IMPACT OF CONSTRUAL LEVEL ON EMPLOYEE VOICE

By

ANTHONY SANOR

A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL OF BUSINESS AT THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF BUSINESS ADMINISTRATION

UNIVERSITY OF FLORIDA

2017
To my parents, Dan and Lena, my wife, Cindy, and our children, Mary, Anna, and Daniel, who are my sources of strength and encouragement to pursue my dreams.
ACKNOWLEDGMENTS

I would like to thank my committee chair Dr. Joyce Bono and co-chair Dr. Amir Erez for their consistent feedback and valuable coaching. I would also like to thank Elisabeth Gilbert for her guidance on the surveys and encouragement throughout this last year. Special thanks should also be given to Dr. Trevor Foulk who provided valuable instruction and thoughtful feedback during the analytical processes.
Abstract

Employee voice is a powerful concept that provides constructive challenge and drives innovation throughout an organization. We utilized construal level theory to hypothesize that greater levels of psychological distance may influence employee voice behavior. Data was collected from a two-week experience sampling methodology, with daily manipulation, at a Global 500 corporation undergoing significant strategic change. We aimed to extend the previous laboratory-based construal level theory research in a field setting with implications on voice. While results from our analysis did not show support for our hypotheses that voice safety, voice efficacy, and power would mediate a relationship between construal level and employee voice behavior, nor a direct relationship between construal level and idea feasibility or novelty, we did find a direct relationship between construal level and idea desirability. Those in the high construal manipulation voiced more desirable ideas illustrating the importance of construal level on the characteristics of employee voice.
Introduction

The ability for companies to remain competitive in a dynamic global marketplace requires continual adaptation and innovation to create new products and services that meet customer needs. The popular press has identified how innovative companies such as GE, Apple, and Google have been able to separate themselves from their competition due to their ability to continually innovate and improve their products and processes (McGregor, 2007; Wagner, Taylor, Zablit, Foo, 2014). These model corporations are increasingly relying on their employees as sources of innovation and continuous improvement (Bamford & Forrester, 2003; Crant, 2000; Detert & Burris, 2007; Senge, 1990). This approach encourages individuals at all levels in an organization to participate and contribute to process innovations by challenging the status quo.

One of the most relevant frameworks associated with grassroots level innovation is the concept of employee voice. Employee voice behavior is concerned with proactive improvement ideas that drive organizational changes (Tangirala & Ramanujam, 2003). Research has shown that voice leads to positive individual and group level outcomes, such as increased engagement, positive workplace attitudes, higher workplace performance ratings, and increased innovation (Frese, Teng, & Wijnen, 1999; LePine & Van Dyne, 1998; Ng & Feldman, 2012). Despite these positive benefits, many employees indicate that they do not feel empowered and supported to bring forth their ideas. Voice literature notes employees make a conscience decision to determine the potential risks and likelihood of implementation prior to communicating workplace improvement opportunities. Many employees perceive the risks to be too high and likelihood of implementation to be too low, which inhibits this source of innovation. For example, Ryan and Oestreich (1991) note that over 70% of surveyed employees were hesitant to voice improvement opportunities due to a belief that their ideas would not be examined and implemented (as cited in
Morrison & Milliken, 2000, p. 706). Additionally, Moskal (1991) highlights only 29% of surveyed working-level supervisors felt confident and encouraged to express workplace concerns. Previous research in the field of employee voice has explored a variety of contextual factors such as organizational characteristics and leadership approaches as well as individual factors including personality, demographics, and attitudes that influence the decision for when and when not to speak up about improvement ideas or workplace concerns (Morrison, 2011). Key findings of this research include positive associations of voice with transformational leadership, managerial openness, and higher levels of conscientiousness and extraversion in employee personality traits (Morrison, 2011). Recently there has been a shift to explore the psychological processes influencing voice behavior (Detert & Burris, 2007; Liang, Farh, & Farh, 2012). This present study aims to expand this shift by incorporating construal level theory (CLT) and its potential relationship with the psychological mechanisms and characteristics of employee voice.

Construal level theory states individuals mentally represent information more abstractly for distant future events and more concretely for near future events (Trope & Liberman, 2000; 2003). This theory has demonstrated important implications for how individuals make evaluations, predictions, and their propensity to take action (Trope, Liberman, & Wakslak, 2007). Existing construal level research explores how priming concrete versus abstract thinking impacts several decision making elements such as predictions regarding one’s future performance (Nussbaum, Liberman, Trope, 2006), prioritization of primary versus secondary features of objects and events (Trope et al., 2007), the preference for desirability versus feasibility attributes (Liberman & Trope, 1998; Todorov, Goren, Trope, 2007), as well as individuals levels of creativity (Reyt & Wiesenfeld, 2015; Forster, Friedman, Liberman, 2004).
We predict these elements will increase the quantity and effect the characteristics of employee voice.

To test our predictions, we will conduct a field study within several locations of a Global 500 corporation. The benefit of this research methodology is that previous CLT research has focused on using laboratory-based research methods, where we aim to extend the generalizability of the theory through our field-based exploration. An experience sampling methodology (ESM) with a daily experimental manipulation will be employed examining the effects of level of construal on employee improvement idea generation and expression. We test the prediction that construing an improvement opportunity at a more abstract level, will lead to greater levels of voice safety, efficacy, and power resulting in a greater quantity of ideas than when construed at a more concrete level. Furthermore, we will examine whether an improvement opportunity framed at a high construal level will lead to ideas that are more desirable and novel and whether a low construal level will lead to more feasible ideas.

