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Review

Exploring why leaders do what they do: An integrative review of the situation-trait approach and situation-encoding schemas

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ABSTRACT

In order to enhance leaders' effectiveness, it is critical to clearly and accurately understand the underlying processes that contribute to leaders' decision making and behavior. The traditional trait approach to understanding leaders' underlying processing carries limitations and does not capture any of the situational characteristics that may be important. We thus advance the situation-trait approach by introducing the Cognitive Affective Processing Systems framework more fully into the leadership domain. A primary benefit of integrating this framework is that it identifies an attribute largely overlooked by leadership scholars, yet foundational to leaders' processing and behaviors: situation-encoding schemas. We integrate and review decades of research on four sets of situation-encoding schemas to demonstrate their important role in determining why leaders do what they do. This consensus shift, novel focus on situation-encoding schemas, and integration of four disparate sets of well-studied situation-encoding schemas has important implications for leaders' self-awareness, meta-cognition, effectiveness, and development.

Introduction

Leadership matters. Leaders are responsible for making decisions, taking action, and creating cultures that help their organizations adapt and succeed in competitive environments (Bass, 1990; Nadkarni & Herrmann, 2010; Peterson, Smith, Martorana, & Owens, 2003; Resick, Whitman, Weingarden, & Hiller, 2009; Waldman & Yammarino, 1999). Acknowledging this, a primary question researchers and practitioners face is: "How do we improve the effectiveness of leaders?" This is particularly important because anecdotal evidence suggests a large proportion of leaders are not operating as effectively as expected. Gallup, Inc.'s polling research has revealed that only 22% of employees strongly agree that their performance is managed in a way that motivates them to do outstanding work (Ott, 2017). The Center for Creative Leadership reports that over 38% of executives outright fail in the first 18 months (Riddle, 2016). To answer the question, "How do we improve the effectiveness of leaders?" it is critical to understand the underlying processes that contribute to leaders' decision making and behavior. Only by diving into the psychology of leadership can we hope to comprehensively understand why leaders do what they do, which will ultimately help us train leaders to process and behave in more effective and optimal ways.

Historically, the emphasis on why leaders do what they do has been on leaders' traits. This traditional approach implied that leaders' traits were the primary explanation for leaders' processing and behavior, and left organizations with two primary options if they wanted to improve the effectiveness of their leaders: select leaders with the traits more likely to lead to effectiveness or develop their leaders to possess such traits. Unfortunately, this early approach carries three assumptions that have limited leadership development research and practice. These assumptions include: (1) leadership behaviors are a function of relatively stable characteristics of the person (Michel & LeBreton, 2011; Park, Arvey, & Tong, 2011; Zaccaro, Green, Dubrow, & Kolze, 2018), (2) variability of behaviors across situations represent a form of measurement error or internal contradictions (Mischel & Shoda, 2008), and (3) the manifestation of the leader's traits and the situations they face are mutually exclusive and opposing influences (Mischel & Shoda, 2008). While leadership researchers have largely moved away from this traditional focus of leaders' traits being the primary explanation for why leaders do what they do, these assumptions still linger and may be

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limiting the development of richer perspectives which can more comprehensively explain leaders' processing and behavior.

What psychologists and leadership researchers are increasingly agreeing on is that an improved explanation for why leaders do what they do must go beyond studying leaders' traits, and instead focus on the interaction of those traits with the specific situations in which leaders operate (Bandura, 1986; Higgins, 1990; Mischel & Shoda, 1995; Mischel & Shoda, 2008). They recognize that instead of the leaders operating similarly across situations because of their traits, leaders operate and manifest their traits differently across the various situations they encounter (Michel & LeBreton, 2011; Park et al., 2011). For example, it should be expected for a leader who is generally high in agreeableness to demonstrate different levels of agreeableness across different situations—for example one level when negotiating with employees about where to hold the annual company retreat, and another level when negotiating a significant business deal. Further, psychologists do not believe that such variation should be considered "error;" rather, such variation should be expected, and is likely predictable (Mischel & Shoda, 2008). Thus, to better understand why leaders do what they do, we need to better understand the interplay between the situations leaders encounter and their traits (Fleeson, 2007; Judge & Zapata, 2015; Mischel & Shoda, 2008). When we take this situation-trait approach, new and novel insights related to leadership development and effectiveness become apparent.

Perhaps the best framework to explain this situation-trait approach is broadly summarized by a model and meta-theory called "Cognitive-Affective Processing System" (CAPS). The CAPS framework explains that how leaders operate in a given situation is based upon cues in the situation that activates select affect and cognitions within the leader (broadly categorized as an individual's personality system; Mischel & Shoda, 1995; Mischel & Shoda, 2008). More specifically, it suggests that while individuals do not operate similarly across situations, they have processing and behavioral dispositions that become activated upon certain cues, causing them to operate similarly and predictably across situations that share similar cues (Mischel & Shoda, 1995; Mischel & Shoda, 2008). This framework identifies a commonly undervalued, yet critical aspect of leaders' operations: the initial intersection between the leader and the situations they encounter, which CAPS labels the "encoding process" (Mischel & Shoda, 1995).

Leaders' encoding process, which largely functions subconsciously, guides (1) what cues the leaders detect in the situations they encounter; (2) why those particular cues are detected and not others; and (3) the activation of specific processing and behavioral dispositions, or repeatable and predictable patterns, within the leaders' personality system (Mischel & Shoda, 2008). As such, leaders' encoding process are foundational to how they process and operate, and if categorized, can be used to develop a leader's "signature" (Mischel & Shoda, 2008). We believe that if we can better understand leaders' encoding process, and the specific mechanisms that drive it (i.e., situation-encoding schemas), we will develop more precise leadership development guidance that involves a novel focus on leaders' encoding process, which has largely been absent from leadership research and practice.

The purposes of our paper are three-fold. First, we seek to shift consensus within the leadership literature to more fully embrace this situation-trait approach in the study of why leaders do what they do. In doing so, we recognize that the leadership domain has historically placed emphasis on situational leadership theories. But, these theories have primarily focused on how leaders need to adapt to their situations instead of how their situations dictate their processing and behavior, which has only received scant attention. Thus, we summarize the situation-trait approach, primarily relying upon the CAPS framework. Our second purpose is to identify a component in this framework, leaders' encoding process, as being the most important and foundational component for leaders' operations because it initiates the interchange between individual and situation and activates select aspects of leaders' personality systems (e.g., traits and self-regulatory processes) to help them best navigate the situations they encounter. Third, we review four sets of situation-encoding schemas that govern leaders' encoding process. These schemas activate and guide leaders' processing and behavioral dispositions, yet they have largely been overlooked by leadership researchers and practitioners. As such, they are ideal aspects to focus on for leadership development and promoting leadership effectiveness. One benefit of considering these sets of schemas together is that they can help identify leaders' "signature" responses across the situations they encounter, with important developmental implications including enhancing their ability to be self-aware, operate consciously (as opposed to non-consciously), and engage in metacognition.

The study of why leaders do what they do

The field of psychology has long investigated why people process and behave in the manner they do. Historically, psychologists took two competing approaches, forming two branches of psychology: personality psychology and social psychology (Mischel, 2009). Personality psychologists focused on identifying internal traits to explain individuals' processing and operation. On the other hand, social psychologists focused on the situational characteristics to explain individuals' processing and operation. For many years, primarily in the 1970s and 1980s, these psychologists debated between the "power of the person" and "the power of the situation," considering the debate a zero-sum formula, where it was all or nothing.

Psychologists' contemporary view is now a more accurate depiction of reality that acknowledges a combination of individual traits and situational characteristics is what best explains why people operate the way they do. They believe that there is a dynamic interchange between situations and individuals' traits, and it is this interchange that best represents how individuals express their behavior (Bandura, 1986; Mischel, 2009; Pervin & John, 1999). It is also an interchange that leadership scholars need to better integrate into their theories and research.

The trait approach

The traditional approach that the leadership domain has taken in studying why leaders do what they do has been the trait approach, stemming from personality psychology (Zaccaro et al., 2018). This approach has a long history that dates back to the ancient Greeks who believed that some people had the "natures" to be leaders, while others did not (Plato & Jowett, 1901). Leadership researchers who have taken this approach have been primarily interested in identifying specific traits that can be generalized across situations, providing insight for leadership selection, development, and effectiveness. The significant amount of research on this topic has resulted in multiple meta-analyses, allowing DeRue, Nahrgang, Wellman, and Humphrey (2011) to test a meta-analytic structural equation model of the role leader traits play on leadership behaviors and effectiveness. They identified personality (i.e., the Big Five), intelligence, and gender as being the most heavily studied traits related to leadership.

This approach carries an assumption that few have questioned: leaders' traits generally cause them to act the same across situations. Unfortunately, this assumption, and broader approach, carries significant limitations. First, it views variability of behavior across situations as error and internal contradictions (Mischel & Shoda, 2008). Second, it construes personality and situation as being mutually exclusive and opposing influences (Mischel & Shoda, 2008). Third, it overlooks and fails to address the psychological processes and dynamics that underlie leaders' behaviors (Mischel & Shoda, 2008). Fourth, it fails to consider that leaders engage in cross-situational consistent patterns of behavior that differ depending upon the cues of the situation (Michel & LeBreton, 2011; Mischel, 2009; Park et al., 2011). Overall, this approach ignores reality: "The person and the situation at any given moment are inextricably interwoven" (Rauthmann, Sherman, & Funder,

2015; p. 363). Because of these limitations, the trait approach will always be limited in its predictive validity of leadership effectiveness, and they are likely the primary reasons for relatively small correlations between traits and leader effectiveness (DeRue et al., 2011; Judge, Colbert, & Ilies, 2004).

The situation-trait approach

The leadership domain is increasingly recognizing the limitations associated with the traditional trait approach, but theoretical approaches or frameworks that move the domain beyond this traditional approach have been slow to develop. Fortunately, the psychological domain has spent decades studying how individuals' traits interact with their situation to explain why they do what they do. Thus, there is much precedent and expected value from applying this situation-trait approach into the leadership domain. In fact, this approach has been predicted (Antonakis, Day, & Schyns, 2012) and promoted (Zaccaro et al., 2018) as a renaissance for the leadership domain.

A framework commonly used to describe the situation-trait approach is CAPS (Mischel & Shoda, 1995). CAPS is a meta-theory, which means that it provides a framework for building theories to account for individuals' characteristic intra-individual behavior and the dynamics that underlie it (Cervone, Shadel, Smith, & Fiori, 2006; Mischel & Shoda, 2008). It is able to incorporate "the complexity of human personality and the cognitive-affective dynamics, conscious and unconscious—both 'cool' and 'hot,' cognitive and emotional, rational and impulsive—that underlie the individual's distinctive, characteristic internal states and external behavioral expressions" (Mischel & Shoda, 1998, p. 210–211).

The situation-trait approach and CAPS framework takes a process-oriented perspective toward personality, viewing it as a process or system of a unique network of organized interconnections among cognitions and affects that explains why and when a leader behaves distinctively (Mischel & Shoda, 1994, 1995, 2008; Rauthmann et al., 2015; Zaccaro et al., 2018). It moves beyond the idea that personality produces uniformly consistent behavior across situations, and instead suggests that leaders possess various behavioral processes or patterns that are characteristic and predictable across situations, depending upon situational cues (Mischel & Shoda, 1998; Park et al., 2011). It implies that certain traits (e.g., extraversion) and related behavior may be utilized more heavily in situations with certain cues than other situations with different cues.

This approach carries its own assumptions that has unique implications for the leadership domain. First, leaders' context or situation has significant influence on the expression of their leadership (Zaccaro et al., 2018). Second, leaders' behavioral tendencies vary in stable and predictable manners across situational cues, which means that variability in cognitions and behavior across situations is not viewed as error or internal contradictions, but as valuable information related to the leaders' personality processes (Michel & LeBreton, 2011; Mischel & Shoda, 1995, 2008). Third, every leader will differ in how they encode the situations they encounter, and their specific encodings will activate their own unique pattern of processing and behavior (Mischel & Shoda, 1995). Fourth, failed leadership is less about not possessing particular traits, and more about failing to encode their situations properly and subsequently failing to recognize the need to employ their traits differently across situations (Zaccaro et al., 2018).

Comparing the situation-trait approach to the trait approach, it becomes clear to see that while they are both seeking to address why leaders do what they do, they have different motives and focus. The trait approach seeks to identify the characteristics that explains how leaders are likely to operate across all situations, whereas the situation-trait approach investigates the psychological processes that underlie leaders' individual differences in behavior and its variability across situations (i.e., how a leader functions; Mischel & Shoda, 1995).

This latter approach allows for a more accurate view of the reality of human functioning. Assuming variability in behavior across situations to be errors, the trait approach only offers flat, simplistic, static portraits that characterize a leader's average types of behavior. Instead, the situation-trait approach sees variability to be part of the multi-faceted nature of human character, and provides a richer, more comprehensive, and more coherent explanation and understanding of leaders' contextualized behavioral expressions (Michel & LeBreton, 2011; Mischel, 2009; Mischel & Shoda, 2008; Park et al., 2011). It explains both baseline levels of behavior (i.e., behavioral consistency) and patterns of variability (i.e., behavioral coherence; Michel & LeBreton, 2011).

It has been argued that the trait approach is akin to categorizing an automobile's dispositions (e.g., clunky or speedy; gas guzzler or economical; Mischel & Shoda, 2008). While that information may be helpful when determining which car to buy, it provides little value for fixing the car if it is not running properly. The situation-trait approach, on the other hand, allows for a deeper understanding of what is going on "under the hood"—the psychological processes and dynamics that underlie leaders' behavioral dispositions (Epstein, 1994; Mischel & Shoda, 2008). When one has a knowledge of what is going on "under the hood," it makes one more capable of diagnosing and fixing any issues in operation.

In fact, the situation-trait approach allows for the identification of leader signatures or profiles representing their characteristic individual patterns of cognitions and behaviors in response to specific situational conditions (Mischel & Shoda, 2008). Identifying and awaking to such signatures has valuable implications for enhancing leaders' self-awareness and development. If leaders can better understand their processing dynamics, they will be able to more accurately assess and improve the effectiveness of their processing and operation (Mischel & Shoda, 2008). Specifically, they will be able to anticipate the events and conditions that activate select signatures, allowing them to become more conscientious of the situations they step into and more conscious of their reactions and responses to such situations. Altogether, they will be empowered to modify their processing that underlies any maladaptive and dysfunctional behaviors.

Modeling the situation-trait approach

CAPS framework

The CAPS framework is the primary model used to capture the situation-trait approach. A depiction of this framework is presented in Fig. 1. Broadly, it presents a process explaining why leaders operate the way they do.

This process begins with the initial interaction between individual and situation. The situation is full of features and related cues, generally too many to process effectively. When individuals interact with the situation, they must identify and interpret a sample of select cues to start the process of informing the individual how to best navigate the situation. This is called the encoding process. This reading of the situation occurs automatically, largely subconsciously, and efficiently (Bargh, 1997; Kihlstrom, 2004; Mischel & Shoda, 2008).

This encoding process activates a number of affective and cognitive personal aspects—housed in what is broadly categorized as one's personality system—in a manner designed to help the individual best navigate the situation based upon the select cues perceived and how they are interpreted (Mischel & Shoda, 1995, 2008). Mischel and Shoda (1995, 2008) identify five different categories of affective and cognitive personal aspects that can potentially be activated as part of the broad personality system. They include: (1) encoders, which are people's individualized manner of categorizing information from external stimuli; (2) competencies and self-regulation strategies, which include intelligence and self-regulatory strategies; (3) expectancies and beliefs, or people's predictions about the consequences of each of the different behavioral possibilities; (4) goals and values, which provide the basis for behavior consistency; and (5) affective responses, which include

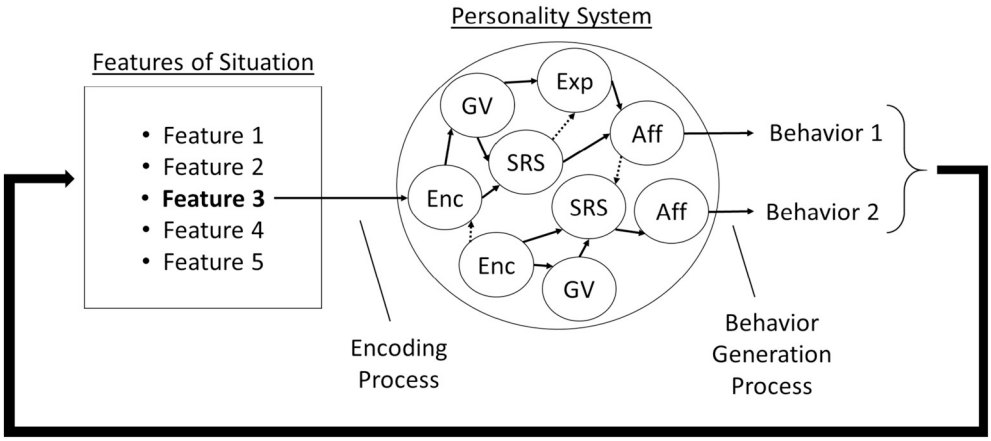

Fig. 1. Model of Cognitive and Affecting Processing System (CAPS)
Enc = Encoding, SRS = Self-regulatory strategies, Exp = Expectancies, GV = Goals and Values, Aff = Affects. Adapted from Mischel & Shoda, 2008, p. 212).

emotions, feelings, and the affects accompanying physiological reactions.

