience, and recalling—consciously or unconsciously—a memory of a past emotional event (see Table 2 below for a full listing). The workplace example above could represent the trigger of an unconscious recollection of a past emotional experience. However, similar to shame, there are no universal triggers for fear (Barrett, 2006a; Brown, 2006); that triggers are unique to the individual and associated context suggest infinite sources to evoke threat responses and potentially elicit a feeling of fear.

Insert Table 2 about here

Threat Responses. When we are faced with threat, whether to our physical or psychological well-being, “the brain’s resources are monopolized by the task of coping with the threat” (LeDoux, 2012, p. 658). For someone who experiences social fears like fear of negative evaluation, for example, cognitive resources are allocated toward the perceived threat (Wenzel & Finstrom, 2005). Thus, fewer resources remain available for potential opportunities; that is, there are “ability constraints on attentional resource capacity” (Kanfer & Ackerman, 1989, p. 687).

This is critical when considering employees' cognitive resources to engage in their work and collaborate with colleagues. Threat detection, discussed above, activates multiple brain systems that create a cascading effect of reactions, actions, and responses (LeDoux, 2015). The amygdala receives sensory inputs about the stimulus and triggers instinctive behavioral responses including what we know as freeze, flight, or fight. For the employee in the example above, they may freeze whenever they get asked in the future to share ideas. Over time, this sensation could lead to behavioral actions such as withholding ideas altogether that, in turn, could snowball into the employee being perceived as a lower performer, receiving poor performance appraisals, and not advancing in the company.

Threat detection also arouses the autonomic physiological responses including increased heart rate and palmar sweating (Ohman & Wiens, 2004; Ohman, 2012). The endocrine system responds by releasing hormones including ACTH and cortisol (LeDoux, 2015). The motivational system is engaged, leading to instrumental, goal-directed behavior unique to each individual (LeDoux, 2012). In total, these and other defensive responses create what LeDoux calls a "global organismic state" (2012, p. 663) from which new learning and new memories are formed. This state is considered multidimensional and individuals will experience a response at varying levels depending on the context and the degree to which certain components are activated (LeDoux, 2014). The subjective feeling of fear can be evoked based on a cognitive interpretation of all that is occurring physically and neurologically (LeDoux, 2012, 2015).

Our threat response system is a motivational system that impacts our cognition, our emotions, and our behavior (Fisher & Horsfall, 2005; Ohman, 2012; Seo, Barrett, & Bartunek, 2004). Thus, without even realizing it, people will at times be either driven by an invisible force to defend, or stopped by an invisible barrier to protect. In the face of physical danger, these

motivations are fitting and can protect us from harm (Ohman, 2012). Even when faced with certain psychological dangers, like emotional or verbal abuse, defensiveness is appropriate (Quinn & Fanselow, 2006). Yet when the perceived threat is in fact not a threat at all—our unconscious appraisal mechanisms are not always correct (Ekman, 2004)—the constraining responses can hinder what could otherwise be opportunities. We continually take in new stimuli that contribute to memories; however, our neural circuitry was built in a way “to keep triggers in, not get them out, to mobilize our emotional responses without thought, not to allow us to interrupt them readily” (Ekman, 2004, p. 128). The presence of knowledge that a particular stimulus should not be perceived as (or no longer is) threatening has been found to be ineffective in certain conditions in overriding conditioned responses (Ekman, 2004; Mineka & Sutton, 2006; Wenzel & Finstrom, 2005) that we associate with fear. In other words, just knowing we should not feel threatened does not keep us from feeling threatened and experiencing fear. By extension, then, we may not behave in ways that are beneficial to us and instead behave (i.e., defensively react) in ways that are harmful.