This research will advance the bodies of literature within both employee voice and CLT as well as provide practitioner guidance in methods to improve innovation and problem solving through employee voice. Specifically, for CLT, our study will advance its generalizability and predictive abilities within large dynamic global organizations. We will contribute to the voice literature by understanding how framing improvement opportunities (either more abstractly or concretely) can affect the quantity and characteristics of the voice suggestion. Our research will offer insights for how organizations can frame improvement opportunities in a broad or narrow perspective in order to increase the amount and content of employee voice.

Theory and Hypotheses

Employee Voice Literature Review
The concept of employee voice originates from the perception that there is a gap between the current and ideal state within the organization. Early scholars such as Hirschman (1970) and Rusbult, Farrell, Rogers & Mainous (1988) explored how employees responded to this imbalance in the workplace by noting four different ways employees could react: voice, exit, neglect, and loyalty. Morrison (2011) notes early voice literature focused on a variety of ways employees attempted to make current work conditions better, such as notifying managers of issues, working harder at their job, and seeking advice from co-workers. This broad, more self-focused view of voice has evolved to include a narrower, other-focused view where employees voice to better the organization over their own self-interest (Morrison, 2011). Additionally, the target of employee voice has expanded to not only include a direct supervisor (Saunders, Sheppard, Knight, & Roth, 1992) but also co-workers (Morrison, Wheeler-Smith, & Kadmar, 2011), skip level managers (Detert & Trevino, 2010), and formal centralized and decentralized suggestion systems (Leach, Stride, & Wood, 2006; Klaas, Olson-Buchanan, & Ward, 2011).

Liang et al. (2012) have divided the other-focused view of prosocial voice behavior into prohibitive and promotive voice. Prohibitive voice is associated with expressing concern for existing operations that may be damaging to the organization as well as new activities that have the potential to deteriorate effective work activities. Its goal is to eliminate wasteful and dangerous practices that may harm the status quo. Conversely, promotive voice, which will be the focus for this study, prioritizes the achievement of an ideal state through voicing innovative ideas and solutions to bring about beneficial organizational change (Liang et al., 2012). Its goal is to improve the status quo not solely through mitigating risk but also through pushing the organization to achieve optimal performance.
Building upon the promotive aspect, we will rely on the following definition by Van Dyne and LePine (1998) which states, voice is a “non-required behavior that emphasizes expression of constructive challenge with an intent to improve rather than merely criticize” (p109). The first key point of this definition is that voice is discretionary behavior taken upon by the employee. Although these actions are not part of the formal job function, there is tremendous benefit in initiating change. Scholars also point out that employee voice is a proactive not passive behavior that is intentional and requires effort (Van Dyne, Ang, & Botero, 2003). Along with the constructively challenging aspect, risk is associated with disturbing the status quo and existing processes. Individuals who may have designed the existing process being challenged may take offense and resist the proposed adaptation. Therefore, the voicer must be careful when balancing the constructive and challenging aspects so that the voice is perceived from an intent to improve versus simply highlighting flaws.

**Voice calculus.** When an employee has a process improvement idea or workplace concern, they must make a conscious decision whether to speak up or hold the information within. Literature has referred to this as voice calculus, where employees consider the costs and benefits of speaking up (Ashford, Sutcliffe, & Christianson, 2009; Morrison, 2011). Two themes associated with voice costs in literature are existence and relatedness losses (Detert & Burris, 2007). Existence losses are associated with demotion, being passed over for promotion, or loss of one’s job (Milliken, Morrison, & Hewlin, 2003). These costs are tangible and can have life altering impacts if the voicer miscalculates the risk. Relatedness losses are associated with damaging an individual’s social standing and image within the organization (Detert & Burris, 2007; Milliken et al., 2003). Fears of being shamed, labeled a trouble maker, or being excluded from the group can cause a voicer to remain silent. These potential negative perceptions could
lead to retaliation and a hostile work environment. Such risks may be heightened if the recipient of the voice is a higher-ranking member of the organization (Edmondson, 1999; Liu, Zhu, & Yang, 2010). For example, the higher-ranking individuals may have access to valuable resources and influence on desirable outcomes which could be withheld if constructive challenge is viewed unfavorably. Dutton and Ashford (1993) state that the costs associated with voice can be even further escalated due to the irreversibility of voice, particularly when documented in formal suggestion systems and reviewed by other members of the organization. Once the conscious decision is made to engage in voice behavior, the individual must be prepared to respond to the outcomes.