The encoding process and subsequent pattern of affects and cognitions within the personality system serves to help individuals assign meaning to the situations they encounter. This system is complex, involving automatic bottom-up processing, top-down 'hot' (impulsive-affective and ore implicit) and 'cold' (reflective-cognitive and more explicit) information processing, and the five different personal aspects that range from volatile (e.g., emotions, moods, attitudes) to stable personal factors (e.g., competencies, personality; Rauthmann et al., 2015). Altogether, this processing determines how individuals uniquely experience their situations and determines how they think, feel, and act, leading to the next step in the process: behavior generation, or taking action associated and in alignment with the initial encoding and subsequent processing within one's personality system.

The CAPS framework also suggests that this sequence is circular. Once the individual takes action as a result of their processing, the features of the situation can change or new cues can become available, restarting the encoding process, and reengaging the individual's personality system. Because of this cyclical relationship, individuals' processing interacts continuously and dynamically with the individuals' social world (Mischel & Shoda, 2008).

The CAPS framework creates space for exploring and explaining the rich and dynamic processing that underlies leaders' responses to the situations they encounter. It includes allowing for the explanation for why a leader behaves differently across situations.

To fully explore such processing and to improve our understanding of leaders' operations, there are two elements of the CAPS framework that are vital to understand: the personality system and the encoding process. We describe each as follows.

Personality system

A primary focus of the CAPS framework has always been on the description of the personality system. It creates a space for a variety of personal attributes to interact in a variety of ways in response to the cues encoded from the environment, explaining behavior across situations and situational cues. The CAPS framework carries a number of assumptions about this personality system.

First, it suggests that the affective and cognitive personal aspects interact in distinct patterns based upon the specific environmental cue encodings (Mischel & Shoda, 2008). These patterns generally operate in a distinct sequence, such that the immediate "triggering" of a specific attribute can in turn "trigger" other relevant aspects of the self (Hannah, Woolfolk, & Lord, 2009; Fig. 1 depicts a greatly simplified CAPS pattern). These patterns are processing structures that dictate one's behavioral dispositions and subsequent behavior (Mischel & Shoda, 1995).

Second, it assumes that the complex, multifaceted relationships and interactions between these personal aspects may operate at many levels of awareness, automaticity, and control (Mischel & Shoda, 1995). Mischel and Shoda (2008) state that the characteristic reactions of the personality system to situations are often immediate, non-conscious, and automatic. But, the reactions can also be conscious and reflective, involving higher-order cognitive processes. Whether one reacts non-consciously or consciously may be partly described by the "heat" of the situation. When a situation is "hot," or emotionally charged, individuals' personality system may operate more quickly and non-consciously. But, when a situation is "cold," or emotionally neutral, individuals' have the ability to be more contemplative, flexible, slow, and strategic, allowing for more conscious processing and regulation. Other characteristics of the individual or situation that can affect the consciousness of one's processing system is the amount of stress within the individual or situation, the individual's developmental level, and the individual's self-regulatory dynamics (Mischel & Shoda, 2008).

Third, it suggests that the personality system's patterns are stable across situations that share the same cues. Specifically, these stable and predictable patterns are what characterize the personality of an individual, and underlie their uniqueness (Mischel & Shoda, 1995).

Fourth, it suggests that while the structure of the personality system can remain stable across situations, it will change readily when the situational features change or are encoded differently (Mischel & Shoda, 1995). Thus, the activated pattern of processing can be categorized as an individuals' personality state, and as environments change, different personality states are activated (Mischel & Shoda, 2008). This implies that at any single point in time, only a portion of the individual's self-construct is active, and as different cues are perceived, other portions of the individuals' self-construct become active (Hannah et al., 2009).

Fifth, it suggests that individual's variability in processing and behavior across situations are not necessarily internal contradictions, rather potentially predictable expressions of a stable underlying system that may remain unchanged in its organization (Mischel & Shoda, 1995). This provides the rationale for why, despite having certain stable traits (i.e., extraversion), individuals do not operate similarly across situations (i.e., trait approach), but operate similarly across situational cues (i.e., situation-trait approach).

Sixth, each individual's personality structure is both stable and unique, allowing for the explanation for why individuals with similar traits operate differently across the same situations. Specifically, this difference can be explained by the chronic availability and ease of activation of particular affects and cognitions and the particular relations

among them (Mischel & Shoda, 1995).

Seventh, as individuals' repeatedly use and rely upon specific processing patterns, they increase in strength, and may even function more automatically and habitually over time (Hannah et al., 2009). In fact, Lord, Diefendorff, Schmidt, and Hall (2010) suggest that it is common for leaders to nonconsciously rely on these habitual processing patterns for their functioning and operation.

Together, these assumptions have led Mischel (2009) to summarize the CAPS framework as follows:

> "The CAPS model is idiographic in the sense that it is about each person's distinctive organization and how it is expressed in interactions with the social world. But while intended to capture the uniqueness of each personality, it is not limited to N = 1. It lends itself easily to the nomothetic study of types of people who share common if. . . then. . . behavioral signatures, and similar underlying processing dynamics, generated by similarities in their CAPS networks" (p. 286).

Mischel is alluding to the idea that the personality system is the "nuts and bolts" of the of the CAPS framework. But, he is also suggesting that if we can better understand and predict why certain patterns or systems will be activated, we can better predict individuals' processing and subsequent behavior (Mischel, 2009; Mischel & Shoda, 1995). This leads us to the aspect of the CAPS framework that we are most interested in: the encoding process, which is the intersecting point between the individual and the situation.

Encoding process

Across Mischel and Shoda's (1995, 2008) explanations of the CAPS framework, and relative to their explanation of the personality system, the encoding process has received relatively little attention. Yet, it is a critical aspect of explaining why leaders do what they do. This is for two primary reasons. First, it initiates the behavioral process. In order for leaders to effectively navigate the situations they encounter, they must first form situational impressions (Edwards & Templeton, 2005). Since it is extremely inefficient, costly, and time-consuming to process every possible situational cue, individuals quickly attend to, filter, and interpret only the information that appears salient, important, and consequential (Miller, 2007; Rauthmann et al., 2014). Second, and consequently, the cues that are attended to, filtered, and interpreted are what activates individuals' personality system in ways unique to the filtered cues (Mischel & Shoda, 1995, 2008).

Mischel and Shoda (1995, 2008) generally identify the encoding process as *if… then…* situation-behavior relations. They suggest that *if* certain cues are identified, *then* specific personality signatures are activated. More specifically, the encoding process guides and constrains the particular patterns of affect and cognitions within the personality system (Mischel & Shoda, 2008). As such, the encoding process underlies and is foundational to how individuals think, process, and correspondingly behave.

There are two important features of this process to point out. First, encoding is what brings meaning to an environment – what is happening, what might have led to the observed state of affairs, and what might happen (Rauthmann et al., 2014; Rauthmann et al., 2015). The objects and the aspects associated with an environment are neutral and without meaning. They only take on meaning once they are perceived by an individual. For example, a picture of a clown, if unobserved, does not carry any meaning. But, if observed, can bring a variety of emotions and cognitions ranging from amused to fear. Second, this encoding process generally occurs automatically and outside of one's awareness (Mischel & Shoda, 2008). The purpose of this automatic and non-conscious meaning making process is to quickly inform processing, regulation, and behavior based upon the situational cues (Rauthmann et al., 2015).

The encoding process is primarily regulated by individuals' categories for the self, people, events, and situations, which Mischel and Shoda (1995) label as "encodings." We label them as situation-encoding schemas.

Broadly, schemas have been described as patterns of thought that influence attention and the absorption of new knowledge to quickly understand one's world (Nadkarni & Narayanan, 2007). They are the lenses through which individuals interpret information and translate it into actions (Baldwin, 1992).

Such descriptions seemed to be aligned with the "encodings" Mischel and Shoda (1995) describe, which (1) explain why individuals differ in how they selectively focus on different cues and features in a given situation, (2) initiate and activate the personality system, and (3) continue to interact with other aspects of the wider personality system to determine appropriate behavior in response to the situation. We add the label, "situation-encoding" because there are a wide variety of schemas that have been studied that occur at different stages of individuals' processing, and we are most interested in the schema that are relied upon as the very first step in one's processing, activating one's personality system.

CAPS experts have yet to identify and categorize specific situation-encoding schemas. Although, they do state that there is value in doing so and identify examples of psychological research that has attempted to do so (e.g., the Implicit Association Test; Mischel & Shoda, 1995).

One of the primary contributions of this paper is to provide clarity and understanding around individuals' situation-encoding schemas. Fortunately, scholars have spent decades studying such schemas. While much of this research validates the important role they play in explaining individuals' processing, behavioral dispositions, and behavior, research on specific situation-encoding schemas has been rather isolated across various domains, spanning psychology, management, education, and marketing. In the next section, we integrate this research to (1) inform readers of the important and foundational role they play in leaders' processing and operation, and (2) create a framework to help leaders and those supporting them better identify and understand the situation-encoding schemas they possess, why they process and operate in the manner they do, and how to improve their situation-encoding schemas to enhance their processing and operation.

Leaders' situation-encoding schemas

It has been stated that the information that captures leaders' attention is what determines their direction and decision making, and ultimately their success and the success of the organizations they lead (Hambrick, 2007; Hambrick & Mason, 1984). Since leaders' situation-encoding schemas are the bridge between the leader and their environment, they play the initiatory role in determining what captures their attention and their subsequent processing and behaviors. This means that leaders' situation-encoding schemas are foundational to how leaders process and operate. Thus, it seems critical that we better understand just how foundational these schemas are in how leaders process and operate, the implications for more fully adopting these schemas into leadership research and practice, and what specific situation-encoding schemas leaders can possess and develop.

Foundational role of situation-encoding schemas

The foundational nature of situation-encoding schemas becomes apparent when we go "under the hood" of leaders' processing and behaviors and understand the neuropsychology behind these schemas. Simply put, situation-encoding schemas are neural networks in the prefrontal cortex that tap into leaders' associative processing mode (Diefendorff & Lord, 2008; Smith & DeCoster, 2000). Specifically, when individuals absorb information through their senses, this information is quickly sent to the individuals' executive processing system, their prefrontal cortex, which functions to maximize benefits and minimize harm for the individual (Miller & Cohen, 2001; Spielberg, Heller, &

Miller, 2013). Designed to create efficiencies, the prefrontal cortex possesses neural connections that stand ready to fire based upon specific cues absorbed by our senses (Johnson, Chang, & Lord, 2006). The stronger the neural connections, the more readily and quickly they fire in response to such cues.

The specific neural connections involved in our situation-encoding schemas are connected to our associative-, or slow-processing, memory system (Smith & DeCoster, 2000). Individuals' associative-processing system uses knowledge accumulated from a large number of experiences to fill in information, quickly and automatically, about the current situation based upon similar situations we have previously experienced (Smith & DeCoster, 2000). As such, this system is responsible for forming stable, general representations about the various properties we commonly encounter.

In summary, situation-encoding schemas are neural connections and networks that are primed to fire when specific cues are detected, quickly and efficiently interpreting the cues based upon past experience and knowledge. As neural connections strengthen, so does the automatic and habitual reliance on these specific networks, and the more likely an individual is to detect and retrieve cues according to the previous experiences which brought about and strengthened the neural networks in the first place. These strong neural networks influence and dispose individuals' focus, motivation, and self-regulation for both the positive and the negative. While leaders' situation-encoding schemas increase information processing speed (i.e., create efficiencies), these situation-encoding schemas also leave them vulnerable to biases and closed off to alternative perspectives, which can have significant negative implications for their effectiveness as a leader.

Why situation-encoding schemas have important leadership implications

Although there has been relatively little focus on situation-encoding schemas within the leadership domain to date, select situation-encoding schemas have received decades of research attention across multiple domains of study including management, psychology, education, and marketing. There are at least three aspects of this research that have important implications for the leadership domain. First, despite being studied independently, the research on situation-encoding schemas has demonstrated consistent findings that suggest they largely dictate where individuals' place their attention, how they process information, and how they behave. Second, summarizing and integrating such research and bringing these attributes together under a common umbrella of situation-encoding schemas can help guide leadership researchers in future scholarship, particularly scholarship related to the situation-trait approach and the role these schemas play in the leadership process. Finally, a focus on situation-encoding schemas provides leaders and leadership developers with the novel perspective that if leaders can become more conscious of their situation-encoding schemas, they can enhance their effectiveness in at least two ways. First, knowing about the role situation-encoding schemas play in one's processing would allow leaders the opportunity to operate more consciously and manually override their automatic and often biased processing. Second, since some situation-encoding schemas have more positive effects on individuals' processing and operation than others, becoming conscious of one's current situation-encoding schemas would allow leaders the ability to change and improve upon their non-conscious automatic processing.

In this next section, we integrate and describe four well- and independently-studied situation-encoding schemas into a single source and review the research on these schemas to demonstrate the foundational role they play in information processing, and subsequent operation. We also summarize the largely limited research that has been conducted on these schemas within the leadership domain. Together, this information will allow us to describe and discuss the implications of situation-encoding schemas on leadership theory and practice in our Discussion section.

Review of four sets of situation-encoding schemas

Situation-encoding schemas are distinctive processing profiles that cause individuals to interpret situational cues and activate individuals' processing dynamics in predictable ways across contexts that contain the same psychological features (Mischel & Shoda, 1995, 2008). Although not always labeled as “situation-encoding schemas,” they have been studied for over 30 years across a variety of domains. Alternative labels for these schemas include: “encoding strategies” (Mischel & Shoda, 1995), “attractors” (Dinh, Lord, & Hoffman, 2014), “perceptual input function” (Carver & Scheier, 2002); “orientations” (Elliot & McGregor, 2001), “mindsets” or “implicit theories” (Dweck, 2006), and “focus” (Higgins, 1998). Collectively, researchers across domains have found that specific situation-encoding schemas can be assessed in individuals, and have been demonstrated to predictably dispose individuals to specific ways of processing (e.g., self-regulation, goals, attitudes, decision-making) and operation (e.g., goal fulfillment, behaviors, performance).

While there is likely a wide variety of situation-encoding schemas that could be identified and studied, there are four sets of such schemas that have received significant research attention: fixed and growth mindsets, goal orientations, deliberative and implemental mindsets, and regulatory focus. Until now, these situation-encoding schemas have been studied in relative isolation from each other. Additionally, there has been little focus on these attributes within the leadership literature. Although, in the instances when situation-encoding schemas have been studied in relation to leadership, the findings have been significant and meaningful (e.g., Heslin, Latham, & VandeWalle, 2005; Lanaj, Chang, & Johnson, 2012). We are the first to integrate them into a single source, and to collectively introduce them into the leadership domain.

Bringing these four sets of schemas into a single source enables us to develop a framework to help leaders investigate and assess their processing and behavioral dispositions, allowing for greater self-awareness at the foundation of their processing. For leaders, this self-awareness should empower them to become more conscious and regulatory in their processing and operation. Further, it should facilitate more specific predictions of a given leader's reaction to particular types of psychological situations (Mischel & Shoda, 2008).

In this section, we introduce each of the four sets of situation-encoding schemas. In doing so, we have three objectives for each set. First, seek to describe the schemas. Second, we summarize the existing research and evidence demonstrating how each set of schemas influences individuals' processing and behavioral dispositions. Third, we summarize the limited amount research that does exist related specifically to the role they play in leaders' processing, behaviors, and effectiveness. After reviewing these sets of schemas, and in our Discussion section, we summarize broader theoretical and practical implications for integrating these four sets of situation-encoding schemas more fully into the leadership domain.