Defensiveness is the state of being and behavioral companion to a perceived threat, which can include the emotional response of fear, and has been defined as “any group member act motivated, in substantial part, by an individual’s need to preserve a stable perception of the self or to defend the self from perceived attack...” (Gibb, 1961 as quoted in Holmer, 2014. p. 621). On the surface it seems fear and defensive responses appear to occur almost simultaneously. If an employee becomes resistant, aggressive, or even insubordinate in a performance appraisal review with their manager, these defensive behaviors can signal to the manager that the employee has detected a threat (e.g., to his integrity, to his competence) and may likely be in fear. In this case, it could be associated with a previous experience in which the employee was

rejected or their competence was questioned. Regardless of the original cause, unconscious defense mechanisms can be a key factor in an organization's capacity to effect learning and change (Argyris, 2002; Vince, 1998).

Learned fears. Stimuli that directly or indirectly evoke fear are “idiosyncratic for individual persons, which suggests that learning is an important mechanism of selection for what people fear” (Ohman, 2012, p. 45). Fear, as defined in this paper, can be learned through associative experience with threatening stimuli, instruction from others, or observation (Mineka & Sutton, 2006; Ohman, 2012; Phelps, 2006). However, it is more likely for fear to be learned through observation or instruction than direct association (Ohman, 2012). For example, an employee walks out from behind closed doors with their manager, looking as though they saw a ghost. A colleague is waiting outside the office, next in line to talk with the manager. The employee who just finished the meeting pulls the other employee aside and says, “You-know-who is in a terrible mood. You don't want to go in there right now or you'll get your head ripped off!” The second employee in this case will have learned through instruction to fear the manager before even entering the room.

There is a strong relationship between threat and memory. In fact, memories formed through aversive stimuli are considered indelible (Ekman, 2004; Holmer, 2014; LeDoux, 1996). In animal research conducted in the 1980s, scientists—drawing largely on the classic work of Pavlov—studied aversive learning and the relationship between threat and memory by pairing a conditioned stimulus (typically a tone) with an aversive unconditioned stimulus (typically a foot shock). The rat experiences both the conditioned stimulus and the unconditioned stimulus simultaneously, at which point the animal typically freezes in response to the perceived danger.

After only one round, subsequent rounds of the conditioned stimulus result in the rat freezing, as though its body is still receiving a shock.

In the team meeting example above, the conditioned stimulus was the request to share an idea, and the unconditioned stimulus was the hurtful retorts. The amygdala receives inputs about these stimuli, which—going forward—allows the conditioned stimulus to activate the amygdala without the presence of the unconditioned stimulus (Olsson & Phelps, 2007). Prior to this coupling, the conditioned stimulus may have only insignificantly activated the amygdala. In other words, when the employee was asked for their ideas on any given day prior to the hostile treatment, the employee's amygdala was only weakly aroused (as it would be with any other neutral stimulus). Yet after the pairing of the conditioned stimulus and unconditioned stimulus, the conditioned stimulus (i.e., the request to share ideas) is able to activate the employee's amygdala even if no team members are hostile toward or laughing at them. Because of the employee's aversive experience, in the future just being asked for input can initiate neural activity in the central nucleus, which evokes defensive behavior, physiological responses (e.g., increased heart rate, dilated pupils; Ohman & Wiens, 2004; Ohman, 2012), and brain arousal. In essence, the pairing of the conditioned stimulus and unconditioned stimulus—the request to share and the unwelcomed behavior—activates neural circuitry that embeds memories in a long-term memory databank (Phelps, 2006). Thus, the individual may continue to feel fear whenever asked for their thoughts.