The other variable in the voice calculus is the perceived efficacy and probability of implementation of the change initiative. Research by Tangirala and Ramanujam (2008) demonstrated a U-shaped relational pattern with high and low levels of personal control within job functions tending to increase voice activity. Personal control, from their perspective consists of levels of autonomy and impact. Autonomy is associated with having choice in one’s job functions. Impact is associated with the result of their actions achieving key organizational goals. Having high levels of autonomy and impact provide the basis of confidence and efficacy to engage in promotive voice behavior whereas low levels will motivate employees to improve their current state. Additionally, in their work on issue selling, where lower-level employees bring issues to top management’s attention, Dutton, Ashford, O’Neil, and Lawrence (2001) discovered that issues were more likely to be perceived as successful when they were presented using facts and figures to improve the legitimacy of the claim. Furthermore, employees are more successful at selling issues by involving others at their own level and from differing parts of the organization to broaden the impact of the upward communication. Moreover, employees are
likely to be effective when breaking up a larger more impactful issue into incremental changes allowing for “series of small wins” versus complete organizational redesign (Dutton et al., 2001, p.722). When employees include these elements into their voicing efforts, they are more likely to have higher perceptions of voice efficacy by gaining senior managers and other key decision maker’s attention (Ashford, Rothbard, Piderit, & Dutton, 1998). From this voice calculus one can see that when perceived ability to impact the current situation is high and the risks are low, an organization should have a much higher level of voice activity.

**Factors associated with voicing.** Contextual, individual, and psychological factors can play significant roles in influencing employees when determining whether to speak up. Scholars have noted that variables such as organizational processes, psychological safety, and leadership style can foster an environment conducive for voice (Milliken et al., 2003; Morrison, 2011). Similarly, voicer personality traits, organizational identification, tenure, performance, and employment status in the organization have shown to affect employee voice behavior (Morrison, 2011; Stamper & Van Dyne, 2001). Employees consider these factors to “read the wind” for how and when it is safe and applicable to voice their insights (Dutton, Ashford, O’Neill, Hayes, & Wierba, 1997). Within a specific organizational context, individuals are assessing the previously discussed voice calculus process of whether there are low costs to speaking up and high probability of successfully communicating their ideas.

**Organizational mechanisms and structure.** One factor playing a significant role in supporting voice behavior are processes and policies that are designed for formal upward communications. Common features of formal voice are established methods to record and capture the improvement ideas along with a specific structured evaluation process to determine its merits to make decisions on subsequent steps and implementation (Klaas et al., 2012). Leach
et al. (2006) found that the work-based systems (which rely on small work teams) were the best at overall perceived success of improvement ideas having a lasting impact on the organization. Furthermore, their research found decentralized suggestion systems (separate systems for organizations within the firm) had the highest suggestion and implementation rates (Leach et al., 2006). By having increased implementation rates, employees will regard their ideas are valued and instrumental at improving organizational capabilities.

**Psychological safety.** Morrison et al. (2011) highlights that one of the key elements within workgroup voicing is a high level of psychological safety. Edmondson (1999) notes that psychological safety originates from increased respect and trust which creates a “sense of confidence that the team will not embarrass, reject, or punish someone for speaking up” (p. 354). Psychological safety allows an individual to express their ideas without fear of retribution and seek improvements outside of the consensus or norms. Opposing ideas are encouraged to test the validity of current assumptions and underlying principles. If a mistake is made, the focus is on where the mishap occurred in the process more so than who made the error (Garvin, Edmondson, & Gino, 2008). This creates a sense of trust and strong cohesiveness within the group to continually improve and innovate. Having a high level of psychological safety reduces the risk of relational and existence losses from the voice calculus thus removing one of the major hurdles in the decision process.

**Leadership.** Managers who foster a climate favorable to voice exhibit approachability, openness, and willingness to listen (Morrison, 2011). These managers also demonstrate their willingness to take action to support the implementation of the process improvements. This reinforces the voicers perception that they have a level of instrumentality in that their ideas are more likely to be utilized. Leaders who effectively demonstrate these attributes have been
labeled efficient voice managers (Saunders et al., 1992). Some examples of specific behaviors voice managers must display are “a) make consistent, accurate, and correctable decisions; b) encourage participation by employees; c) is fair and unbiased in reaching decisions; d) is easy to approach; e) manages employee voice in a timely manner; and f) is not retributive to employees who voice” (Saunders et al., 1992, p. 243). Furthermore, research on transformational leadership has shown that when a leader emphasizes collective identity and willingness to sacrifice for the team, the level of trust is enhanced (Shamir, Zakay, Breinin, and Popper, 1998). Liu et al.’s (2010) investigation of the relationship between transformational leadership style and employee voice behavior found that transformational leadership has a partially mediated relationship with voice through social and personal identification. Personal identification occurs when an employee receives intellectual stimulation, motivation, and encouragement from the transformational leader and views them as a role model (Shamir et al., 1998). Social identification occurs when the employee views themselves as a member of the organization and their self-concept becomes tied to the organization's identity. Here, transformational leaders encourage higher level needs and group goals tying the employee closer to the organization as a whole (Shamir et al., 1998). These variables make employees more likely to speak up and out to not only their managers but also their peers (Liu et al., 2010).

**Voicer personality traits.** Individuals personality characteristics have been shown to play an important role in employee voice. LePine & Van Dyne’s (2001) research found voice behavior to be higher in individuals who are more conscientious and extraverted, and less neurotic and agreeable. They reason that conscientious individuals tend to value hard work, achievement, and persistence and therefore see it worthwhile to exert the effort to speak up about issues. Similarly, extraverts are outgoing, sociable, and confident in their speech with others.
making them more willing to voice ideas challenging the status quo. Alternatively, agreeableness and neuroticism were negatively associated with voicing behavior as more agreeable individuals tend to avoid conflict and act as sources of stability for the status quo. More neurotic individuals tend to be less co-operative and view change negatively.