Fixed and growth mindsets

Fixed and growth mindsets, also called implicit theories, revolve around a person's lay beliefs about the malleability of their personal attributes (e.g., ability, intelligence, personality; Dweck, 1986). Research on these mindsets were largely pioneered by psychologist, Carol Dweck, with most of her research being rooted in the educational psychology domain. As such, the majority of the research on fixed and growth mindsets over the last 30 years has occurred in that domain and its related domains. Across this body of research, mindset researchers have found that individuals can either believe that people can change their personal attributes (i.e., growth mindset), or that they cannot change their personal attributes (i.e., fixed mindset), and that such beliefs dramatically affect how individuals process and operate (Dweck, 2012).

Processing dispositions

Fixed and growth mindsets play a deep role within individuals' cognitive processes. One reason why is that these mindsets represent implicit beliefs, meaning that they may not explicitly articulated in the mind of the person holding them. Yet, researchers have found that at the implicit, largely subconscious level, these beliefs actually (1) dictate the way people ascribe meaning to their environment and situations, and (2) prime a range of processing and behavioral dispositions, largely outside of one's awareness (Burnette, O'Boyle, VanEpps, Pollack, & Finkel, 2013; Heslin & Keating, 2017).

Interpreting situational cues. Preserving and enhancing a sense of self-worth is a priority for all individuals (Crocker, Luhtanen, Cooper, & Bouvrette, 2003). When individuals possess fixed or growth mindsets, their specific belief about the malleability of their personality attributes influences how they manage their sense of self-worth (Kamins & Dweck, 1999). Thus, their mindsets cause them to quickly scan for specific cues to inform them about how to best navigate their environment to preserve or enhance their self-worth in a manner unique to their mindset.

Since individuals with a fixed mindset do not believe they can change or improve their attributes, their self-worth is connected to the valuable attributes that they possess. They implicitly believe that if they experience failure, because they cannot develop or improve, such failure is an indication that they are a failure and of little worth (Burnette et al., 2013; Dweck, 2012; Kamins & Dweck, 1999; Mangels, Butterfield, Lamb, Good, & Dweck, 2006). Further, they also implicitly believe that if they experience success, such is an indication that they are of value. Thus, wanting to protect their self-worth and image, they are sensitive to cues that indicate whether the situations they encounter will threaten or confirm their self-worth. Situations that involve the opportunity for failure threaten their self-worth, making them sensitive to cues that suggest uncertainty about their likelihood for success. Such situations commonly involve what the individual considers to be a challenge or requiring effort (Blackwell, Trzesniewski, & Dweck, 2007; Dweck, 2012; Dweck & Leggett, 1988; Hong, Chiu, Dweck, Lin, & Wan, 1999). On the other hand, if a fixed-mindset individual approaches a situation and ascertains that success is likely and/or requires very little effort, they will see the situation as an opportunity to demonstrate their positive attributes and solidify themselves as someone of worth.

Since individuals with a growth mindset believe they can change or improve their attributes, their self-worth is connected to their personal growth and development (Dweck, 2012; Mangels et al., 2006). Thus, wanting to enhance their self-worth, they are sensitive to cues that indicate whether the situations they encounter provide the opportunity for growth and development. The situations that provide the greatest opportunity for growth and development are the situations that those with a fixed mindset try to avoid: situations where there is uncertainty about success, usually challenges or situations that require effort (Blackwell et al., 2007; Dweck, 2012; Dweck & Leggett, 1988; Hong et al., 1999).

Together, fixed and growth mindsets seek for similar cues associated with one's likelihood for success. Specifically, they seek for cues related to the likelihood for failure (i.e., challenges) and anticipated effort required for success, but they encode these cues very differently. Those with a fixed mindset encode challenges and effort as situations to avoid, whereas those with a growth mindset encode such cues as situations to approach. These differences are summarized in the top half of Table 1

Activating processing dynamics. One of the primary ways fixed and growth mindsets influence individuals' processing is that they shape their self-regulation, which is a core part of individuals' personality system. Many prominent self-regulation theories (e.g., control theory, motivation action theory, adaptive resonance theory) rely upon the notion of a feedback loop to help explain individuals' motivations and behaviors. The basic premise of the feedback loop is that individuals set goals, compare their progress against those goals, and make modifications to their behaviors or cognitions to resolve the discrepancy between their goals and their current state (Karoly, 1993).

Interestingly, the psychological theories that use feedback loops to explain motivation and goal-oriented behaviors largely consider the steps involved in the feedback loop to be a conscious process. While they surely can be a conscious process, these theories largely overlook the non-conscious role situation-encoding schemas play in shaping and dictating the entire feedback loop process. Since situation-encoding schemas occur quickly, non-consciously, and automatically, they are an implicit force that shape the three main aspects of individuals' feedback loops. They (1) influence what goals the individual sets to begin with, (2) influence the metrics individuals select and use to measure the gap between their goals and their current state, and (3) guide individuals to select specific behavioral and/or cognitive options to resolve any such discrepancy that exists (Smith & DeCoster, 2000). Acknowledging the underlying role situation-encoding schemas play in this process has led researchers to suggest that much of our behavior is driven by non-conscious automatic processes (Bargh, 1990; Bargh & Chartrand, 1999; Bargh, Gollwitzer, Lee-Chai, Barndollar, & Trötschel, 2001; Wilson, 2004).

In the case of fixed mindsets, to preserve their sense of self-worth, individuals implicitly develop goals to avoid failure and be viewed favorably (Dweck, 2012; Kamins & Dweck, 1999; Mangels et al., 2006). Consequently, they consistently measure and monitor how they are performing relative to expectations of, and in comparison to, others. Correspondingly, they are non-consciously directed to avoid failure and validate their ability (Burnette et al., 2013; Mangels et al., 2006). Thus, fixed mindsets predispose individuals to self-regulate by avoiding tasks or challenges where they are uncertain of success (Burnette et al., 2013; Dweck, 2006, 2012; Hong et al., 1999; Nussbaum & Dweck, 2008).

In the case of growth mindsets, to enhance their self-worth, individuals implicitly develop goals to learn and develop in order to be viewed favorably (Dweck, 2012; Mangels et al., 2006). They monitor and measure their progress through the development of attributes. Correspondingly, they are non-consciously directed to take on tasks or challenges where they are uncertain about how successful they will be—acknowledging that such tasks and challenges are essential for optimal learning and development (Burnette et al., 2013). In fact, researchers have found that those with growth mindsets are more inclined to seek out developmental opportunities and remain optimistic when struggling with their goal pursuits, when compared to fixed mindset individuals (Burnette et al., 2013; Dweck, 2006; Dweck, 2012; Hong et al., 1999; Nussbaum & Dweck, 2008).

Additional evidence of the role these mindsets play in individuals' regulatory processes is found in how individuals with these different mindsets compare their performance to others and view feedback. Researchers have found that fixed-mindset individuals engage in downward comparisons to see if they outperformed others, while those with a growth mindset often engage in upward comparisons to learn from top performers (Dweck, 2012; Nussbaum & Dweck, 2008). Further, fixed-mindset individuals tend to view constructive feedback as being self-defeating, whereas growth-mindset individuals view that same feedback as valuable information that enhances learning and development (Mangels et al., 2006; Mueller & Dweck, 1998).

Other ways these mindsets influence individuals' processing dispositions revolve around how fixed mindsets make individuals more prone to biases. Consider the following findings. Because individuals with a fixed mindset do not believe that others can change, compared to those with a growth mindset, they (1) are more likely to engage in fundamental attribution error, believing that others' behaviors are driven by their traits and are indicative of their underlying moral behavior (Chiu et al., 1997; Erdley & Dweck, 1993; Molden & Dweck, 2006); (2) are inclined to be more confident in their attributions of others and are less likely to change their attributions (Erdley & Dweck, 1993; Plaks et al., 2001); and (3) are more likely to endorse

Table 1
How fixed and growth mindsets influence individual processing and operation.

	Fixed mindset	Growth mindset	Citations
Processing dispositions	Interpreting situational cues • Failure threatens self-worth • Sensitive to cues that indicate a likelihood for failure • Situations with high likelihood for success are opportunities to demonstrate worth	Interpreting situational cues • Failure enhances learning • Sensitive to cues that indicate a likelihood for learning and development • Opportunities for greatest growth involves challenges and effort	• Blackwell et al., 2007; Burnette et al., 2013; Dweck, 2012; Dweck & Leggett, 1988; Hong et al., 1999; Kamins & Dweck, 1999; Mangels et al., 2006
	Activating processing dynamics • Develop goals to avoid failure and be viewed favorably • Assesses progress by comparing performance to others • Predisposed to avoid tasks or challenges with uncertainty for success • Seek comparisons to see if they outperformed others • Views feedback as being self-defeating • More prone to biases	Activating processing dynamics • Develop goals to learn and develop to be viewed favorably • Assesses progress through personal advancement and progress • Predisposed to seek out developmental opportunities and remain optimistic when struggling • Seek comparisons to see how they can learn • Views feedback as valuable information • Less prone to biases	• Burnette et al., 2013; Chiu, Hong, & Dweck, 1997; Dweck, 2012; Erdley & Dweck, 1993; Gervey, Chiu, Hong, & Dweck, 1999; Hong et al., 1999; Kamins & Dweck, 1999; Levy, Stroessner, & Dweck, 1998; Mangels et al., 2006; Molden & Dweck, 2006; Mueller & Dweck, 1998; Nussbaum & Dweck, 2008; Plaks, Stroessner, Dweck, & Sherman, 2001
Behavioral dispositions	• More likely to avoid challenges, feedback, and opportunities to learn • Inclined to adopt avoidant and self-handicapping strategies in an effort to self-protect • Less willing to put forth effort in the face of challenges and difficulties • Less likely to provide quality and quantity feedback • Lower motivation • Progress toward goals less quickly • Lower negotiation performance • More inclined to engage in emotion-focused coping strategies • Less willing to receive coaching related to underperformance • Fare less positively in challenging situations • Set less-challenging goals	• More likely to take advantage of challenges, feedback, and opportunities to learn • Inclined to adopt problem-solving strategies in an effort to develop and master • More willing to put forth effort and persist in the face of challenges and difficulties • More likely to provide quality and quantity feedback • Higher motivation • Progress toward goals more quickly • Higher negotiation performance • More inclined to engage in problem-focused coping strategies • More willing to receive coaching related to underperformance • Fare more positively in challenging social situations • Set more-challenging goals	• Beer, 2002; Blackwell et al., 2007; Burnette et al., 2013; Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Doron, Stephan, Boiché, & Le Scanff, 2009; Dweck, 2012; Dweck & Leggett, 1988; Heslin, Vandewalle, & Latham, 2006; Kray & Haselhuhn, 2007; Miele & Molden, 2010; Mueller & Dweck, 1998; Nussbaum & Dweck, 2008; Shih, 2009; Tabernero & Wood, 1999

punishment, hold stereotyped views, and resist information that countered a stereotype (Erdley & Dweck, 1993; Gervey et al., 1999; Levy et al., 1998; Plaks et al., 2001).

Behavioral dispositions

The options for individuals' behaviors are limited to the breadth and depth of their processing. Thus, it should not be a surprise to understand that individuals behave in a manner aligned with their processing. We identify several specific ways fixed and growth mindsets dispose individuals to operate in distinct ways.

First, these mindsets shape individuals' disposition toward avoiding versus approaching challenges. Since the self-worth of those with a fixed mindset is sensitive to failure, they are disposed to avoid challenges or situations with potential for failure (Blackwell et al., 2007; Dweck & Leggett, 1988; Mueller & Dweck, 1998). On the other hand, implicitly believing that they are malleable and that growth enhances self-worth, those with a growth mindset are disposed to approach challenges and situations at risk for failure as opportunities to learn and grow (Blackwell et al., 2007; Dweck & Leggett, 1988; Mueller & Dweck, 1998).

Second, researchers have found that individuals' mindsets cause them to develop different strategies for navigating achievement contexts (Burnette et al., 2013; Doron et al., 2009; Shih, 2009). Perceiving achievement contexts as threats to their self-worth, fixed mindset individuals are inclined to adopt avoidant and self-handicapping strategies in an effort to self-protect. Those with a growth mindset view achievement contexts as opportunities for development and mastery. As such, they are more inclined to adopt problem-solving strategies.

Third and relatedly, individuals' mindsets affect their willingness to exert effort and persist in the face of obstacles (Blackwell et al., 2007). Since those with a fixed mindset do not believe that they can improve their talents, intelligence, and abilities, they believe that efforts to nurture one's abilities and improve performance are essentially futile. In fact, for those with a fixed mindset, the need to exert effort is interpreted as an admission of a lack of ability (Dweck, 2012; Miele & Molden, 2010). Thus, if something does not come naturally to fixed-mindset individuals, they are more inclined to back away from a task rather than continually invest in the task. On the other hand, since those with a growth mindset believe that they can improve their talents, intelligence, and abilities, they see effort as the very instrument for improving their abilities (Blackwell et al., 2007; Mueller & Dweck, 1998). As such, when something does not come naturally to them, they are more inclined to persist, believing that success is the result of hard work, and that even geniuses have to work hard for their discoveries (Blackwell et al., 2007, Dweck & Leggett, 1988).

Additional findings related to how those with a fixed mindset operate differently from those with a growth mindset include the following: (1) lower motivation (Burnette et al., 2013); (2) progress toward goals less quickly (Compas et al., 2001; Shih, 2009); (3) poorer negotiation performance (Kray & Haselhuhn, 2007); (4) are more

inclined to engage in emotion-focused, rather than problem-focused, coping strategies (Compas et al., 2001); (5) less willing to receive coaching related to underperformance (Dweck, 2012; Nussbaum & Dweck, 2008); and (6) less willing to enter challenging social situations, and fared less positively in those situations (Beer, 2002). The bottom half of Table 1 summarizes these findings.

Existing research related to leadership domain

Although most of the research on fixed and growth mindsets exists outside of a leadership context, the little evidence that is there demonstrates that leaders aren't immune to the effects their fixed or growth mindsets have on their processing and behavioral dispositions, and select studies have demonstrated that is the case. Specific studies reveal that those with growth mindsets are more likely to engage in efforts to develop their followers (Heslin et al., 2006), demonstrate greater leadership confidence (Hoyt, Burnette, & Innella, 2012), and set more challenging goals (Tabernero & Wood, 1999).

Considering the breadth of research on fixed and growth mindsets, we should anticipate fixed-mindset leaders to be sensitive to cues related to the likelihood of success, adopt goals to support a successful image, engage in downward comparisons, resist feedback, commonly engage in attribution biases, seek to avoid challenges and effort, develop self-handicapping strategies, and resist investing in the development of others. On the other hand, we should anticipate growth-mindset leaders to be sensitive to cues related to learning and development, adopt developmental goals, engage in upward comparisons, seek feedback, make sound attributions, approach challenges and effort, adopt problem-solving strategies, and invest in the development of others. In all, research has rather conclusively demonstrated that we should expect leaders' processing, behaviors, and overall effectiveness to be more positive if they possess a growth mindset compared to a fixed mindset.

Goal orientation

Goal orientation has become one of the most frequently studied motivational variables in applied psychology and is a dominant approach in the study of achievement motivation (DeShon & Gillespie, 2005; Vandewalle, Nerstad, & Dysvik, 2019). The basic premise of goal orientations is that individuals, largely non-consciously, take on a specific goal preference or orientation toward their achievement situations, and the goal orientation they adopt directs their efforts to support the goal they are oriented toward.

Individuals' goal orientations are generally described as a disposition that is a “somewhat stable individual difference factor that may be influenced by situational characteristics” (Button, Mathieu, & Zajac, 1996; p. 28). Additionally, scholars have suggested that individuals' goal orientations represent neural wiring in individuals' brains, that when frequently activated become increasingly accessible and eventually become chronic in the sense that they are chronically ready to be activated and acted upon (Bargh & Chartrand, 1999; DeShon & Gillespie, 2005).

While many conceptualizations of goal orientations exist, most conceptualizations have primarily revolved around two primary orientations: a learning orientation and performance orientation (Vandewalle et al., 2019). A learning orientation involves being motivated toward increasing one's competence and mastering something new. A performance orientation involves being motivated toward gaining favorable judgements about competence or avoiding negative judgments about one's competence.