THE MEASUREMENT OF FEAR

The extant instruments to measure fear originated within the field of psychology. The primary measures of fear include the Fear Survey Schedule-II (FSS-II; Geer, 1965), the Fear Survey Schedule-III (FSS-III; Wolpe & Lang, 1964), the Fear of Negative Evaluation scale

(FNE; Watson & Friend, 1969), the Fear of Positive Evaluation Scale (FPES; Weeks, Heimberg, & Rodebaugh, 2008), and the Social Anxiety Scale (Liebowitz, Gorman, Fyer, & Klein, 1985). Many of the instruments measure changes in affect, cognition, and/or behavior over time based on clinical interventions such as desensitization to fear and anxiety (Geer, 1965; Wolpe & Lang, 1964). However, there are several critical issues with the way fear has been measured to-date, including a sole reliance on self-report for studying implicit phenomena, a larger focus on anxiety or other constructs than fear itself, a narrow view of types of fear, inconsistent results from categorically organizing discrete emotions, and delimiting contextual stimuli.

With the exception of the Social Anxiety Scale (Liebowitz, Gorman, Fyer, & Klein, 1985) which was originally developed to be a clinician-administered survey, most current fear instruments utilize self-report data. Self-report measures can focus on cognition, affect, or behavior (Leary, 2001), and most of the instruments include affective and cognitive components. However, self-reporting has continued to receive criticism, especially in the study of implicit phenomena (see Uhlmann et al., 2012). Traditional self-reporting requires “effortful and introspective thought” (Uhlmann et al., 2012, p. 554), and is less advantageous when the variables are processed—even in part—at subconscious levels. Self-reporting can create problems when used for gathering personality data or scaling psychological states of participants (Podsakoff & Organ, 1986). When considering the measurement of fear as defined in the present paper and within the context of the workplace, there is a reasonable concern that employees might self-censure in an instrument containing explicit items. An exception is in the study of the physiology of affect. Using self-report in tandem with facial behaviors and electroencephalogram (EEG) allowed Davidson and his colleagues (Davidson, Ekman, Saron, Senulis, & Friesen, 1990) to identify what they believed to be the presence of fear. They found that brain physiology

during arousal of emotion differs depending on the emotion. Barrett (2006a) challenged this study method in the field of emotion, however, concerned with the high degree of reliance on correlational relationships to explain potential causal mechanisms. She also raised concerns about the small to moderate correlations in these particular emotion studies with correlated sets of measureable effects (e.g., facial movement, peripheral physiology), citing “some question about their consistency across studies” (Barrett, 2006a, p. 33). At the same time, there is some validity in self-reports when studying emotional *properties* rather than emotion *categories* (Barrett, 2006a), such as the properties of facial display or cardiovascular pattern as opposed to the categories of fear or anger.

Many of the scales that contain “fear” in the instrument title (e.g., FSS-II, FSS-III, FNE, FPES) attend less to any construct of fear and more often measure the presence or level of social anxiety (Leary, 1983; Watson & Friend, 1969; Weeks, Heimberg, & Rodebaugh, 2008; Wolpe & Lang, 1964). Scales similar to FSS-II utilized constructs like maladaptive neuroses (Wolpe & Lang, 1964), and anxiety experienced in social situations (Watson & Friend, 1969). In these instruments, fear (e.g., of negative evaluation) was often identified as a core component of social anxiety disorder (Heimberg, Mueller, Holt, Hope, & Liebowitz, 1992; Watson & Friend, 1969; Weeks et al., 2008), yet many of the supporting studies did not specifically define fear. Within this latter body on social anxiety, most scales specifically focus on pathological levels of social phobia and generalized anxiety disorder (Baker, Heinrichs, Kim, & Hofmann, 2002; Mattick & Clarke, 1998).

Fear scales tend to focus on specific, explicit conditions in which someone might experience fear (e.g., fear of snakes, loud noises, public speaking) (Geer, 1965; Wolpe & Lang, 1964). This is understandable given that fear had predominantly been viewed from the single