**Organizational identification.** Individuals who have high levels of identification with an organization derive part of their identity by being a member of the organization (Mael & Ashforth, 1992). These individuals have a vested interest and are psychologically attached to the firm. Conversely, research has shown that employees who are psychologically detached are less likely to engage in voice activity (Burris, Detert, & Chiaburu, 2008). Furthermore, Tangirala and Ramanujam (2008) empirically demonstrated that employees with high levels of personal control and organizational identification engaged in more voice behavior than those who have low personal control and high levels of organizational identification. Individuals with high organizational identification are able to participate and share in the successes derived through the voice behavior. Similarly, these employees feel responsible if they failed to voice and success was not achieved for a course of action.

**Tenure, performance, and employment status.** Research has also highlighted the impact of tenure and performance on the likelihood of employee voice. New employees and lower performers are more hesitant to provide constructive challenge suggestions than those who have been employed at the company longer and have higher levels of performance (Stamper & Van Dyne, 2001). Individuals with less tenure and lower performance may be perceived as having less credibility and confidence when challenging the status quo (Milliken et al., 2003). Conversely, tenured employees and high performers can rely on past achievements and a greater scope of context when voicing improvement suggestions. Additionally, Stamper and Van Dyne
(2001) investigated the quantity of voice suggestions between full- and part-time employees and found that part-time employees who desired to gain full-time status were less likely to voice due to higher perceived risks that they would be viewed as disruptive.

Overall, these factors offer insight into when individuals tend to speak up and remain silent. While this research is beneficial in determining the drivers of employee voice, it can be enhanced through understanding how abstract versus concrete thinking can affect perceptions of risk, efficacy, predicted performance, and content of the idea. In the following section, we will explore how construal level theory is a suitable complement to the voice calculus process and its potential effect on employee voice.

**Construal Level Theory Literature Review**

In CLT, individuals mentally represent the same information differently for distant or near future events (Liberman & Trope, 1998; Trope & Liberman, 2000). Events occurring in the distant future are construed with higher level representations containing more abstract, generalized information while events in the near future are construed with more concrete, incidental aspects (Trope & Liberman, 1998). Smith and Trope (2006) note that abstract versus concrete processing is the extent that an individual utilizes information over personal knowledge to make evaluations. To highlight these differences in information processing, the scholars provide the example of a Navon (1977) letter in the large shape of a “S” composed of small “T’s”, and that although the content does not change within, people can construe the information to focus on either the global (“S”) or local (“T”) features. Additionally, high-level construals of actions comprise superordinate, primary goals whereas low-levels constitute subordinate, more detail-oriented objectives (Trope & Liberman, 2003; Vallacher & Wegner, 1987). High-level construals are more focused on “why” a course of action is to be taken in contrast to low-level
construals concentrating on “how” the action is to be carried out. This phenomenon is believed to have evolved over time as a judgment making heuristic (Liberman, Sagristano, & Trope, 2002; Forster et al., 2004). Its benefit lies in improving distant predictions by focusing on central invariant aspects of an object or course of action. Accounting for all idiosyncrasies of a distant object may be difficult if not impossible and may add little to the effectiveness of the forecast.

Trope and Liberman (2000) combined previous research by Lewin (1951) on psychological distance to describe its various dimensions of temporal, social, spatial, and probability (otherwise referred to as hypothetical) distance and their relation to CLT (Fiedler, Jung, Wänke, & Alexopoulos, 2012). Though related, Trope and Liberman (2010) underscore that psychological distance and construal level are not the same construct. Psychological distance deals with when (temporal), where (spatial), to whom (social), and whether (probability) an event occurs and construal levels refer to what (mental representation) will happen. Research on psychological distance and CLT has shown that construals have a distinct influence on judgments and decisions (Fujita, Henderson, Eng, Trope, & Liberman, 2006). For example, Liberman et al. (2002) demonstrated that as temporal distance of a future event increases, individuals tend to group information related to the event into fewer, more comprehensive categories. Additionally, research on social distance has found that individual’s actions who are similar to others are evaluated on subordinate, low-level construals of information in comparison to those who are dissimilar from others (Liviatan, Trope, & Liberman, 2008). Furthermore, research on probability and construal level found that when events were less likely to occur, individuals construed the event at a higher, more abstract level (Wakslak, Trope, Liberman, Alony, 2006). Similarly, spatial distance research has shown when physical distance of an event increases, individuals construe the incident at abstract, high levels associating it with the “ends”
of the activity performed rather than by the “means” of which an activity is to be completed (Fujita et al., 2006).

**Evaluations and predictions.** Some of the most beneficial findings from construal research are its relationship to evaluations and predictions. Scholars have explored how current and future behaviors and outcomes can vary when an individual uses an abstract or concrete frame of mind. For example, Gilovich, Kerr, & Medvec (1993) found that respondents predicted performing better on tasks when the action was to occur in the more distant as opposed to near future. Nussbaum et al., (2006) extended this research by exploring the aspects of information individuals use to form their confidence in their ability to predict future performance. They reason that when a person relies more on high-level construals (such as theory-based, global aspects of information) they will predict future performance with greater confidence. This is due to high-level construals providing more certainty in the outcome. Nussbaum et al. (2006) illustrate this reasoning by discussing a student thinking about an upcoming math test. When the test is to occur in the distant future, the student can rely on invariant, high-level aspects of performance for the exam such as their overall mathematical skill versus lower-level incidental features (carrying greater uncertainty on performance) such as the type of test questions and their ability to concentrate that exam day.