Originally, goal orientation researchers believed goal orientation to be a bipolar construct, suggesting that individuals could be high (or low) on one orientation, but not simultaneously high (or low) on both (Payne, Youngcourt, & Beaubien, 2007). But, since then, research has established that not only are these two orientations separate constructs, but that each orientation can be further broken down into two separate dimensions—approach and avoid—identifying up to four types of goal orientation: learning-approach (the desire to develop skills and abilities, advance one's learning, and master a task), learning-avoid (the desire to avoid losing one's skills and abilities, forgetting what one has learned, or leaving a task unmastered), performance-approach (the desire to prove one's competence and to gain favorable judgments about it), and performance avoid (the desire to avoid the disproving of one's competence and to avoid negative judgments about it; Elliot, 1999; Vandewalle et al., 2019). However, researchers have historically focused primarily on a three-factor model involving learning-approach, performance-approach, and performance-avoid orientations (Vandewalle et al., 2019).

Although different from other situation-encoding schemas, goal orientations do share some similarities with fixed and growth mindsets. Notably, both of these situation-encoding schemas were developed in the educational psychology domain. In fact, Carol Dweck's foray into fixed and growth mindsets began with conducting research on goal orientations and similar constructs, and she eventually suggested that fixed and growth mindsets may be antecedents to goal orientations, with fixed mindset being more strongly related to performance orientation, and growth mindset being more strongly related to learning orientation (Dweck, 1986; Dweck & Leggett, 1988). While this relationship between fixed/growth mindsets and goal orientation has been largely accepted, it has been largely untested, and meta-analytic correlations between the two situation-encoding schemas have been quite small, suggesting that there may not be a causal relationship between the two situation-encoding schemas and that the two situation-encoding schemas may be more distinct than thought previously (Payne et al., 2007; Vandewalle et al., 2019). In fact, for the most part, research on these two types of situation-encoding schemas have been rather isolated from each other, and notably, goal orientations have received significantly more attention within the management domain, enough for Vandewalle et al. (2019) to review goal orientation research specifically from this domain.

Like the other situation-encoding schemas, goal orientations have been found to activate and influence individuals' processing and behavioral dispositions, which ultimately have important implications for leadership. We discuss below and summarize in Table 2.

Processing dispositions

Research across the three most commonly studied goal orientations has been consistent: learning goal orientation generally has positive relationships with self-regulatory processes, performance-avoid goal orientation has overwhelmingly negative relationships with self-regulatory processes, and performance-approach goal orientation largely has non-significant relationships with self-regulatory processes (Cellar et al., 2011; Payne et al., 2007; Vandewalle et al., 2019). We discuss why this is and specific findings below.

Interpreting situational cues. Although goal orientations are related to the motivations for achievement within achievement contexts, the foundation of this motivation is rooted in individuals' appearance of their competence (Cellar et al., 2011; Dweck, 1986). Effectively, this means that individuals develop different definitions for success (Nicholls, 1975; Payne et al., 2007). Success for those with a learning orientation is enhancing self-perceptions of their competence. Success for those with a performance-approach orientation is being seen as being competent by others, often in comparison to others. Success for those with a performance-avoid orientation is avoiding being seen as incompetent.

As such, individuals' goal orientations cause them to be sensitive to situational cues that indicate their likelihood of success in the manner that they define it. Since those with a learning orientation are primarily concerned about their self-perceptions of their competence, they seek cues to indicate that their situation is one where they can make incremental improvements to one's self (Elliott, 1995). Those with either

Table 2
How goal orientations influence individual processing and operation.

	Performance-avoid goal orientation	Performance-approach goal orientation	Learning goal orientation	Citations
Processing dispositions	Interpreting situational cues • Success is related to the degree to which they are not viewed as incompetent • Sensitive to cues that signal likelihood of failure	Interpreting situational cues • Success is related to being viewed as more competent than others • Sensitive to cues that signal ease to perform higher than others	Interpreting situational cues • Success is related to enhancing self-perceptions of competence • Sensitive to cues that signal they can advance competence	• Cellar et al., 2011; Dweck, 1986; Elliott, 1995; Nicholls, 1975; Payne et al., 2007
	Activating processing dynamics • Self-regulation is catered to avoid being viewed as incompetent • Rely upon surface-level learning strategies • Reluctant to seek feedback • Experience greater anxiety	Activating processing dynamics • Self-regulation is catered to being viewed as more competent than others • Rely upon surface-level learning strategies • Reluctant to seek feedback • Experience greater anxiety	Activating processing dynamics • Self-regulation is catered to enhancing competence • Rely upon deep-level learning strategies • Seeks out feedback • Experience less anxiety	• Blume, Ford, Baldwin, & Huang, 2010; Cellar et al., 2011; Diefendorff & Lord, 2008; Dierdorff, Surface, & Brown, 2010; Fisher & Ford, 1998; Payne et al., 2007; Simons, Dewitte, & Lens, 2004; Spielberger & Vagg, 1995; Tziner, Fisher, Senior, & Weisberg, 2007; Vandewalle et al., 2019
Behavioral dispositions	• Less effort and persistence • More likely to compete and refrain from information sharing • More likely to cheat • Less likely to adapt to change • Moderate negative relationship with performance	• Less effort and persistence • More likely to compete and refrain from information sharing • More likely to cheat • Less likely to adapt to change • Small positive relationship with performance	• Greater effort and persistence • More likely to cooperate and engage in information sharing • Less likely to cheat • More likely to adapt to change • Moderate positive relationship with performance	• Matzler & Mueller, 2011; Poortvliet & Giebels, 2012; Poortvliet, Janssen, Van Yperen, & Van de Vliert, 2007; Vandewalle et al., 2019; Van Yperen, Hamstra, & Van der Klauw, 2011; Van Yperen, Blaga, & Postmes, 2014

of the performance orientations are primarily concerned about others perceptions of their competence (Cellar et al., 2011; Dweck, 1986). More specifically, those with a performance-approach goal orientation want to demonstrate to others that they possess high competence. Thus, they are sensitive to cues that signal the ease at which one can perform or succeed relative to others. If cues suggest that they will not perform as well as others, their processing and behavioral dispositions are inclined to avoiding the situation (Elliott, 1995; Payne et al., 2007). Those with a performance-avoid goal orientation want to avoid demonstrating incompetence to others. Thus, they are sensitive to cues that signal the likelihood of failure and/or the ease at which one can perform above a minimum standard of achievement (Elliott, 1995; Payne et al., 2007).

Activating processing dynamics. Since individuals' goal orientations cause them to define success differently, their personality system is primed to function in a manner that supports their definition of success (Diefendorff & Lord, 2008). There are three primary ways goal orientations have been found to shape individuals' processing.

First, individuals' goal orientations non-consciously underlie and influence individuals' self-regulation. In a similar fashion as fixed and growth mindsets, goal orientations shape the goals individual adopt, how they measure their success relative to their goals, and the actions they take to address any gaps between their level of success relative to their goals (Diefendorff & Lord, 2008; Payne et al., 2007). Essentially, goal orientations explain what goals individuals set, why some people set higher goals than others, why some people persist longer in the face of adversity, and why some people tend to avoid achievement situations (Cellar et al., 2011; Diefendorff & Lord, 2008). In all, goal orientations activate the processing involved in determining the allocation of effort in achievement-related situations.

Second, individuals' goal orientations have been found to explain the learning strategies individuals adopt (Vandewalle et al., 2019). Specifically, goal orientation researchers have examined two different types of learning strategies: surface-level strategies (e.g., note-taking, textbook highlighting, rehearsing) and deep-level strategies (e.g., creating diagrams, paraphrasing, and using self-testing exercises). Across multiple contexts, individuals with a learning goal orientation tend to use more deep-level strategies, whereas those with performance goal orientations tend to use more surface-level strategies (Fisher & Ford, 1998; Simons et al., 2004). Correspondingly, researchers have found that there is a positive relationship between learning orientation and transfer of training for those with a learning orientation, a non-significant relationship for those with a performance-approach orientation, and a negative relationship for those with a performance-avoid orientation (Blume et al., 2010; Dierdorff et al., 2010; Tziner et al., 2007).

Third, individuals' goal orientation explains the likelihood an individual will seek feedback (Payne et al., 2007; Vandewalle et al., 2019). Researchers have found is that there are both benefits and costs to seeking feedback. The benefits largely involve gaining information to improve learning and performance. The costs largely involve potentially exposing one's lack of competence. Those with a learning orientation weigh the benefits much more highly than the costs; and as such, are much more inclined to seek feedback. Those with a performance orientation tend to weigh the costs more highly than the benefits, making them more reluctant to seek feedback.

Some additional ways research has indicated that individuals' goal orientations affect individuals processing include affecting their state goal orientations, state anxiety, and specific self-efficacy (Payne et al., 2007). For example, there is evidence to suggest that those with performance orientations are more anxious than those with a learning orientation, and such anxiety can affect individuals' behavior and performance (e.g., “test anxiety;” Spielberger & Vagg, 1995).

Behavioral dispositions

Arguably, the most widely studied behavioral disposition studied in relation to goal orientation is effort. From a theoretical standpoint, individuals are more likely to exert effort if the situation appears to be aligned and supportive of their definition for success. But, empirically, what researchers have found across a wide variety of contexts is that those with a learning orientation are more disposed to engage in higher levels of effort and persist longer compared to those with a performance orientation (Vandewalle et al., 2019). One of the primary explanations for this consistent finding is that those with learning orientations are more intrinsically motivated than those with performance orientations (Vandewalle et al., 2019).

Researchers have also found that individuals operate in predictably

different ways. First, since those with performance goal orientations are concerned about their competence relative to referent others, they are more likely to compete and refrain from information sharing in an effort to gain a competitive advantage, whereas those with a learning goal orientation are more likely to cooperate, seeing information sharing as an opportunity for supporting mutual growth (Matzler & Mueller, 2011; Poortvliet et al., 2007; Poortvliet & Giebels, 2012). Second, those with a performance goal orientation are more likely to engage in problematic and counterproductive behaviors, such as cheating, in order to promote their competence. For example, Van Yperen et al. (2011) found that those assigned to a performance goal condition cheated at nearly twice the rate as those with a learning goal condition. Finally, research has repeatedly found that those with a learning orientation are more willing to change and do a better job of successfully adapting to change than those with performance goal orientations (see Vandewalle et al., 2019).

Recognizing that individuals' goal orientations shape their effort and operation, it is no surprise that researchers have found significant relationships between goal orientation and performance. Notably, when Van Yperen et al. (2014) meta-analytically investigated the relationship between goal orientation and non-self-reported performance moderated by setting (work, sports, and education), they found that the relationships were more extreme for work settings compared to education and sports settings. Specifically, they found that the relationships between learning goal orientation and performance in a work setting was much higher than the other settings ($r = 0.27$ for work and $r = 0.13$ and $r = 0.17$ for education and sports, respectively), and higher than indicated in prior meta-analyses that did not engage in moderator analyses (Cellar et al., 2011; Payne et al., 2007). The relationship between performance-approach and performance was $r = 0.10$, with no difference across settings, and the relationship between performance-avoid and performance was $r = -0.20$ in a work setting and $r = -0.14$ and $r = -0.04$ for education and sports settings, respectively.

As a whole, all of the research on goal orientation led Cellar et al. (2011) to state: “Thus based on the existing research, we conclude that the [learning]-approach trait goal orientation may well be the most desirable orientation in achievement contexts. This is likely the case because the [learning]-approach orientation results in more frequent and persistent self-regulation activities” (p. 480).

Existing research related to leadership domain

While most goal orientation research has not been directed at leaders, there is little reason to think that the conclusive results would differ for a leader population. Based upon the findings described above, we anticipate leaders with a learning goal orientation will be sensitive to situations that may enhance their ability to develop, develop goals focused on learning, utilize deep-level learning strategies, seek feedback, be willing to exert effort, cooperate, and perform at a high level. Those with either of the performance goal orientations will be sensitive to situations where they can demonstrate their competence, develop goals focused on performing at a certain level, utilize surface-level learning strategies, avoid feedback, be relatively unwilling to exert effort, compete, and perform at a lower level.

In the research that has been conducted on goal orientation related to leadership, these assumptions have largely been validated. Findings suggest that goal orientation is likely important for (1) leadership emergence and development (Dragoni, Tesluk, Russell, & Oh, 2009), (2) the quality of relationships leaders have with their followers (Janssen & Van Yperen, 2004), (3) leaders' willingness to embrace change (Payne et al., 2007), and (4) the behaviors and styles a leader adopts (Coad & Berry, 1998; Sosik, Godshalk, & Yammarino, 2004). In all, evidence suggests that a leader's goal orientation non-consciously influences the effectiveness of their processing and behaviors, and that possessing a learning goal orientation is most optimal to leader effectiveness and success.

Deliberative and implemental mindsets

The third set of situation-encoding schemas that we review are deliberative and implemental mindsets. Like the other situation-encoding schemas, this set is concerned with individuals' non-conscious processing that drives one's goal-related motivations and striving, but it is rooted in different psychological theories, mainly those associated with decision-making (Gollwitzer, 2012). Being from a different theoretical foundation, research on these mindsets has been largely isolated from the other situation-encoding schemas even though the effects found have also been shown to dictate individuals' processing and behavioral dispositions.

The initial impetus for studying these mindsets was based on the idea that as individuals go through the decision-making process, they generally take on different mindsets (Gollwitzer, 1990, 2012). Originally, it was suggested that early in the decision-making process, individuals have a heightened receptiveness to all kinds of information (i.e., deliberative mindset). But, in the later stages of the decision-making process, individuals become more selective in their processing, allowing them to focus on implementing decisions, and thus closing them off to new ideas and information (i.e., implemental mindset).

With this view, early researchers theorized that when individuals possess a deliberative mindset, the deliberation they engage in would deplete their cognitive resources, causing them to perform more poorly on subsequent short-term memory tasks than those more focused on implementing decisions (implemental mindset), who likely use less cognitive resources. However, they found the exact opposite (Gollwitzer, 2012).

Researchers found that when individuals possess a deliberative mindset, it activates the brain's ability to explore things outside what one has been deliberating, causing a heightened receptiveness to all kinds of information (open-mindedness). And, on the other hand, possessing an implemental mindset activates the brain's ability to focus on a single task and deactivates the brains ability to be receptive to new non-relevant information (close-mindedness).

While initial theorization suggested that these mindsets occur in different stages of the decision-making process, subsequent research and theory suggest that they do not necessarily fluctuate as one proceeds through different decision-making stages. Instead, it is more of a condition of the mind that affects overall processing (Gollwitzer, 2012). In fact, most research on these mindsets involve experiments where these mindsets are manipulated or primed, suggesting that regardless of where one is in the decision-making process, he/she can possess either a deliberative or implemental mindset.

Processing dispositions

Like the other situation-encoding schemas, deliberative and implemental mindsets dictate the cues and information individuals absorb, and in turn, activates different, yet predictable processing dynamics. We summarize their unique processing dispositions in the top half of Table 3.

Interpreting situational cues. Similar to fixed and growth mindsets and goal orientations, deliberative and implemental mindsets are connected to individuals' perceptions of their worth. In the case of deliberative and implemental mindsets, individuals are concerned about their rightness. Those with a deliberative mindset want to make the most appropriate decisions. As a result, they believe that their value is connected to their ability to get closer to truth and think optimally. Those with an implemental mindset think that they are right. As a result, their value is connected to being seen as being right. Both mindsets are cognitively attuned to information that confirms or supports their perspective (Gollwitzer, 2012).

At the encoding level, those with a deliberative mindset are sensitive to cues that indicate an opportunity for improving in one's processing and decision making (Gollwitzer, 2012; Gollwitzer, 1990;

Table 3
How deliberative and implemental mindsets influence individual processing and operation.