salient cue perspective around the time of the original scale development. Items in the fear scales are typically either dichotomized using true-false or agree-disagree, or they employ a five- or seven-point Likert scale that might range from *Not At All* to *Very Much* (e.g., disturbed by the situation). The FSS-II and FSS-III instruments were presented in inventory form, conveying less of a measurement to understand the latent construct of fear or social anxiety and more of a checklist of items that, because of their presence and correlation with the total score, would produce the construct in question (e.g., high fear of negative evaluation). A total score is typically calculated, representing the overall presence or level of the construct in question. The FSS-II (Geer, 1965) is one of the only scales developed to specifically measure fear. Geer (1965) intended to create a research tool that measured fear, defined as “a negative emotional response evoked by a relatively specific stimulus” (1965, p. 45). And although Geer (1965) was an early advocate for delineating fear from anxiety on the basis of the specificity of the stimulus, he posited that fears—as measured by FSS-II (e.g., being alone, making mistakes, looking foolish)—were a stable phenomenon; he was interested in pursuing theories of broad dimensions of personality.

Attempts at categorically organizing discrete emotions have produced inconsistent results, and more often than not, have shown high correlations between “like-valenced states” (Barrett, 2006a, p. 35). These highly correlated states have led to broadening measurement of emotions to higher-level constructs such as positive and negative affect (Watson, Clark, & Tellegen, 1988). Factor analysis has been a common approach to identifying construct validity among the current fear scales (Baker et al., 2002; Mattick & Clarke, 1998; Sadd, Lenauer, Shaver, & Dunivant, 1978; Weeks et al., 2008; Wolpe & Lang, 1964). Factor analysis should be employed when the items are seen to be an effect of a variable; principal component analysis is

more appropriate when the indicators are seen as causing the variable (Babbie, 2008). Especially in the cases of FSS-II and FSS-III, which both employed more of an inventory of potentially unrelated—and thus uncorrelated—variables, and Fear of Negative Evaluation Scale that posed only True-False questions, the items could reasonably be viewed as *causing* the variable of “fear” or social anxiety; thus, factor analysis may not be the appropriate methodology.

In sum, merely listing a number of situations in which people typically feel fear to measure the presence of fear or anxiety, in part because they are conducive to laboratory study (Geer, 1965), is insufficient to understand this largely implicit phenomenon. As defined in this paper, fear is a lived experience of a defensive state constructed for the purpose of self-preservation. It is not an objective occurrence, nor is it finite in its contexts as extant scales might lead us to believe. Rather, potential stimuli that can lead to the arousal of fear are seemingly limitless as they rely on a unique combination of an individual’s past experiences, memories, and current cognition. In addition, self-reports of emotional experience tend to fit on a circumplex-like structure as opposed to a straight line, indicating there is more than one dimension to the experience (e.g., pleasure-displeasure and high activation-low activation) and should be measured as such (Barrett, 2006a). More recently, functional magnetic resonance imaging (fMRI) and positron emission tomography (PET) techniques have been used to measure the presence of certain emotions via specific neural circuitry (e.g., Morris, Ohman, & Dolan, 1998; Öhman & Mineka, 2001; Olsson & Phelps, 2007), yet this type of scientific research assumes each emotion has patterns or clusters of causal mechanisms (Barrett, 2006a). Although the technology has advanced dramatically from paper and pencil, the intent to measure fear based on a specific set of building blocks remains much the same. None of these scales described above is

sufficient to measure fear as defined in this paper. Thus, future consideration of appropriate methods to study fear will be critical.

FUTURE RESEARCH DIRECTIONS

The purpose of this paper is to begin building a literacy—an awareness and a language—of fear to study this construct in the workplace. The ultimate goal would be to study the experience of fear so that it can be expressed, acknowledged, and reframed in a more helpful way such that the experience moves from unconscious reaction to conscious choice. If individuals become aware of and can express their fears, they become more aware of themselves. Self-awareness is key to authenticity (Gardner, Avolio, Luthans, May, & Walumbwa, 2005) and a core component of emotional intelligence (Boyatzis, Smith, Van Oosten, & Woolford, 2013). A clear terminology of fear may help academics and practitioners alike understand how individuals participate in triggering these defensive states that lead to the need for self-preservation. Although fear is well-represented in the practitioner literature, it is often only implied in management research such that the study of fear is largely unaddressed. I propose that the organizational sciences begin systematically studying the phenomenon of fear and its impact in the workplace. Studying fear will require new ways of measuring not only the subjective feeling of fear, but also the lived experience of fear.