**Temporal distance and predicated performance.** Nussbaum et al. (2006) conducted a series of studies to explore the proposed relationship between construal level and individual’s confidence in prediction for future performance. Respondents were asked to indicate their level of confidence for participating in a trivia quiz for the near (15 minutes) or distant (1 month) future. The prediction of their performance on the test was based off two factors: the perceived ease or difficulty of test format (low-level construal) as well as the content of the quiz (high-level
construal). The results confirmed the authors reasoning in that if the test was to be taken in the distant future, the content played a greater role in predicted testing efficacy, whereas in the near future the test format was more impactful in their performance expectations. These findings are substantial in that individuals prioritize varying aspects of the same information; low-level contextual information being more impactful in the near future predicted performance, and high-level central information having greater effect in the distant future.

**Spatial distance and evaluations.** Fujita et al. (2006) investigated the influence of spatial distance on how individuals interpret and describe an event. Participants envisioned helping a friend move within the same city (near spatial) or across the country (distant spatial). Respondents then completed a test of choosing preference for either low- or high-level action descriptions from Vallacher and Wegner’s (1989) Behavioral Identification Form (BIF). For example, the activity of “locking a door” could be described at a low level with “placing key in lock” or a high level with “securing the home” (Fujita et al., 2006). Participants who were primed to envision moving in the spatially distant manipulation preferred the high-level descriptions over those in the spatially near condition who favored low-level aspects. This study demonstrated the impact of near and distant spatial orientation perceptions when making evaluations.

**Desirability and feasibility aspects.** Additionally, CLT research has also explored the influence on decision criteria associated with desirability versus feasibility among alternative options. Desirability features are related to the “why” aspect of an option while feasibility is concerned with “how” an option will be carried out. Liberman and Trope (1998) proposed that individuals will focus on desirability aspects in the distant future and feasibility elements in the near future. To test this relationship, participants were presented with the choice of attending an
interesting lecture (desirability) at an inconvenient time and location (feasibility) versus an uninteresting lecture at a convenient time and location. The respondents preferred the interesting yet inconvenient lecture in the distant future and the uninteresting, convenient option in the near future. This demonstrated that as temporal distance increases one’s mind shifts to the central aspects of the alternative and mitigates the influence of contextual elements that may help or hinder achieving that goal.

Furthermore, Todorov et al. (2007) investigated the relationship between the probability of an event occurring and its impact on individual’s preferences. It was suggested that highly improbable outcomes are far removed from individual’s direct experiences and should therefore foster high-level construals. One study conducted by the authors offered subjects a choice between a highly desirable with low feasibility award, or vice versa, in either a high or low probable manipulation. Individuals in the low probability condition favored an award that had high desirability yet low feasibility. Conversely, high probability manipulated individuals favored the high feasibility, low desirability option. These results indicate that high probability triggered a low-level construal which prioritized the feasibility features of the award. Such concerns were diminished when probability was low and the individual’s construal shifted to the primary aspects of the desirability of the award.

**Pros and cons.** Additionally, Eyal, Liberman, and Trope (2004) examined the relationship between level of construal and the ability for participants to generate higher degrees of pro versus con considerations for an action. The authors hypothesized that pro positions (in favor of the action) would be more prominent in the distant future in contrast to con arguments (against the action) being numerous in the near future. The authors reasoned that pros are associated with a higher level construals as they are superordinate to the cons, meaning a
decision would not be considered if pros were nonexistent. To test this hypothesis, students were asked to generate pro and con arguments for taking a course of action in an imaginary social setting in the beginning (near future) or end (distant future) of the semester. Results showed that the number of pros were greater in the distant scenario. They additionally found that the higher level of pro arguments increased their positive affect and likelihood to engage in the behavior. This research highlights the influence construal level has on the salience of pros versus cons when making evaluations.

**Self-enhancing versus self-evaluative feedback.** Moreover, a study by Freitas, Salovey, and Liberman (2001) investigated the influence of psychological distance on the likelihood that individuals would seek either self-enhancing or self-evaluative feedback. It was proposed that individuals would prefer receiving self-evaluative feedback in the temporally distant condition as it would allow for a more accurate assessment to improve their current and future performance. Conversely, those in the near temporal condition would prefer self enhancement as feasibility concerns would be more prevalent in that there is a risk they could receive negative feedback lowering their self-esteem. The authors laboratory-based experiments confirmed that respondents in the temporally distant condition sought evaluative feedback both directly from an assessor as well as preferred not to be compared against low performing peers. Those in the near distant manipulation preferred comparison with low performing peers and sought self enhancement feedback to avoid the possibility of receiving negative evaluations.

This body of research has implications for a voicer’s assessment of perceived risk and efficacy prior to speaking up. When the opportunity for improvement has a higher level of psychological distance resulting in greater abstract thinking, employees will envision the scenario from a more holistic, decontextualized perspective. It follows that this viewpoint will
improve efficacy and risk reduction. One reason being that an individual will tend to enumerate a larger quantity of pro attributes versus cons for why or why not to speak up. The imbalance of pros over cons will help to shift the calculus to a net benefit in favor of speaking up. Additionally, the focus of desirability over feasibility aspects will allow the individual to focus on the nature of why the improvement opportunity has merit by prioritizing a desirable end state rather than contextual feasibility issues that may hinder the possibility of acting on the voice idea. Furthermore, when evaluating potential performance of voice behavior employees thinking more abstractly will prioritize more invariant aspects of their skills and abilities versus peripheral details thus improving their perception of favorable performance. Given this rationale, the following, as shown in Figure 1, is proposed.