	Deliberative mindset	Implemental mindset	Citations
Processing dispositions	Interpreting situational cues • Want to make appropriate decisions and think optimally • Sensitive to cues that indicate opportunities for improved thinking • Primed to explore why one should do something and related pros and cons	Interpreting situational cues • Think they are right and want to be viewed as being right • Sensitive to cues that indicate their perspective is correct • Primed to explore how, when, and where to do something	• Gollwitzer, 2012; Gollwitzer, 1990; Taylor & Gollwitzer, 1995
	Activating processing dynamics • More impartial, less biased, and more accurate in processing and decision making • More open to new information, and more open-minded as a whole • More inclined to spot relevant information and engages in less selective filtering	Activating processing dynamics • Less impartial, more biased, and less accurate in processing and decision making • Less open to new information, and less open-minded as a whole • Less inclined to spot relevant information and engages in more selective filtering	• Fujita, Gollwitzer, & Oettingen, 2007; Gagne & Lydon, 2001; Gollwitzer, 2012; Gollwitzer & Kinney, 1989; Harmon-Jones & Harmon-Jones, 2002; Heckhausen & Gollwitzer, 1987; Henderson, de Liver, & Gollwitzer, 2008; Puca, 2001; Taylor & Gollwitzer, 1995
Behavioral dispositions	• Exerts less focus, initiative, persistence, and effort toward taking action	• Exerts greater focus, initiative, persistence, and effort toward taking action	• Armor & Taylor, 2003; Brandstätter & Frank, 2002; Gollwitzer, 2012

Taylor & Gollwitzer, 1995). They are more primed to explore why one should do something and information related to the pros and cons of different possibilities. On the other hand, those with an implemental mindset are sensitive to cues that indicate their perspective is correct and that they can proceed accordingly (Gollwitzer, 2012; Gollwitzer, 1990; Taylor & Gollwitzer, 1995). They are more primed to explore how, when, and where one should do something. Consequently, these schemas shape individuals' processing as follows.

Activating processing dynamics. Research has found that these mindsets affect individuals' processing in two primary ways: the degree to which one engages in biased thinking and one's openness to information.

Relative to those with an implemental mindset, those with a developmental mindset are more impartial, less biased, and more accurate in their processing and decision making (Gollwitzer, 2012). Research has demonstrated this in three primary ways. First, researchers have found that after making a selection between options, those with implemental mindsets view the non-selected alternatives more negatively than those with a deliberative mindset (Harmon-Jones & Harmon-Jones, 2002), leaving those with a deliberative mindset more open to the value of alternative ideas. Second, researchers have found that those possessing a deliberative mindset are more accurate judges of their control or impact over the situations they encounter than those possessing an implemental mindset (Gollwitzer & Kinney, 1989; Taylor & Gollwitzer, 1995). When individuals were successful at a task that they did not have control over (i.e., their success was based on factors outside of their control), those with a deliberative mindset were more open to the idea that their success was not fully attributed to themselves, whereas those with an implemental mindset tended to believe that their success was more fully the result of their performance (Gagne and Lydon, 2001; Puca, 2001; Taylor & Gollwitzer, 1995). This has led researchers to assert that those with implemental mindsets are more prone to illusions of invulnerability, and less-accurately perceive their abilities and probabilities for success (Gollwitzer, 2012; Puca, 2001). Finally, researchers have found that those with an implemental mindset are more likely to develop an extreme position, particularly around a course of action they are implementing. But interestingly, these effects are not just associated with the issue at hand and have found to carry over to issues irrelevant to one's goal concern (Henderson et al., 2008).

As mentioned previously, researchers originally conceptualized these mindsets as being part of a decision-making process. These findings demonstrate that these mindsets are not solely associated with the decision-making process, but also persist beyond current tasks.

Further, an acknowledged premise of effective decision-making is that in order to make the best possible decisions, one should (1) be open to any available information that might inform one's decisions, (2) avoid prematurely dismissing relevant information, and (3) be willing to change one's mind in light of new ideas (Fujita et al., 2007; Gollwitzer, 2012; Heckhausen & Gollwitzer, 1987). Across the body of deliberative and implemental mindset research, researchers consistently find that those with deliberative mindsets are much more open to new information and thus more open-minded as a whole, leading them to be more effective decision-makers relative to those with implemental mindsets. Additionally, those with deliberative mindsets are more inclined to spot relevant information and engage in less selective filtering than those with implemental mindsets (Fujita et al., 2007).

Behavioral dispositions

Until now, we have largely presented implemental mindsets in a negative light. But, research indicates that this mindset is not always negative (see bottom half of Table 3 for summary). There seems to be some benefits to having implemental mindsets. Although, as we will discuss, perhaps these benefits need to be slightly tempered. Research indicates that those with implemental mindsets are more focused on implementing a decision, and as such, they are able to exert greater focus and effort toward a specific course of action than those with deliberative mindsets (Gollwitzer, 2012). Specifically, relative to those with deliberative mindsets, those with implemental mindsets (1) are faster to initiate goal-directed behavior (Gollwitzer, 2012); (2) generate greater persistence in goal-directed behavior, particularly when feasibility was deemed low and desirability deemed high, or vice versa (Brandstätter & Frank, 2002); and (3) demonstrate greater effort and performance on certain tasks (e.g., scavenger hunt), partly because of their more optimistic outcome expectations and overestimating the ease of the task (Armor & Taylor, 2003).

While these findings surely seem positive for possessing an instrumental mindset, there are a couple of factors to further consider. First, while instrumental mindsets seem valuable when one needs to implement a decision, they do not seem valuable when having to make a decision. Thus, a tradeoff potentially exists: making the best decision and possibly implementing that decision at a slower or more thoughtful pace or possibly implementing a less-than-optimal decision at a quicker pace. Second, it seems likely that the complexity of the decision and task needs to be taken into consideration. There are some decisions and

tasks that, perhaps because of their obviousness or simplicity, do not require a deliberative mindset, making an implemental mindset more beneficial. But, it is important to recognize that, while the weightiest and most important decisions may be infrequent, often they are quite complex, and likely require a deliberative mindset. Further, it is important to recognize that there are some individuals in certain organizational positions that consistently deal with more complex and weighty decisions (e.g., leaders) who would presumably function more effectively with a deliberative mindset.

Existing research related to leadership domain

Unfortunately, there has yet to be much research directly investigating the role that deliberative and implemental mindsets play in leadership effectiveness, but the implications of deliberative and implemental mindset research surely seem relevant. Gollwitzer (2012) asserts that deliberative and implemental mindsets have "enormous influence" on how individuals process information (p. 533). Thus, we suggest that if leaders' processing and decision-making shapes the direction and success of their organizations, whether they possess deliberative or implemental mindsets can have "enormous" implications. While implemental mindsets do seem to have some positives in terms of effectiveness in implementing decisions, such mindsets may also leave one prone to biases and closed to potentially relevant information, which can reduce the effectiveness of one's decisions in the first place. Leaders with a deliberative mindset appear much more inclined to be sensitive and open to new and novel information, and less biased in their processing. This is surely important for effective decision making, but it is likely also important for the engagement of employees, as deliberative mindsets are likely necessary for creating a psychologically safe and engaging workplace.

Regulatory focus

Regulatory focus theory is a well-studied theory in the organizational domain that suggests that individuals regulate their cognition and behavior during goal pursuit, generally to either maximize pleasure or to minimize pain (Baumeister, Heatherton, & Tice, 1993; Carver & Scheier, 2002; Higgins, 2001). As such, regulatory focus theory describes how individuals regulate through two coexisting regulatory systems that cater to different needs and interests during goal pursuit (Higgins & Spiegel, 2004; Lanaj et al., 2012; Scholer & Higgins, 2010). These systems are called prevention and promotion focus and represent two different goal-striving strategies (Lanaj et al., 2012). Simply stated, those with a prevention focus are focused on winning, gaining, and accomplishing, while those with a promotion focus are focused on avoiding losses (Johnson, Smith, Wallace, Hill, & Baron, 2015).

There have been over 200 studies conducted on regulatory focus (Johnson et al., 2015). What researchers have found is that individuals' regulatory foci are situation-encoding schemas that shapes how individuals view their world and approach their goals, and as such, is a foundational driver of the affect, cognitions (i.e., processing, strategies, and tactics), and behaviors individuals engage in to accomplish their goals (Gorman et al., 2012; Johnson et al., 2015; Lanaj et al., 2012). While these two forms of regulatory focus are theoretically independent (suggesting that individuals can be high or low on either simultaneously), individuals generally possess a dominant focus as a trait-like quality (Higgins, 1997, 2000).

Despite some similarity between regulatory focus and the other perceptual attributes, especially goal orientation, they are considered distinct (Cornwell & Higgins, 2015). Kark & Van Dijk (2019) explain that the primary difference between these situation-encoding schemas is that while both are focused on approaching or avoiding positive or negative end-states, goal orientation schemas do not distinguish between different types of positive or negative end-states. By this, they mean that theory related to goal orientation suggests that individuals typically approach positive end-states and avoid negative end-states. Regulatory focus schemas, on the other hand, are concerned with distinct types of end-states, and suggest that individuals can approach positive or negative end-states through either approach or avoid actions.

In Lanaj et al.'s (2012) meta-analysis, the authors summarize the research associated with regulatory focus as follows: "Based upon the evidence to date, promotion and prevention foci appear to be important person-based variables that influence self-regulation and behavior at work" (p. 999). Much of the research that led them to make this conclusion has been focused on how these regulatory foci dictate individuals' processing associated with their evaluation of their workplace perceptions and attitudes. This research is largely summarized in Table 4.

Processing dispositions

Like the other situation-encoding schemas, the regulatory focus schemas influence both the cues individuals absorb and the activation of their personality system as described below.

Interpreting situational cues. Kark and Van Dijk (2007) stated that "regulatory focus theory can be thought of as one of the most comprehensive motivation theories, since its constructs seem to comprise a primary element of human motivation" (p. 503). This primary element involves the non-conscious regulation individuals engage in to maximize pleasure or to minimize pain. In fact, researchers have isolated this regulation within the prefrontal cortex. Specifically, Shah, Higgins, and Friedman (1998) found that promotion focus is associated with greater left prefrontal activity, and thus positive thinking and maximizing pleasure, while prevention focus is associated with greater right prefrontal activity, which drives negative thinking and minimizing pain.

Specifically, individuals with a prevention focus are sensitive to cues that indicate the likelihood of negative affect, safety, and security (Johnson et al., 2015; Kark & Van Dijk, 2007). They are especially sensitive to cues related to risk. Such cues guide prevention-focused individuals on how to best fulfill their duties and obligations, maintain an acceptable standard of performance, and limit mistakes and errors (Johnson et al., 2015; Johnson & Chang, 2008; Kark & Van Dijk, 2007). Those with a promotion focus, on the other hand, are sensitive to cues that indicate the likelihood of positive affect, growth, and accomplishment (Johnson et al., 2015; Kark & Van Dijk, 2007). Such cues guide promotion-focused individuals on how to best fulfill their goals and aspirations, advance and make progress, and attain their ideal self (Higgins, 1997). Rather than interpret risk as something to avoid, they interpret it as being a necessary part of the process of progress and advancement.

Activating processing dynamics. Since the motivations associated with each regulatory focus schema differ, it is natural that their processing differs, which includes their focus, goals, desires, and behaviors (Kark & Van Dijk, 2007). Those with a prevention focus are motivated to avoid problems and losses, which leads their personality system to be programmed for vigilance, avoidance, stability, exploitation, and maintaining the status quo (Kark & Van Dijk, 2007; Kark and Van Dijk, 2019). Those with a promotion focus are motivated to seek winning and gains, which leads their personality system to be programmed for eagerness, speed, achievement, exploration, and change (Kark & Van Dijk, 2007; Kark and Van Dijk, 2019).

As most of the research on regulatory focus has occurred within the management domain, researchers have commonly investigated the effects regulatory focus schemas have on how employees process and perceive their work environment, in the form of workplace perceptions and attitudes that include job satisfaction, commitment, and engagement.

Job satisfaction, affective commitment, and engagement are each considered to be positive and desired employee perceptions and

Table 4
How regulatory foci influence individual processing and operation.

	Prevention focus	Promotion focus	Citations
Processing dispositions	Interpreting situational cues • Seeks to minimize pain • More prone to negative thinking • Sensitive to cues that indicate the likelihood of negative affect, safety, and security • Focused on fulfilling duties and obligations, maintaining acceptable standards of performance, and limiting mistakes and errors	Interpreting situational cues • Seeks to maximize pleasure • More prone to positive thinking • Sensitive to cues that indicate the likelihood of positive affect, growth, and accomplishment • Focused on accomplishing goals and aspirations, advancing and making progress, and fulfilling one's ideal self	• Higgins, 1997; Johnson et al., 2015; Kark & Van Dijk, 2007
	Activating processing dynamics • Motivated to avoid problems and losses, programming them for vigilance, avoidance, stability, exploitation, and maintaining status quo • Negative and/or weak relationships with job satisfaction, affective commitment, and engagement • Moderate positive relationship with continuance commitment • Small positive relationship with normative commitment	Activating processing dynamics • Motivated to seek winning and gains, programming them for eagerness, speed, achievement, exploration, and change • Strong positive relationships with job satisfaction, affective commitment, and engagement • Small positive relationship with continuance commitment • Moderate positive relationship with normative commitment	• Kark & Van Dijk, 2007; Kark and Van Dijk, 2019; Lanaj et al., 2012
Behavioral dispositions	• Generally underperforms relative to those with a promotion focus • Less likely to set goals and exhibit persistence • Small or non-significant relationships with task performance, organizational behavior, and innovative performance • Moderate positive relationship with counterproductive work behaviors • Strong positive relationship with safety performance	• Generally outperforms those with a prevention focus • Sets more challenging goals and exhibit greater persistence • Moderate positive relationships with task performance, organizational behavior, and innovative performance • Moderate negative relationship with counterproductive work behaviors • Moderate negative relationship with safety performance	• Gorman et al., 2012; Higgins & Spiegel, 2004; Lanaj et al., 2012

attitudes. The research between the regulatory foci and these outcomes portrays consistent findings: promotion focus has a strong positive relationship with these outcomes (r = 0.45, 0.45, and 0.49, respectively), while prevention focus has either a small positive or negative relationship with these outcomes (r = −0.23, −0.04, and 0.06, respectively; Lanaj et al., 2012). The primary explanations for these relationships are that, compared to those with a prevention focus, those with a promotion focus are more perceptive to positive information, more intrinsically motivated, and more emotionally connected to their work because they see work as a way to fulfill their ideal selves, allowing them to go beyond their minimum job requirements.

Continuance and normative commitment have also been studied as consequences of regulatory foci. These forms of commitment both involve an element of feeling compelled to remain a member of the organization, and as such, have been theorized to have a stronger relationship with prevention focus. For continuance commitment, meta-analyses have confirmed that prevention focus has a moderate positive relationship with continuance commitment (r = 0.31; Lanaj et al., 2012), while promotion focus, on the other hand, has a small positive relationship with continuance commitment (r = 0.15; Lanaj et al., 2012). For normative commitment, meta-analytic results suggest that promotion focus has a stronger positive relationship with normative commitment (r = 0.26) than prevention focus (r = 0.12; Lanaj et al., 2012).

Behavioral dispositions

Similar to perceptions and attitudes, research associated with the relationships between the regulatory focus schemas and behaviors and performance are rather consistent. For the most part, those with a promotion focus seem to outperform those with a prevention focus. This is largely because those with a promotion focus are more satisfied, committed, engaged, and motivated to enhance their self-concept. Specifically, it has been found that compared to those with a prevention focus, those with a promotion focus set more challenging goals and exhibit greater persistence, task performance, organizational behavior, and innovative performance (Gorman et al., 2012; Higgins & Spiegel, 2004; Lanaj et al., 2012). In fact, for each of these types of performance, relationships with promotion focus are moderately positive (ranging between r = 0.28 and 0.30), while relationships with prevention focus are largely nonexistent (ranging from r = −0.04 to 0.04; Lanaj et al., 2012). In addition, meta-analyses reveal that promotion focus has a moderate negative relationship with counterproductive work behaviors (CWBs; r = −0.19), while prevention focus has a moderate positive relationship with CWBs (r = 0.25; Lanaj et al., 2012).

Overwhelmingly, research has consistently found that those with a promotion mindset outperform those with a prevention mindset. However, there is one area where this is not the case. Based upon meta-analytic results, it appears there is one primary behavioral benefit to possessing a prevention focus, which is that it has a strong positive relationship with safety performance (r = 0.51), while promotion focus has a small-moderate negative relationship with safety performance (r = −0.15; Lanaj et al., 2012). This is largely because those with a prevention mindset are mentally cued to safety and security, and are more vigilant to safety-related issues.

Existing research related to leadership domain

Leader's regulatory focus has been found to have important implications for how the leader operates, their influence on those they lead, and even the success of an organization. In terms of the influence of regulatory focus schemas on how leaders operate, researchers have found that those with a promotion focus are viewed more as transformational leaders, possessing greater motivation for accomplishments and aspirations, whereas those with a prevention focus are viewed more as transactional leaders, seeking to maintain order and stability in the workplace (Johnson et al., 2015; Kark & Van Dijk, 2007).