The study of trust and psychological safety are also of critical importance to the research on fear. How can organizations create the psychologically safe environment in which employees can specifically voice their fears, obtain support, and be liberated to do their best work? Ashford and her colleagues (Ashford et al., 1998) conducted a study of influences on issue selling (i.e., the attempt to gain the attention of senior leaders with regard to issues the individual deems important) and found that context favorability was critical. That is, study participants who

perceived their organizations to be supportive and espouse norms that favored issue selling were more likely to feel safer, perceive fewer threats, and take more risks to sell issues important to them. Building on this study, Morrison and Milliken (2000) proposed a model that identifies contextual variables that create an environment of organizational silence in which individuals do not feel safe to speak up. In addition to organizational dynamics such as structures, policies, and managerial practices, a manager's fear of negative feedback is a primary impediment to employee voice. Thus, a study of fear that illuminates the experience and assuaging of fear may help organizations create psychologically safer environments for employees. Specific research questions might focus on the degree to which the specific impact of fear in organizations decreases as trust and psychological safety increase, and whether organizations that create an environment in which employees are permitted to make mistakes and reward taking risks experience less negative impact from fear.

Finally, although the impact of fear on organizations can be negative, fear—as it is being defined in this paper—is neither judged as positive nor negative, but rather viewed as a natural response to aversive events. Although the specific feeling of fear is typically classified as a negative emotion (e.g., Ashkanasy & Daus, 2002; Boyatzis, Rochford, & Taylor, 2015; Geer, 1965; Lerner & Keltner, 2000; Phelps, 2006), psychology provides a specific framework more consistent with the approach in this paper. Dual tuning theory (George, 2011; George & Zhou, 2007) posits that a tension must be maintained between both positive and negative affect for the greatest range of behavioral outcomes. Moods lead to cognitive processes which then lead to specific behaviors (George, 2011). Since moods can be a composite of both positive and negative emotions, it is important to understand both because either can lead to positive or negative outcomes. It is more important to consider how both positive and negative emotions can serve

“adaptive functions in organizational life” (George, 2011, p. 157). Positive and negative emotions are flexible and adaptive and may work together in a specific work context for greater individual and organizational outcomes. Going forward, it will be important to work from theories and models that take into consideration not just psychological and political complexity (Vince, 1998), but more specifically positive-negative and conscious-unconscious emotional complexities of the work environment.

CONCLUSION

The phenomenon under study in this paper is fear in the workplace, capable of constraining thought and inhibiting ability to enact preferred choices without proper support (Baumann, Chatterjee, & Hank, 2015). Employees from the shop floor to the C-suite may be aware that they are feeling fearful, apprehensive, or uneasy. Or they may feel fear because their bodies signal a detected threat—through physical agitation or discomfort, a more rapid heartbeat, a ‘pit’ in the stomach, a sense of paralysis, or a physical compulsion to escape from an uncomfortable circumstance. Yet the manifestations of fear are real and have real effect on employees and organizations. Barsade and Gibson (2007) reviewed the literature on affect in organizations and found that emotions influence critical organizational phenomena such as performance, turnover, prosocial behavior, group dynamics and leadership. The true cost of fear in the workplace has yet to fully be discovered. As management scholars, we have the opportunity to contribute significantly to this nascent area of organizational knowledge in the hope of having positive impact on organizations and their members.