*Hypothesis 1: Individuals primed with a high construal level will perceive higher safety resulting in greater quantities of ideas.*

*Hypothesis 2: Individuals primed with a high construal level will perceive higher efficacy resulting in greater quantities of ideas.*

*Hypothesis 3: Construal level is positively associated with desirability focused voiced behavior.*

*Hypothesis 4: Construal level is negatively associated with feasibility focused voiced behavior.*
Figure 1. Construal level and employee voice hypothesized relationships.

**Creativity.** Similar to research on CLT and its effects on predictions and evaluations, scholars have also explored the relationship between abstract thinking and its effect on creativity. For example, Ward (2004) demonstrated the benefit of an abstract frame of mind on creative idea generation. He offers three techniques to shift one’s mentality to foster more abstract thinking. These include the use of conceptual combination, analogy, and problem formation (Ward, 2004). Combination involves the merging of two different concepts to create a novel interpretation. The merger of opposing concepts has been shown to spur the creative development of new products and services. For example, the opposing ideas within the phrase of “affordable luxury” have been used to support the generation of offerings such as Starbucks beverages and entry level luxury cars (Ward, 2004). Analogy has been used in this process to not necessarily spur the creation of a new idea but more so to communicate the concept of a unique opportunity. Ward (2004) provides the example of how analogy was utilized to demonstrate the structure of the atom based on the workings of our solar system. The reflection on the solar systems mechanisms did not spur insight into the atom design, however it provided a mental representation so that others
could more easily understand the atom structure theory. Finally, problem formation is related to how concretely or abstractly the problem is framed to generate solutions. It is noted that concrete framing leads to less novel and more familiar solutions whereas an abstract mindset leads to more unique and novel results. Ward (2004) offers an example of framing a problem associated with how to improve the braking performance of an automobile at a lower level by stating the issue as “develop a new disc brake system” and higher level by noting “develop a new device for transforming the kinetic energy of a moving vehicle” (p. 174). Solutions to the former problem tend to be incremental improvements on existing mechanical systems. Insights to the latter issues are more creative as they are less constrained by current or past braking systems.

Scholars have leveraged this research on creativity to explore its connection with CLT. Forster et al. (2004) investigated the relationship between construal level and its ability to improve or hinder insight and creative problem solving activities. The authors proposed that individuals would be able to solve a greater quantity of insight problems when primed with a high construal (over low construal) mindset. The results from both verbal and visual experiments confirmed this relationship. Furthermore, their research from an additional study demonstrated the level of creativity (as judged by an expert panel) was higher for abstract problem solving activities when primed to think in a psychologically distant time perspective. Overall, this research demonstrated that increased temporal distance improves the quantity of insight problems in activities that require a greater level of abstract thought.

Additionally, Reyt and Wiesenfeld (2015) have leveraged research on creativity to explore the ability of high-level construals to foster abstract thinking and its benefits on exploratory learning. Exploratory learning occurs when individual’s problem-solve by experimenting and generating various novel hypothetical solutions, as opposed to exploitative
learning which relies on incremental improvements on past experiences and knowledge (Reyt & Wiesenfeld, 2015; March, 1991). Reyt and Wiesenfeld (2015) reason that exploratory learning requires an element of creativity that is enhanced through abstract thinking which allows an individual to transcend their personal experiences and explore novel alternatives. Their research found that when individuals were primed with a high construal manipulation they reported greater levels of exploratory learning intentions versus those at a low-level construal. A key takeaway from their research is that the way a problem is communicated and framed can influence how others construe individual’s thoughts to mentally represent the issue when searching for solutions to the issue. For example, if the problem is framed as a high-level concept occurring in the distant future, team members will be more likely to construe their mental thoughts to long term goals and search for new unfamiliar information in an exploratory way. Conversely, framing the issue at a lower construal may induce behavior and information search that is more concrete with familiar solutions that are more exploitative in nature.

This creativity research indicates that abstraction derived through greater psychological distance can have a beneficial effect on creativity and insight problem solving. We propose that construal level will have a similar creative impact on the idea generation within the voice process. Specifically, individuals at a high-level construal will provide more new and unique solutions to improve their organization. Therefore, the following, as shown in Figure 1 is proposed,

_Hypothesis 5: Construal level is positively associated with idea novelty._

**Power.** Much like research linking CLT and creativity, scholars have also explored a relationship between power and abstract thinking. Research on power has noted that social power can vary an individual’s dependency, with those in low power positions feeling reliant on peers
and employees in high power positions feeling independent and distinct from others (Emerson, 1962; Smith & Trope, 2006). Smith and Trope (2006) utilize social identity theory of leadership, the perception of oneness with a group that includes social categorizations of leaders and followers (Ashforth & Mael, 1989; Hogg, 2001), to highlight that those in leadership positions become “psychologically separate” from low power individuals (p. 579). This forms the rationale for their hypothesis that people with high power positions will think more abstractly, focusing on the “gist” of information and the bigger picture (Liberman et al., 2002; Smith & Trope, 2006).