Related to the influence of leaders' regulatory focus schemas on those they lead, when leaders possess a promotion focus, their followers become more sensitive to positive outcomes, more likely to develop

preferences for change, are more committed, and engage in higher levels of performance demonstrated through risk-taking, creativity, and efficiency (Kark & Van Dijk, 2007; Kark & Van Dijk, 2019; Kark, Van Dijk, & Vashdi, 2018). On the other hand, when leaders possess a prevention focus, their followers become more sensitive to negative outcomes, more likely to develop preference for stability, are less committed, and less likely to take risks and be creative (Kark et al., 2018; Kark & Van Dijk, 2007; Kark & Van Dijk, 2019).

There is also evidence that leaders' regulatory focus affects organizational performance. Regulatory focus scholars have suggested that leaders are the meaning makers in their organization, such that their personal goals frame the goals of their organizations (Brockner & Higgins, 2001; Johnson et al., 2015). As such, it has been posited that the regulatory focus of organizations' top management teams shapes their organizations' and workforces' goal pursuit strategies (including employees' dominant regulatory focus stance), capacity to be agile and implement change, and engagement in corporate knowledge management systems (Arazy & Gellatly, 2012; Kark et al., 2018; Kark & Van Dijk, 2007; Spanjol, Tam, Qualls, & Bohlmann, 2011; Taylor-Bianco & Schermerhorn, 2006). In fact, there have been multiple studies that have demonstrated that firms with promotion-focused CEOs outperform firms with prevention-focused CEOs (Kammerlander, Burger, Fust, & Fueglistaller, 2015; Wallace, Little, Hill, & Ridge, 2010).

Summary of the four sets of situation-encoding schemas

Upon identifying, describing, and summarizing the research associated with the four sets of situation-encoding schemas, we feel it is important to bring attention to four broad observations. First, there has been decades of research studies supporting the foundational role that these four situation-encoding schemas play in how people and leaders process and behave. Second, the amount of research on these schemas related to leadership is relatively small, and additional research is not only needed, but, we believe, will prove quite fruitful. Third, altogether, the existing research strongly supports the idea that certain situation-encoding schemas are more conducive to leadership effectiveness (e.g., growth mindset, learning orientation, deliberative mindset, and promotion focus) than other schemas (e.g., fixed mindset, performance orientation, implemental mindset, and prevention focus), which has important development implications. Fourth, while we seem to know some schemas are more conducive for success than others, we currently have little research or understanding regarding how the different schemas are related. While some research has pointed toward some natural consistencies between schemas (e.g., Lanaj et al., 2012; Payne et al., 2007; Vandewalle et al., 2019), their relationships with each other needs to be further explored. We further elaborate this point later in our Discussion section. Altogether, we believe substantial evidence exists for more fully integrating situation-encoding schemas into our research and conversations related to the important ingredients of effective leadership.

Before moving on, it is important to acknowledge that while individuals' situation-encoding schemas generally dictate their processing and behavioral dispositions, it seems likely that certain situations may be strong enough for these individuals to overcome their natural schematic tendencies. For example, individuals may normally possess a performance orientation, but if they are required to learn or master some material (e.g., to pass a bar or certified public accounting exam), the situation may elicit a learning orientation. In fact, as we will discuss below, research across these schemas has demonstrated that relatively simple interventions designed to elicit more positive situation-encoding schemas generally will lead to at least a short-term positive shift in one's processing and behaviors (for example, see Blackwell et al., 2007; Gollwitzer, 1993; Kilduff & Galinsky, 2013; Kray & Haselhuhn, 2007).

Discussion

Our paper had three purposes: (1) to shift consensus within the leadership literature away from the more traditional trait-approach toward the more modern situation-trait approach to better understand why leaders do what they do, (2) identify situation-encoding schemas as being critical and foundational components that explain why leaders process and operate uniquely across the situations they encounter, and (3) integrate and review research on four types of situation-encoding schemas to more fully introduce these schemas into the leadership domain. We summarize these contributions in preparation for discussing the important implications they have for leadership research and practice.

In the first section, entitled “The Study of Why Leaders Do What They Do,” we identify that leaders' traits have been a traditional focus for explaining how leaders operate. This approach has a number of limitations which may limit our ability to gain a complete understanding for why leaders process and behave the ways that they do. For example, the trait approach assumes that leaders' variations in behavior across situations are assumed to be “errors,” as opposed to valuable information into how they process and behave. Acknowledging these limitations, we integrate the CAPS framework from psychology to advance and build the case for a robust approach to understanding leader effectiveness which utilizes the situation-trait approach. It carries its own assumptions suggesting that when explaining leaders' processing and behaviors, it is necessary to consider both the situation and how it interacts with leaders' traits.

We cover the CAPS framework in our second section: “Modeling the Situation-Trait Approach.” The CAPS framework suggests that why individuals operate in the manner they do begins with how they encode unique cues in the situations they encounter. This encoding activates individuals' personality system, which in turn, causes the individual to behave and navigate the situation in a manner aligned with the personality system's processing. As such, the encoding process is foundational to and directs the leaders' personality system. The personal attributes that guide individuals' encoding process are situation-encoding schemas, making these attributes a crucial and foundational component of individuals' processing and behavior.

In the third section, entitled “Leaders' Situation-encoding Schemas,” we demonstrate just how foundational these attributes are in leaders' processing by “going under the hood” and summarizing the neuropsychology behind these schemas. Specifically, we identify situation-encoding schemas as neural networks in the prefrontal cortex that tap into leaders' associative processing mode. As such, they automatically and largely non-consciously direct leaders' cue-seeking and processing activation. Being foundational to how leaders view their environments and subsequently how they process and behave relative to their perception of their environments, we suggest that better understanding leaders' situation-encoding schemas and integrating them more fully into the leadership literature will have important and meaningful implications for leadership research and practice. Thus, it is important to identify specific situation-encoding schemas that underlie leaders' processing and behaviors.

In the fourth section, entitled “Review of Four Sets of Situation-Encoding Schemas,” we identify and integrate research on four sets of situation-encoding schemas that have been independently studied for decades across various research domains: fixed and growth mindsets, goal orientations, deliberative and implemental mindsets, and regulatory focus. Despite being studied independently, research across these schemas has repeatedly found that they do dictate individuals' processing dispositions (cue-encoding and activating the personality system) and behavioral dispositions. As such, they are likely to have important implications for leadership, and we summarize the research to date and integrating these previously independently-studied schemas into one source.

Implications for leadership

By understanding the situation-trait approach, the CAPS framework, the encoding process, and situation-encoding schemas that direct the encoding process, we are able to come to a more clear and accurate understanding of the complexity of leaders' operations. Further, it allows us to more clearly identify situation-encoding schemas to be a foundational component behind leaders' processing and operation. This has a variety of important implications that include: enhancing leaders' self-awareness, improving leaders' meta-cognition, improving leadership effectiveness, and improving leadership development.

Enhancing leaders' self-awareness

Remarkably, until this point, leadership researchers have largely treated the variation of leader behaviors as error and eliminated it by simply averaging behavior over diverse situations (Mischel & Shoda, 1995). But, with the situation-trait approach and CAPS theory, it becomes possible to identify meaningful stable situation-behavior (i.e., if… then…) profiles activated by situation-encoding schemas that predictably explain variations in behavior across situations (Mischel & Shoda, 1995). Since the leadership domain has largely not considered the situation-trait approach or foundational role situation-encoding schemas play in leaders' processing and operation, leaders have largely lacked a framework to help them understand why they do what they do across the various situations they encounter, and we suggest that the current framework provides the opportunity for greater clarity and self-awareness.

In particular, we have identified four sets of situation-encoding schemas that dispose leaders to specific processing and behaviors. Each of these sets identifies at least two possible schemas, but research suggests that leaders tend to rely on a single dominant schema for their encoding system. If leaders can identify the schema that they possess, they can better understand why they are disposed to process and behave in the manners that they do across different situations. Further, across the research on these different sets of situation-encoding schemas, research has made it quite clear that certain schemas lead to better processing and behavior than other schemas. This allows leaders to determine if they are disposed to process and behave in the most effective ways.

If we put all four sets of schemas together into a single framework, it allows leaders to develop a multifaceted profile of their processing system. Are they fixed- or growth-minded, learning- or performance-oriented, deliberative- or implemental-minded, and promotion- or prevention-focused? Knowing their profile, leaders and those who support them can develop inferences related to the leaders' underlying structure and dynamics and better understand why leaders process and behave in the specific manner they do (Mischel & Shoda, 1995). This has three important implications for the leadership domain that we discuss next.

Improving leaders' meta-cognition

Meta-cognition is defined as deliberate, planned, intentional, goal-directed, and future-oriented mental processing that can be used to accomplish cognitive tasks (Flavell, 1979). When leaders understand how they are disposed to process and operate, it provides them with the opportunity to become more conscious about how they process and operate.

Specifically, there are at least three benefits of leaders understanding their situation-encoding profile (Mischel & Shoda, 1995). First, they can better predict the events and conditions that will activate certain dispositions, helping them to be more strategic about their decision making. Second, they can become more conscious of the situations they put themselves in, helping them avoid situations that bring out negative processing and behavioral dispositions and approach situations that bring out their positive processing and behavioral dispositions. Third, knowing what cues they are naturally attuned to, they can consciously seek after other cues that they do not normally pay much attention to, expanding the range of their processing and options for behavior. In all, with a greater ability to meta-cognate about their situation-encoding schemas, leaders will be more empowered to meet their role demands in their most effective ways (Hannah et al., 2009).

Improving leaders' effectiveness

As leaders improve in their self-awareness, they enhance their behavioral freedom and their ability to operate more consciously, instead of falling back into non-conscious and predictable patterns of processing and behaviors (Mischel & Shoda, 1995). Thus, as leaders get to know their situation-encoding schemas, various options for improving their effectiveness become available (Mischel & Shoda, 1995, 2008). First, by understanding what schemas they currently possess and what schemas are most ideal for leader effectiveness, leaders can seek to more fully adopt the schemas most ideal for leader effectiveness. As leaders make improvements to their schemas, naturally their processing and behavior will improve, making them more effective. Second, by understanding the cues one naturally seeks, and what other cues might be helpful for improved processing and behaviors, leaders can consciously seek after different cues to disrupt their typical personality system patterns. Third, by understanding the situations that activate less-effective and more-effective processing and behavior, leaders can consciously select the situations to which they expose themselves to bring out their best.

Improving leaders' development

One of the great things about focusing on situation-encoding schemas in light of leadership development and effectiveness is that there is ample evidence that individuals can change and improve their schemas, and when they do, there is a corresponding improvement in their processing and behaviors (Mischel & Shoda, 2008). And often, research has repeatedly found that leaders' situation-encoding schemas can be improved through relatively simple interventions, such as: reading fictional studies (Kray & Haselhuhn, 2007), writing two paragraphs (Kilduff & Galinsky, 2013), watching a three-minute video (Crum, Salovey, & Achor, 2013), imagining responses to situations (Gollwitzer, 1993; Gregory, Cialdini, & Carpenter, 1982; Linville & Clark, 1989; Mischel & Shoda, 2008) or engaging in a training (Blackwell et al., 2007; Crum & Langer, 2007; Yeager et al., 2019). For example, Kilduff and Galinsky (2013) found that individuals asked to write two paragraphs about their aspirations and ambitions (priming a promotion focus) were more proactive in their behaviors and achieved higher social status than those asked to write two paragraphs about their duties and obligations (priming a prevention focus).

The basic idea is that when an individual is primed to encode their situations differently, they are activating and strengthening neural connections in their prefrontal cortex that may not fire as rapidly as their dominant situation-encoding neural connections. Knowing that neural connections strengthen and operate more rapidly the more they get used, it suggests that shifting a leaders' situation-encoding schemas requires regular primes or interventions, which over time strengthens their less-dominant but more positive schemas, making them more dominant and having lasting positive implications for their subsequent processing and behavioral dispositions (Gioia & Poole, 1984; Mischel & Shoda, 1995).

Understanding these dynamics uncovers three things that leaders or those who develop leaders can do to help leaders shift from less-than-optimal situation-encoding schemas (fixed mindset, performance orientation, implemental mindset, and prevention focus) to more optimal situation-encoding schemas (growth mindset, learning orientation, deliberative mindset, and promotion focus) to develop more effective processing and behaviors, and overall effectiveness. First, help leaders understand the role their situation-encoding schemas play in their processing and behavior. Without this understanding, it will be difficult to have the motivation to focus on situation-encoding schemas as a way to develop. Second, help leaders identify and distinguish between less-

than-optimal situation-encoding schemas and more optimal situation-encoding schemas. This will help leaders become more conscious of their situation-encoding schemas and the quality of their current situation-encoding schema profiles and it will help them identify areas for development and improvement. Third, develop interventions and initiatives to help leaders adopt the more optimal situation-encoding schemas. These interventions and initiatives should be designed to exercise and strengthen the neural connections associated with the more optimal situation-encoding schemas. As those neural connections are strengthened, leaders will come to rely upon them more frequently, improving their processing and behavioral dispositions.

We must point out that this approach to leadership development has not been available under the trait and behavior approaches that leadership scholars have traditionally leaned upon. When scholars have focused on leaders' traits and behaviors, the practical developmental implications all relate to improving select traits and behaviors. But, what the situation-trait approach reveals is that even if a leader can make shifts in traits and behaviors, if they continue to encode their situations in the same ways, development in traits and behaviors may be limited and may not translate into any greater leader effectiveness. This is what CAPS experts were referring to when they stated that the traditional trait approach may help when determining which car to buy (i.e., leader to select), but that it provides little value for fixing the car if it is not running properly (Epstein, 1994; Mischel & Shoda, 2008). The situation-trait approach allows us to get "under the hood" of leaders' psychological processes and dynamics and to work on any of the processing that may not be functioning properly.

Finally, while we have focused primarily on the encoding process, it is important to step back and more broadly consider the implications that improving one's situation-encoding schemas might have on the CAPS framework. While it is easy to suggest that leadership effectiveness will naturally improve when leaders improve their situation-encoding schemas, the reality is likely more complex. When leaders improve their schemas, these new schemas may activate different elements of the leaders' personality systems (e.g., cognitions, affect, competencies, expectancies, and goals). As a consequence, it is possible that the leaders' entire personality system will be restructured, for both the positive or the negative. For example, the new schemas may trigger more positive self-efficacy beliefs, opening up new expectancies and goals. But, they may also trigger anxiety associated with perceiving situations in new, unproven, and uncertain ways, stifling the positive impact of the new schemas. Thus, while we are promoting the value of an increased focus on the encoding system and situation-encoding schemas, at least two important leadership implications exist beyond this system and schemas. First, while improving situation-encoding schemas may be an important answer for developing leaders, it is not the entire answer. Effective leadership development will require both developing new "if…then…" signatures and subsequent restructuring within the personality system. Second, understanding the broader CAPS framework will help leaders develop greater self-awareness and metacognitive skills beyond their encoding processing. More specifically, understanding the entirety of the CAPS framework will also help leaders to become more self-aware of their personality system and develop improved metacognitive skills to ensure that the changes in their schemas result in improved processing and behavioral dispositions.

Further theoretical implications

One of the major purposes of this paper is to help the leadership literature shift consensus more completely away from the trait-approach and toward the situation-trait approach. There are a variety of theoretical implications related to this shift. First, it aligns the leadership literature with the most current thought and theories from the psychological domain. Second, it provides a more accurate foundation and perspective for explaining why leaders do what they do. Third, this approach introduces new questions and new constructs (i.e., situation-encoding schemas) to focus on for the development and effectiveness of leaders, which both broadens and deepens the pool of important ingredients of effective leadership, and should lead to further theoretical insights and development.

Future research

One of the values of the CAPS framework is that it is a meta-theory, providing a context by which new theories that explain various elements of leaders' processing and behavioral manifestations can be developed. While CAPS provides a general understanding of the processes that underly leadership behavior, there is still much research needed to fully explain these processes. In other words, future research is needed to better map leaders' encoding process, personality system, and behavioral manifestations. There is complexity for each, especially leaders' personality system which can involve a variety of different factors that form leaders' patterns of processing. Mischel and Shoda (1995) state: "The relationships among the person's important encodings, beliefs and expectations (e.g., about the self), the enduring goals pursued, the key strategies used, and the affects experienced, all in relation to relevant features of situations, become the terrain [psychologists and leadership researchers] need to map" (p. 259).

By presenting situation-encoding schemas more fully into the leadership domain, a natural question is: what is the value of these schemas relative to what we are already studying, namely leadership traits and behaviors? Thus, moving forward, leadership researchers should investigate what variance situation-encoding schemas account for above and beyond the leadership traits and behaviors currently studied.