Our threat response system is a necessary function for survival, and feeling fear is a gift given to us along with the gift of consciousness and the ability to make meaning in the world. However, fear can hold us back from living life to its fullest. In her tremendous work on shame

and vulnerability, Brené Brown (2006) quoted Mason, 1991, saying, “We cannot heal our shame in psychotherapy, twelve-step groups or family of origin workshops alone. Until we face the non-psychological aspects of shame, we cannot be free. We need to be conscious to be free” (p. 50). Until we face the non-psychological aspects of fear—that is, until we look at the sociological and even practical conceptualizations of fear alongside the psychological domain—we cannot be free. Ideally, employees increase their level of self-awareness and organizations create the environment in which we can shift from implicit expectation to explicit conversation. Building a construct to study and develop a literacy of fear in the management sciences, along with continued emphasis on trust and psychological safety, may just help create truly empowered workplaces and allow employees the freedom to thrive.

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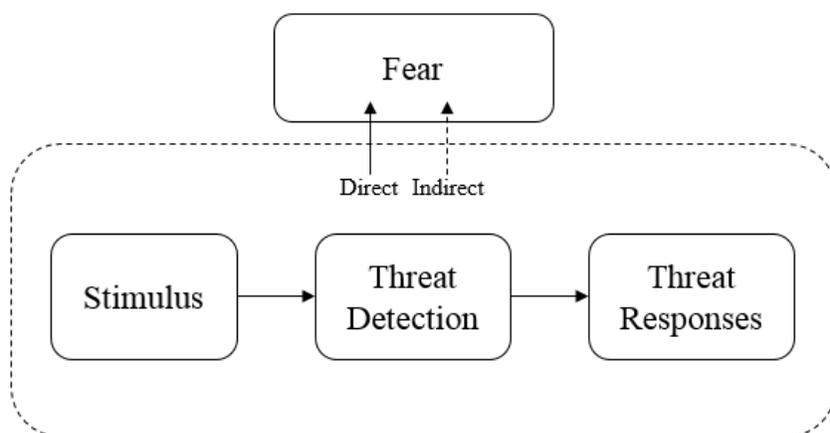
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Being Judged	Failure	Looking Foolish	Not Being Enough
Being Laughed At	Greatness	Looking Lazy	Not Belonging
Being Less Than	Humiliation	Looking Stupid	Powerlessness
Being Minimized	Inadequacy	Looking Weak	Rejection
Being Wrong	Incompetence	Loss	Standing Out
Disappointing	Insignificance	Negative Evaluation	Worthlessness
Embarrassment			

Figure 1. Model of Fear and Basic Threat Systems



Extended Appraisal	The conscious consideration of what is occurring because we are not yet sure how to interpret the stimulus. Extended appraisal involves situations in which there is greater ambiguity (i.e., with which our automatic appraisers are not familiar). Because of the extended processing, there is greater opportunity for more conscious behavioral choices.
Memory of Past Emotional Event	Rather than scanning for danger, we voluntarily or involuntarily recall a past emotional event. Remembering the event evokes a similar if not the exact feeling as was originally experienced.
Imagination	Imagining a scene that we know will make us emotional can lead us to experience the expected emotions. Imagination allows us to reconsider and reframe the situation and, thus, attempt to mitigate some of the effects of our more volatile triggers.
Talking About Past Emotional Experiences	Just by talking to someone about an emotional experience from the recent or deep past can evoke strong emotions.

Witnessing Someone Else's Emotional Reaction	Drawing from social learning theory (Bandura, 1977 as referenced in Ekman, 2004), when we witness someone with whom we identify become emotional, we can feel their emotions as though their experience was happening to us.
Symbolic Pathway	Similar to how fears are learned through instruction and observation as discussed below, the symbolic pathway triggers emotions through instruction of what we should be emotional about (e.g., what to be afraid of), or the observation of what important people in our lives become emotional about.
Norm Violation	Having national, organizational or some other form of cultural norm violated can trigger emotion, whether we or someone else were the one to violate the norm.
Novel, Unexpected Way	Specifically, voluntarily making certain facial expressions that have been found to generate emotion.

(Ekman, 2004)