Over a series of six experiments, Smith and Trope (2006) primed participants with either a high or low sense of power to examine its link to abstract thinking. Respondents participated in several categorization tests noting whether an item belonged to a group as well as using the BIF (Vallacher & Wegner, 1987) and selecting the description that best represented an action. Their results showed that those in the high-power condition formed fewer broader groups and chose more abstract action descriptions in the BIF and those in the low-power-primed manipulation provided more narrow groups. In addition, Smith and Trope (2006) conducted visual experiments using a computer variation of the Gestalt Completion Task (Eckstrom, French, Harman, & Derman, 1976) where participants are shown a fragmented picture and try to identify the whole image. Their results revealed that participants in the high-power manipulation provided guesses of the whole image that were more plausible and at a higher superordinate level than those in the low-power condition who responded on a more subordinate level. Overall, this research demonstrates that high power leads individuals to think more abstractly, focusing on the gist and structure of the information.
Building upon this research, Smith, Wigboldus, and Dijksterhuis (2008) investigated whether the previous stated relationship was bidirectional. The authors reason that abstract thought has a greater flexibility and freedom as well as an influence on internal locus of control. A series of laboratory experiments demonstrated that thinking more abstractly lead to a higher sense of power, control, and more interest in exercising power. These findings suggest that those is low power positions can be made to feel more powerful through abstract thought.

Scholars in employee voice literature have explored the impact of power within the voice calculus process (Edmondson, 2003; Detert & Burris, 2007). Greater power differentials between the voicer and the recipient of the voice can lessen the amount of improvement suggestions being communicated. Organizations effective in promoting voice behavior are able to diminish the perceptions of power and status differences in order to reduce voicing risk. The methods to achieve this power minimization are through decreasing the perceived power of senior members in the group or increasing the power of the voicers. Thinking more abstractly can act as a means to increase the power of the voicer. Individuals in a high construal condition should have a greater sense of power which would influence their voice behavior, therefore the following, as shown in Figure 1, is proposed,

**Hypothesis 6**: Construal level is positively associated with voice through enhanced sense of power.

**Method**

**Background and Setting**

This research was conducted at several manufacturing and corporate headquarter locations of a multi-national corporation. In order to protect the identity of the actual organization, the company name and locations have been altered. Apex Corporation is currently
undergoing a significant North American reorganization initiative (Unified Apex), materialized through the combination of several functional-based headquarters throughout North America into a new, single-based location in the United States. Senior management is using the opportunity to reaffirm foundational principles and improve organizational collaboration. This strategy is resulting in restructuring throughout the corporation as employees are physically relocating to the new location in Chattanooga, Tennessee over a three-year time period. This offered a unique opportunity to study CLT and voice in a natural setting. Specifically, it allowed for the examination of a hypothetical and non-hypothetical evaluation of a temporally and spatially distant event in a real world setting for those employees who are directly and indirectly affected by the move.

Participants

Apex Corp. employees received communications sent to their work email address requesting their voluntary support in this research project. Due to the study design requiring regular internet access, participants were limited to administrative functions, thus excluding manufacturing team members. Of the administrative functions, 6 Vice Presidents were contacted (based off existing relationships) seeking their support and approval to approach team members for participation in our study. Following these meetings, email lists were provided with 590 employees being invited to participate in the online surveys. Of those invited, 180 employees provided consent, 167 participants completed the background survey, and a total of 152 were active participants for the two-week study completing at least one of the Thursdays voice suggestion activity. For the first week (those utilized in this analysis) 113 participants were active providing a Thursday voice response. Participants were told only a select team of company employees would receive non-identifiable improvement responses and there were no
consequences for not participating. Participant’s non-identifiable suggestions were reviewed for quantity and content, with the top 10 contributors being offered the opportunity to have their ideas informally presented to management. Respondents who completed the surveys for the duration of the 2-week time period received a $10 gift card for compensation.

Several categories of employees, ranging from entry level team members to senior executives located in various locations throughout the United States, participated in this research. Each of these locations are affected differently by the new headquarter initiative.

**Operations headquarters.** Personnel provide centralized support for the manufacturing facilities in several key areas, including purchasing, production control and engineering, quality control, health and safety, and administration. These employees are currently located in Kansas and are directly affected by the reorganization initiative, requiring them to relocate to the new headquarter location. This sample consisted of those who plan to relocate with Apex, as well as those who do not plan to move and will find employment elsewhere following the final placement.

**Sales headquarters.** These personnel offer centralized support for sales, marketing, distribution, financing, and human resources. These employees are currently located throughout North America with a portion of team members currently stationed in Seattle. This category of personnel is directly affected by the reorganization initiative, requiring them to relocate to Tennessee. These respondents included those who will and will not relocate with Apex.

**Distribution centers.** These employees provide finished goods distribution throughout North America. Employees in this sample are not directly affected by the reorganization initiative and will remain in their current location.
After-market parts and accessories distribution center. These employees provide service parts distribution to retail sales locations across North America. Employees in this sample are not directly affected by the new strategy and will remain in their current Kansas location.

Temporary transition headquarters. The company has leased a temporary building in Chattanooga while construction is being completed on the new headquarters facility. This segment of personnel has moved to Tennessee; however they have not been incorporated into the new overall organization structure and new headquarters campus.