Additionally, leadership researchers should more fully investigate the relationships between situation-encoding schemas and leadership traits and behaviors. Are situation-encoding schemas antecedents to both leadership traits and behaviors, with leadership traits and behaviors mediating the relationship between situation-encoding schemas and leadership effectiveness?

Leadership researchers should also investigate the degree to which followers can accurately assess leaders' situation-encoding schemas, and what role their evaluations of their schemas plays in their evaluation of the effectiveness of their leader. Mischel and Shoda (2008) argue that observers are interested in and sensitive to others' generalized behavioral tendencies, and are inclined to identify their if…then… situation-behavior profiles, or what we call situation-encoding schemas. Thus, this seems like a ripe area for future research, and would add breadth to our understanding of how followers' perceptions of their leaders affect their responsiveness to their leader, as well as their overall work climate.

Further, it would be valuable to have a clearer understanding surrounding the relationships between the four different situation-encoding schemas. It has been theoretically suggested and largely accepted that fixed and growth mindsets lead to the different goal orientations, but there has been little empirical support for this relationship (Payne et al., 2007; Vandewalle et al., 2019). But, we do have empirical evidence that there is a relationship between the goal orientation schemas and the regulatory focus schemas (Lanaj et al., 2012). Beyond that, we have little clarity if and how these different schemas may be related. It is thus important to better understand the relationships between schemas, as this would have important developmental implications. If they are related, then perhaps they can be built up simultaneously via broad approaches to improving any situation-encoding schemas. If they are more independent, this would suggest that organizations need to gain clarity on what specific negative situation-encoding schemas their leaders dominantly possess, and provide a tailored developmental program specifically for the most limiting schemas.

Finally, we acknowledge that the four situation-encoding schemas that we have focused on in the present review do not exhaustively encompass the breadth of situation-encoding schemas that shape

leaders processing and behavioral dispositions. Thus, future research should seek to identify other schemas that may influence the cues leaders absorb and correspondingly activate their personality system.

Methodological considerations

There are also important methodological implications that accompany our current work. As researchers continue to embrace the situation-trait approach and leverage the strengths of the CAPS framework to guide such research, they will have to give special attention to which measurement techniques they use in order to capture the dynamic nature of situation encoding schemas. One such approach that is especially well-suited for this use is experience sampling methodology (ESM; also called ecological momentary assessments). Utilizing this approach, researchers can capture work behavior from respondents at multiple times during the day in situ (Hormuth, 1986), which allows for the investigation of both between- and within-person variability of constructs. Further benefits of this approach include capturing multiple data points for each variable over time which can reduce the number of third variable explanations and aid researchers in understanding the dynamic relationships between variables (Beal & Weiss, 2003).

To further disentangle and understand the relationships among the four situation-encoding schemas discussed in this review, collecting responses from participants throughout the day to gain insight into how decisions and behaviors result from unique combinations of cognitive and affective states, could prove quite informative in better understanding how and why leaders do what they do. This within-person analysis considers variation in constructs around an individual's own mean level of a construct (effectively capturing situational variation), and this approach can effectively be paired with trait-level measurement to model the combined effect of trait and state levels of a construct on leader behaviors (see Hektner, Schmidt, & Csikszentmihalyi, 2007 for an overview of ESM). In sum, ESM is especially well-suited for asking and answering research questions in which different types of personal attributes (e.g., trait and state attributes) together inform leader behavior, which is aligned with the complexity and strength of the CAPS framework.

A second methodological approach that could be used to advance research on the four situation-encoding schemas is latent profile analysis (LPA; Marsh, Lüdtke, Trautwein, & Morin, 2009; Muthén & Muthén, 2000). This approach is a form of cluster analysis in which researchers can uncover hidden groups that exist within observed data. For example, researchers could ask whether there are certain “clusters” or “signatures” that exist across people in which they exhibit certain levels of each of the four situation-encoding schemas. It could be that a unique combination of these schemas can predict additional variance in outcomes above and beyond the actual level of each of the schemas. In other words, latent profile analysis could prove to be an effective tool to expand the study of situation-encoding schemas and to uncover any hidden insights that might emerge as a result of considering unique combinations of these schemas. As such, each schema is important by itself, but latent profile analysis would allow researchers to study the combined synergistic effect of multiple schemas together.

Conclusion

In 2012, Antonakis et al. argued that leadership and individual difference research is at a cusp of a renaissance because of new theories and methods to conceptualize and test more complete models of leadership. We believe that the shift from the trait approach to the situation-trait approach, the identification of situation-encoding schemas as foundational components of the leadership process, and the identification and integration of specific situation encoding schemas is part of this renaissance. Together, these contributions are meant to broaden, deepen, and enhance the accuracy of our understanding for why leaders do what they do, leading to important implications for leaders' self-awareness, metacognition, effectiveness, and development.

References

Antonakis, J., Day, D. V., & Schyns, B. (2012). Leadership and individual differences: At the cusp of a renaissance. *The Leadership Quarterly, 23*, 643–650.

Arazy, O., & Gellatly, I. R. (2012). Corporate wikis: The effects of owners' motivation and behavior on group members' engagement. *Journal of Management Information Systems, 29*, 87–116.

Armor, D. A., & Taylor, S. E. (2003). The effects of mindset on behavior: Self-regulation in deliberative and implemental frames of mind. *Personality and Social Psychology Bulletin, 29*, 86–95.

Baldwin, M. (1992). Relational schemas and the processing of social information. *Psychological Bulletin, 112*, 461–484.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bargh, J. A. (1990). Goal intent: Goal-directed thought and behavior are often unintentional. *Psychological Inquiry, 1*, 248–251.

Bargh, J. A. (1997). The automaticity of everyday life. In R. S. Wyer (Vol. Ed.), *The automaticity of everyday life: Advances in social cognition. Vol. 10. The automaticity of everyday life: Advances in social cognition* (pp. 1–61). Mahwah, NJ: Erlbaum.

Bargh, J. A., & Chartrand, T. L. (1999). The unbearable automaticity of being. *American Psychologist, 54*, 462–479.

Bargh, J. A., Gollwitzer, P. M., Lee-Chai, A., Barndollar, K., & Trötschel, R. (2001). The automated will: Nonconscious activation and pursuit of behavioral goals. *Journal of Personality and Social Psychology, 81*, 1014–1027.

Bass, B. M. (1990). *Bass and Stogdill's handbook of leadership: Theory, research, and managerial applications.* New York: Free Press.

Baumeister, R. F., Heatherton, T. F., & Tice, D. M. (1993). When ego threats lead to self-regulation failure: Negative consequences of high self-esteem. *Journal of Personality and Social Psychology, 64*, 141–156.

Beal, D. J., & Weiss, H. M. (2003). Methods of ecological momentary assessment in organizational research. *Organizational Research Methods, 6*(4), 440–464.

Beer, J. S. (2002). Implicit self-theories of shyness. *Journal of Personality and Social Psychology, 83*, 1009–1024.

Blackwell, L. S., Trzesniewski, K. H., & Dweck, C. S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child Development, 78*, 246–263.

Blume, B. D., Ford, K. J., Baldwin, T. T., & Huang, J. L. (2010). Transfer of training: A meta-analytic review. *Journal of Management, 36*, 1065–1105.

Brandstätter, V., & Frank, E. (2002). Effects of deliberative and implemental mindsets on persistence in goal-directed behavior. *Personality and Social Psychology Bulletin, 28*, 1366–1378.

Brockner, J., & Higgins, E. T. (2001). Regulatory focus theory: Implications for the study of emotions at work. *Organizational Behavior and Human Decision Processes, 86*, 35–66.

Burnette, J. L., O'Boyle, E. H., VanEpps, E. M., Pollack, J. M., & Finkel, E. J. (2013). Mindsets matter: A meta-analytic review of implicit theories and self-regulation. *Psychological Bulletin, 139*, 655–701.

Button, S. B., Mathieu, J. E., & Zajac, D. M. (1996). Goal orientation in organizational research: A conceptual and empirical foundation. *Organizational Behavior & Human Decision Processes, 67*, 26–48.

Carver, C. S., & Scheier, M. F. (2002). Control processes and self-organization as complementary principles underlying behavior. *Personality and Social Psychology Review, 6*, 304–315.

Cellar, D. F., Stuhlmacher, A. F., Young, S. K., Fisher, D. M., Adair, C. K., Haynes, S., ... Riester, D. (2011). Trait goal orientation, self-regulation, and performance: A meta-analysis. *Journal of Business Psychology, 26*, 467–483.

Cervone, D., Shadel, W. G., Smith, R. E., & Fiori, M. (2006). Self-regulation: Reminders and suggestions from personality science. *Applied Psychology: An International Review, 55*, 333–385.

Chiu, C., Hong, Y., & Dweck, C. S. (1997). Lay dispositionism and implicit theories of personality. *Journal of Personality and Social Psychology, 73*, 19–30.

Coad, A. F., & Berry, A. J. (1998). Transformational leadership and learning orientation. *Leadership & Organizational Development Journal, 19*, 164–172.

Compas, B. E., Connor-Smith, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin, 127*, 87–127.

Cornwell, J. F., & Higgins, E. T. (2015). Approach and avoidance in moral psychology: Evidence for three distinct motivational levels. *Personality and Individual Differences, 86*, 139–149.

Crocker, J., Luhtanen, R. K., Cooper, M. L., & Bouvrette, S. (2003). Contingencies of self-worth in college students: Theory and measurement. *Journal of Personality and Social Psychology, 85*, 894–908.

Crum, A. J., & Langer, E. J. (2007). Mind-set matters: Exercise and the placebo effect. *Psychological Science, 18*, 165–171.

Crum, A. J., Salovey, P., & Achor, S. (2013). Rethinking stress: The role of mindsets in determining the stress response. *Journal of Personality and Social Psychology, 104*, 716–733.

DeRue, D. S., Nahrgang, J. D., Wellman, N., & Humphrey, S. E. (2011). Trait and behavioral theories of leadership: An integration and meta-analytic test of their relative validity. *Personnel Psychology, 64*, 7–52.

DeShon, R. P., & Gillespie, J. Z. (2005). A motivated action theory account of goal orientation. *Journal of Applied Psychology, 90*, 1096–1127.

Diefendorff, J. M., & Lord, R. G. (2008). Goal-striving and self-regulation processes. In R. Kanfer, G. Chen, & R. D. Pritchard (Eds.). *Work motivation: Past, present, and future* (pp. 151–197). New York, NY: Routledge.

Dierdorff, E. C., Surface, E. A., & Brown, K. G. (2010). Frame-of-reference training

effectiveness: Effects of goal orientation and self-efficacy on affective, cognitive, skill-based, and transfer outcomes. *Journal of Applied Psychology, 95*, 1181–1191.
Dinh, J. E., Lord, R. G., & Hoffman, E. (2014). Leadership perception and information processing: Influences of symbolic, connectionist, emotion, and embodied architectures. In D. V. Day (Ed.). *The Oxford handbook of leadership and organizations* (pp. 29–65). New York: Oxford University Press.
Doron, J., Stephan, Y., Boiché, J., & Le Scanff, C. (2009). Coping with examinations: Exploring relationships between students' coping strategies, implicit theories of ability, and perceived control. *British Journal of Educational Psychology, 79*, 515–528.
Dragoni, L., Tesluk, P. E., Russell, J. E. A., & Oh, I.-S. (2009). Understanding managerial development: Integrating developmental assignments, learning orientation, and access to developmental opportunities in predicting managerial competencies. *Academy of Management Journal, 52*, 731–743.
Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist, 41*, 1040–1048.
Dweck, C. S. (2006). *Mindset: The new psychology of success.* New York, NY: Random House.
Dweck, C. S. (2012). Implicit theories. In P. Van Lange, A. Kruglanski, & T. Higgins (Vol. Eds.), *The handbook of theories of social psychology. Vol. 2. The handbook of theories of social psychology* (pp. 43–61). Thousand Oaks, CA: Sage.
Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review, 95*, 256–273.
Edwards, J. A., & Templeton, A. (2005). The structure of perceived qualities of situations. *European Journal of Social Psychology, 35*, 705–723.
Elliot, A. J. (1999). Approach and avoidance motivation and achievement goals. *Educational Psychology, 34*, 169–189.
Elliot, A. J., & McGregor, H. A. (2001). A 2 x 2 achievement goal framework. *Journal of Personality and Social Psychology, 80*, 501–519.
Elliot, A. J. (1995). *Approach and avoidance achievement goals: an intrinsic motivation analysis.* PhD thesisMadison: Univ.Wisc.
Epstein, S. (1994). Integration of the cognitive and the psychodynamic unconscious. *American Psychologist, 49*, 709–724.
Erdley, C. A., & Dweck, C. S. (1993). Children's implicit personality theories as predictors of their social judgments. *Child Development, 64*, 863–878.
Fisher, S. L., & Ford, J. K. (1998). Differential effects of learner effort and goal orientation on two learning outcomes. *Personnel Psychology, 51*, 397–420.
Flavell, J. H. (1979). Metacognition and metacognitive monitoring: A new area of cognitive-developmental inquiry. *American Psychologist, 34*, 906–911.
Fleeson, W. (2007). Situation-based contingencies underlying trait-content manifestation in behavior. *Journal of Personality, 75*, 825–862.
Fujita, K., Gollwitzer, P. M., & Oettingen, G. (2007). Mindsets and pre-conscious open-mindedness to incidental information. *Journal of Experimental Social Psychology, 43*, 48–61.
Gagne, F. M., & Lydon, J. E. (2001). Mindset and close relationships: When bias leads to (in)accurate predictions. *Journal of Personality and Social Psychology, 81*, 85–96.
Gervey, B., Chiu, C., Hong, Y., & Dweck, C. S. (1999). Differential use of person information in decision-making about guilt vs. innocence: The role of implicit theories. *Personality and Social Psychology Bulletin, 25*, 17–27.
Gioia, D. A., & Poole, P. P. (1984). Scripts in organizational behavior. *Academy of Management Review, 9*, 449–459.
Gollwitzer, P. M. (1990). Action phases and mind-sets. In E. T. Higgins, & R. M. Sorrentino (Vol. Eds.), *Handbook of motivation and cognition. Vol. 2. Handbook of motivation and cognition* (pp. 53–92). New York: Guilford.
Gollwitzer, P. M. (1993). Goal achievement: The role of intentions. *European Review of Social Psychology, 4*, 141–185.
Gollwitzer, P. M. (2012). Mindset theory of action phases. In P. van Lange (Ed.). *Handbook of theories of social psychology* (pp. 526–545). Thousand Oaks: Sage.
Gollwitzer, P. M., & Kinney, R. F. (1989). Effects of deliberative and implemental mind-sets on the illusion of control. *Journal of Personality and Social Psychology, 56*, 531–542.
Gorman, C. A., Meriac, J. P., Overstreet, B. L., Apodaca, S., McIntyre, A. L., Park, P., & Godbey, J. N. (2012). A meta-analysis of the regulatory focus nomological network: Work-related antecedents and consequences. *Journal of Vocational Behavior, 90*, 148–161.
Gregory, W. L., Cialdini, R. B., & Carpenter, K. M. (1982). Self-relevant scenarios as mediators of likelihood estimates and compliance: Does imagining make it so? *Journal of Personality and Social Psychology, 43*, 89–99.
Hambrick, D. (2007). Upper echelon theory: Revisited. *Academy of Management Review, 32*, 1346–1352.
Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review, 9* (193-106).
Hannah, S. T., Woolfolk, R. L., & Lord, R. G. (2009). Leader self-structure: A framework for positive leadership. *Journal of Organizational Behavior, 30*, 269–290.
Harmon-Jones, E., & Harmon-Jones, C. (2002). Testing the actionbased model of cognitive dissonance: The effect of action orientation on postdecisional attitudes. *Personality and Social Psychology Bulletin, 28*, 711–723.
Heckhausen, H., & Gollwitzer, P. M. (1987). Thought contents and cognitive functioning in motivational versus volitional stales of mind. *Motivation and Emotion, 11*, 101–120.
Hektner, J. M., Schmidt, J. A., & Csikszentmihalyi, M. (2007). *Experience sampling method: Measuring the quality of everyday life.* Thousand Oaks, CA: Sage.
Henderson, M. D., de Liver, Y., & Gollwitzer, P. M. (2008). The effects of an implemental mind-set on attitude strength. *Journal of Personality and Social Psychology, 94*, 396–411.
Heslin, P. A., & Keating, L. A. (2017). In learning mode? The role of mindsets in derailing and enabling experiential leadership development. *Leadership Quarterly, 28*, 367–384.
Heslin, P. A., Latham, G. P., & Vandewalle, D. (2005). The effect of implicit person theory on performance appraisals. *Journal of Applied Psychology, 90*, 842–856.
Heslin, P. A., Vandewalle, D., & Latham, G. P. (2006). Keen to help? Managers' implicit person theories and their subsequent employee coaching. *Personnel Psychology, 59*, 871–902.
Higgins, E. T. (1990). Personality, social psychology, and person-situation relations: Standards and knowledge activation as a common language. In L. A. Pervin (Ed.). *Handbook of personality: Theory and research* (pp. 301–338). New York: Guilford Press.
Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist, 52*, 1280–1300.
Higgins, E. T. (1998). Promotion and prevention: Regulatory focus as a motivational principle. *Advances in Experimental Social Psychology, 30*, 1–45.
Higgins, E. T. (2000). Making a good decision: Value from fit. *American Psychologist, 55*, 1217–1230.
Higgins, E. T. (2001). Promotion and prevention experiences: Relating emotions to nonemotional motivational states. In J. P. Forgas (Ed.). *Handbook of affect and social cognition* (pp. 186–211). Mahwah, NJ: Erlbaum.
Higgins, E. T., & Spiegel, S. (2004). Promotion and prevention strategies for self-regulation: A motivated cognition perspective. In R. F. Baumeister, & K. D. Vohs (Eds.). *Handbook of self-regulation: Research, theory, and applications* (pp. 171–187). New York, NY: Guilford Press.
Hong, Y., Chiu, C., Dweck, C. S., Lin, D., & Wan, W. (1999). Implicit theories, attributions, and coping: A meaning system approach. *Journal of Personality and Social Psychology, 77*, 588–599.
Hormuth, S. E. (1986). The sampling of experiences in situ. *Journal of Personality, 54*(1), 262–293.
Hoyt, C. L., Burnette, J. L., & Innella, A. N. (2012). I can do that: The impact of implicit theories on leadership role model effectiveness. *Personality and Social Psychology Bulletin, 38*, 257–268.
Janssen, O., & Van Yperen, N. W. (2004). Employees' goal orientations, the quality of leader–member exchange, and the outcomes of job performance and job satisfaction. *Academy of Management Journal, 47*, 368–384.
Johnson, P. D., Smith, M. B., Wallace, J. C., Hill, A. D., & Baron, R. A. (2015). A review of multilevel regulatory focus in organizations. *Journal of Management, 41*, 1501–1529.
Johnson, R. E., & Chang, C. (2008). Relationships between organizational commitment and its antecedents: Employee self-concept matters. *Journal of Applied Social Psychology, 38*, 513–541.
Johnson, R. E., Chang, C.-H. D., & Lord, R. G. (2006). Moving from cognition to behavior: What the research says. *Psychological Bulletin, 132*, 381–415.
Judge, T. A., & Zapata, C. P. (2015). The person–situation debate revisited: Effect of situation strength and trait activation on the validity of the Big Five personality traits in predicting job performance. *Academy of Management Journal, 58*, 1149–1179.
Judge, T. A., Colbert, J. E., & Ilies, R. (2004). Intelligence and leadership: A quantitative review and test of theoretical propositions. *Journal of Applied Psychology, 89*, 542–552.
Kamins, M. L., & Dweck, C. S. (1999). Person versus process praise and criticism: Implications for contingent self-worth and coping. *Developmental Psychology, 35*, 835–847.
Kammerlander, N., Burger, D., Fust, A., & Fueglistaller, U. (2015). Exploration and exploitation in established small and medium-sized enterprises: The effect of CEOs' regulatory focus. *Journal of Business Venturing, 30*, 582–602.
Kark, R., & Van Dijk, D. V. (2007). Motivation to lead, motivation to follow: The role of the self-regulatory focus in leadership processes. *Academy of Management Review, 32*, 500–528.
Kark, R., & Van Dijk, D. (2019). Keep your head in the clouds and your feet on the ground: A multi-focal review of leadership–followership self-regulatory focus. *Academy of Management Annals, 13*, 1–38.
Kark, R., Van Dijk, D. V., & Vashdi, D. R. (2018). Motivated or demotivated to be creative: The role of self-regulatory focus in transformational and transactional leadership processes. *Applied Psychology, 67*, 186–224.
Karoly, P. (1993). Mechanisms of self-regulation: A systems view. *Annual Review of Psychology, 44*, 23–52.
Kihlstrom, J. F. (2004). Implicit methods in social psychology. In C. Sansone, C. C. Morf, & A. Panter (Eds.). *Handbook of methods in social psychology* (pp. 195–212). Thousand Oaks, CA: Sage.
Kilduff, G. J., & Galinsky, A. D. (2013). From the ephemeral to the enduring: How approach-oriented mindsets lead to greater status. *Journal of Personality and Social Psychology, 105*, 816–831.
Kray, L. J., & Haselhuhn, M. P. (2007). Implicit negotiation beliefs and performance: Experimental and longitudinal evidence. *Journal of Personality and Social Psychology, 93*, 49–64.
Lanaj, K., Chang, C.-H. D., & Johnson, R. E. (2012). Regulatory focus and work-related outcomes: A review and meta-analysis. *Psychological Bulletin, 138*, 998–1034.
Levy, S. R., Stroessner, S. J., & Dweck, C. S. (1998). Stereotype formation and endorsement: The role of implicit theories. *Journal of Personality and Social Psychology, 74*, 1421–1436.
Linville, P. W., & Clark, L. F. (1989). Can production systems cope with coping? *Social Cognition, 7*, 195–236.
Lord, R., Diefendorff, J., Schmidt, A., & Hall, R. (2010). Self-regulation at work. *Annual Review of Psychology, 61*, 543–568.
Mangels, J. A., Butterfield, B., Lamb, J., Good, C. D., & Dweck, C. S. (2006). Why do beliefs about intelligence influence learning success? A social cognitive neuroscience model. *Social Cognitive and Affective Neuroscience (SCAN), 1*, 75–86.
Marsh, H. W., Lüdtke, O., Trautwein, U., & Morin, A. (2009). Classical latent profile analysis of academic self-concept dimensions: Synergy of person- and variable-centered approaches to theoretical models of self-concept. *Structural Equation Modeling, 16*, 191–225.
Matzler, K., & Mueller, J. (2011). Antecedents of knowledge sharing-examining the

influence of learning and performance orientation. *Journal of Economics Psychology, 32*, 317–329.
Michel, J. S., & LeBreton, J. M. (2011). Leadership coherence: An application of personality coherence theory to the study of leadership. *Personality and Individual Differences, 50*, 688–694.
Miele, D. B., & Molden, D. C. (2010). Naive theories of intelligence and the role of processing fluency in perceived comprehension. *Journal of Experimental Psychology: General, 139*, 535–557.
Miller, E., & Cohen, J. (2001). An integrative theory of prefrontal cortex function. *Annual Review of Neuroscience, 24*, 167–202.
Miller, G. F. (2007). Reconciling evolutionary psychology and ecological psychology: How to perceive fitness affordances. *Acta Psychologica Sinica, 39*, 546–555.
Mischel & Shoda, 1998.
Mischel, W. (2009). From personality and assessment (1968) to personality science, 2009. *Journal of Research in Personality, 43*, 282–290.
Mischel, W., & Shoda, Y. (1994). Personality psychology has two goals: Must it be two fields? *Psychological Inquiry, 5*, 156–158.
Mischel, W., & Shoda, Y. (1995). A cognitive-affective system theory of personality: Reconceptualizing situations, dispositions, dynamics, and invariance in personality structure. *Psychological Review, 102*, 246–268.
Mischel, W., & Shoda, Y. (2008). Toward a unified theory of personality: Integrating dispositions and processing dynamics within the cognitive-affective processing system. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.). *Handbook of personality: Theory and research* (pp. 208–241). (3rd ed.). New York, NY: Guilford Press.
Molden, D. C., & Dweck, C. S. (2006). Finding "meaning" in psychology: A lay theories approach to self-regulation, social perception, and social development. *American Psychologist, 61*, 192–203.
Mueller, C. M., & Dweck, C. S. (1998). Praise for intelligence can undermine children's motivation and performance. *Journal of Personality and Social Psychology, 75*, 33–52.
Muthén, B. O., & Muthén, L. K. (2000). Integrating person-centered and variable-centered analysis: Growth mixture modeling with latent trajectory classes. *Alcoholism: Clinical and Experimental Research, 24*, 882–891.
Nadkarni, S., & Herrmann, P. (2010). CEO personality, strategic flexibility, and firm performance: The case of the Indian business process outsourcing industry. *Academy of Management Journal, 53*, 1050–1073.
Nadkarni, S., & Narayanan, V. K. (2007). Strategic schemas, strategic flexibility, and firm performance: The moderating role of industry clockspeed. *Strategic Management Journal, 28*, 243–270.
Nicholls, J. G. (1975). Causal attributions and other achievement-related cognitions: Effects of task outcome, attainment value, and sex. *Journal of Personality and Social Psychology, 31*, 379–389.
Nussbaum, A. D., & Dweck, C. S. (2008). Defensiveness versus remediation: Self-theories and modes of self-esteem maintenance. *Personality and Social Psychology Bulletin, 34*, 500–612.
Ott, B. (2017, Oct. 12). 3 reasons why performance development wins in the workplace. Retrieved from: https://www.gallup.com/workplace/231620/why-performance-development-wins-workplace.aspx.
Park, K. W., Arvey, R. D., & Tong, Y. K. (2011). The generalizability of leadership across activity domains and time periods. *Leadership Quarterly, 22*, 223–237.
Payne, S. C., Youngcourt, S. S., & Beaubien, J. M. (2007). A meta-analytic examination of the goal orientation nomological net. *Journal of Applied Psychology, 92*, 128–150.
Pervin, L., & John, O. P. (1999). *Handbook of personality: Theory and research* (2nd ed.). New York: Guilford.
Peterson, R. S., Smith, D. B., Martorana, P. V., & Owens, P. D. (2003). The impact of chief executive officer personality on top management team dynamics. *Journal of Applied Psychology, 88*, 795–808.
Plaks, J. E., Stroessner, S. J., Dweck, C. S., & Sherman, J. W. (2001). Person theories and attention allocation: Preferences for stereotypic versus counterstereotypic information. *Journal of Personality and Social Psychology, 80*, 876–893.
Plato, & Jowett, B. (1901). *The republic of Plato; an ideal commonwealth* (Rev. ed.). New York: The Colonial Press.
Poortvliet, P. M., & Giebels, E. (2012). Self-improvement and cooperation: How exchange relationships promote mastery-approach driven individuals' job outcomes. *European Journal of Work and Organizational Psychology, 21*, 392–425.
Poortvliet, P. M., Janssen, O., Van Yperen, N. W., & Van de Vliert, E. (2007). Achievement goals and interpersonal behavior: How mastery and performance goals shape information exchange. *Personality and Social Psychology Bulletin, 33*, 1435–1447.
Puca, R. M. (2001). Preferred difficulty and subject probability in different action phases. *Motivation and Emotion, 25*, 307–326.
Rauthmann, J. F., Gallardo-Pujol, D., Guillaume, E. M., Todd, E., Nave, C. S., Sherman, R. A., & Funder, D. C. (2014). The situational eight DIAMONDS: A taxonomy of major dimensions of situational characteristics. *Journal of Personality and Social Psychology, 107*, 677–718.
Rauthmann, J. F., Sheran, R. A., & Funder, D. C. (2015). Principles of situation research: Towards a better understanding of psychological situations. *European Journal of Personality, 29*, 262–281.
Resick, C. J., Whitman, D. S., Weingarden, S. M., & Hiller, N. J. (2009). The bright-side and the dark-side of CEO personality: Examining core self-evaluations, narcissism, transformational leadership, and strategic influence. *Journal of Applied Psychology, 94*, 1365–1381.
Riddle, D. (2016). Executive integration: Equipping transitioning leaders for success. Retrieved from https://www.ccl.org/wp-content/uploads/2015/04/ExecutiveIntegration.pdf.
Scholer, A. A., & Higgins, E. T. (2010). Regulatory focus in a demanding world. In R. H. Hoyle (Ed.). *Handbook of personality and self-regulation* (pp. 291–314). Malden, MA: Blackwell.
Shah, J., Higgins, E. T., & Friedman, R. S. (1998). Performance incentives and means: How regulatory focus influences goal attainment. *Journal of Personality and Social Psychology, 74*, 285–293.
Shih, S. S. (2009). An examination of factors related to Taiwanese adolescents' reports of avoidance strategies. *Journal of Educational Research, 102*, 377–388.
Simons, J., Dewitte, S., & Lens, W. (2004). The role of different types of instrumentality in motivation, study strategies, and performance: Know why you learn, so you'll know what you learn!. *British Journal of Educational Psychology, 74*, 343–360.
Smith, E. R., & DeCoster, J. (2000). Dual process models in social and cognitive psychology: Conceptual integration and links to underlying memory systems. *Personality and Social Psychology Review, 4*, 108–131.
Sosik, J. J., Godshalk, V. M., & Yammarino, F. J. (2004). Transformational leadership, learning goal orientation, and expectations for career success in mentor–protégé relationships: A multiple levels of analysis perspective. *Leadership Quarterly, 15*, 241–261.
Spanjol, J., Tam, L., Qualls, W. J., & Bohlmann, J. D. (2011). New product team decision making: Regulatory focus effects on number, type, and timing decisions. *Journal of Product Innovation Management, 28*, 623–640.
Spielberg, J. M., Heller, W., & Miller, G. A. (2013). Hierarchical brain networks active in approach and avoidance goal pursuit. *Frontiers in Human Neuroscience, 7*, 284.
Spielberger, C., & Vagg, P. (1995). Test anxiety: A transactional process model. In C. Spielberger, & P. Vagg (Eds.). *Test anxiety: Theory, assessment, and treatment* (pp. 3–14). Washington, DC: Taylor & Francis.
Tabernero, C., & Wood, R. E. (1999). Implicit theories versus the social construal of ability in self-regulation and performance on a complex task. *Organizational Behavior and Human Decision Processes, 78*, 104–127.
Taylor, S. E., & Gollwitzer, P. M. (1995). Effects of mindset on positive illusions. *Journal of Personality and Social Psychology, 69*, 213–226.
Taylor-Bianco, A., & Schermerhorn, J., Jr. (2006). Self-regulation, strategic leadership and paradox in organizational change. *Journal of Organizational Change Management, 19*, 457–470.
Tziner, A., Fisher, M., Senior, T., & Weisberg, J. (2007). Effects of trainee characteristics on training effectiveness. *International Journal of Selection and Assessment, 15*, 167–174.
Van Yperen, N. W., Blaga, M., & Postmes, T. (2014). A meta-analysis of self-reported achievement goals and nonself-report performance across three achievement domains (work, sports, and education). *PLoS One, 9*, 1–16.
Van Yperen, N. W., Hamstra, M. R. W., & Van der Klauw, M. (2011). To win, or not to lose, at any cost: The impact of achievement goals on cheating. *British Journal of Management, 22*, S5–S15.
Vandewalle, D., Nerstad, C. G. L., & Dysvik, A. (2019). Goal orientation: A review of the miles traveled and the miles to go. *Annual Review of Organizational Psychology and Organizational Behavior, 6*, 115–144.
Waldman, D. A., & Yammarino, F. J. (1999). CEO charismatic leadership: Levels-of-management and levels-of analysis effects. *Academy of Management Review, 24*, 266–285.
Wallace, J. C., Little, L. M., Hill, A. D., & Ridge, J. W. (2010). CEO regulatory foci, environmental dynamism, and small firm performance. *Journal of Small Business Management, 48*, 580–604.
Wilson, T. (2004). *Strangers to ourselves: Discovering the adaptive unconscious.* Cambridge: Belknap Press.
Yeager, D. S., Hanselman, P., Walton, G. M., Murray, J. S., Crosnoe, R., Muller, C., ... Dweck, C. S. (2019). A national experiment reveals where a growth mindset improves achievement. *Nature*. https://doi.org/10.1038/s41586-019-1466-y Available from.
Zaccaro, S. J., Green, J. P., Dubrow, S., & Kolze, M. (2018). Leader individual differences, situational parameters, and leadership outcomes: A comprehensive review and integration. *The Leadership Quarterly, 29*, 2–43.