Procedure

The new company headquarters initiative offered a natural field experiment setting to utilize an experience sampling methodology (ESM) with a daily experimental manipulation testing the effects of level of construal on employee improvement idea generation and expression. Data was collected over two weeks (Monday through Thursday, 8 days total) from employees at several of Apex Corp.’s manufacturing and corporate headquarters locations. Fridays were not included in the study days as several locations utilize an alternative work schedule which allowed a large section of employees to have alternate Fridays off work. Employees were recruited through email requesting their voluntary assistance for the study and followed a link to the UF Qualtrics survey website to learn more about the study and provide consent. Prior to the daily surveys, participants completed a one-time online background survey (see Appendix A) answering questions about demographics and job characteristics to control for several variables that have been empirically demonstrated to influence the amount of voice in organizational settings.
During the first day of the ESM with daily experimental manipulation (Monday, Day 1) respondents were randomly assigned into a high- or low-construal manipulation group. On the second Monday (Day 6), participants were assigned the alternate condition, with the original week 1 high construal manipulation group receiving the low construal manipulation for the duration for the second week, and the original week 1 low construal manipulation receiving the high construal manipulation for the duration for the second week.

For the daily surveys, respondents completed two brief online surveys (morning and afternoon; Monday through Wednesday) taken on the UF Qualtrics survey website. The morning surveys (see Appendices B and C) contained control measures, either a high- or low-construal level manipulation, and measures for proposed mediators; and the afternoon surveys contained additional controls. On Thursday surveys (see Appendices D and E), participants were asked to provide as many improvement ideas as possible in a blank textbox on their online survey. This activity was used to capture the quantity and characteristics of ideas. Participants received reminder emails encouraging enrollment and completion of their background survey. Additionally, reminder emails were sent out on Thursday afternoons and Friday mornings to respondents who needed to complete their Thursday survey activities. The emails contained a link to the survey website as well as a simplified version of the manipulation. Furthermore, the reminder emails reiterated the importance of the Thursday voice activity allowing respondents to provide improvement ideas. A visualization of the daily study flow is shown in Figure 2. For the scope of this study, we will utilize background, daily morning, and Thursday data obtained during week 1.
Figure 2. Daily survey flow.

Given that these surveys were taken at work, they were designed with a consideration for brevity (around 4 minutes for each daily morning and afternoon survey and 20 minutes for Thursday voice suggestions) allowing for participants to commit for the duration of the 2 weeks while being easily completed within a short work break.

**Manipulations**

At the start of the experiment, participants were randomly assigned to one of two conditions: high or low construal. The high construal group was asked how to improve their organization a year from now in the new headquarters location. The low construal group was asked to think about how to improve their current job, today, in their current location. Thus, we
manipulated temporal (now versus a year from now) and spatial distance (current versus new headquarters location) as well as the focus of improvements (job versus organization).

**Construal.** We manipulated high and low construal levels on the Thursday surveys with the words in bold and parentheses. High construal words are in bold, followed by the low construal words in parentheses.

“Today your job is to write down as many ideas as you can think of to improve and enrich Apex (your job). Think about Unified Apex and how the work you do fits into Apex’s future (your work for the day and how it contributes to your productivity). Imagine that things in your home and personal life are calm and stable, leaving you free to think only about your work. Picture yourself… at the new headquarters in Chattanooga, TN a year from now (in your workspace today). You are thinking about Unified Apex, at the new headquarters in Chattanooga, TN (doing your job, performing your tasks and job activities). Take a moment to think about Unified Apex (your day at work) a year from now (today), in Chattanooga, Tennessee (your current location), and the future of Apex (your tasks for the day). Now pause to think about your ideas. How can you improve and enrich Apex (your job)?”

Accompanying this wording were company renderings of the future new headquarters buildings and a sign labeled “future” for the high construal manipulation. Low construal manipulation images included stock photos of businesspeople working at their desk, hands typing on a computer keyboard, and a calendar noting the current day of the week. The manipulation condition was coded to identify participant’s manipulation group with 0 for low- and 1 for high- construal level.

**Controls**
There were several control variables included in the background survey to assess participants’ state prior to the surveys (see Appendix F). These controls were added to all the analyses.

**Demographics.** Participants were asked to indicate their gender, age, job tenure, and organizational tenure to provide basic demographics for each respondent. Participant’s gender was coded as 0 for male and 1 for female. Tenure was controlled for because literature has noted new employees are more hesitant to voice (Stamper & Van Dyne, 2001).

**Management status.** In order to measure management status, participants were asked to indicate whether they were an individual contributor or a manager. Management status was coded as 0 for individual contributors and 1 for managers. This control was incorporated due to research noting its effect on construal level with individuals in high power positions tending to think more abstractly (Smith & Trope, 2006).

**Attitudes Toward Apex.**

**Uncertainty.** Uncertainty surrounding the organizational change initiative was assessed using Bordia, Hobman, Jones, Gallois, and Callan’s (2004) measures for three categories of uncertainty during organizational change; strategic uncertainty (example item: “About the business environment in which the organization will have to exist?”), structural uncertainty (example item: “About the existing reporting structures (i.e. the chain of command) in the organization?”), and job-related uncertainty (example item: “About what you need to do to advance within the organization?”). Respondents indicated their level of uncertainty about each item using a 7-point Likert scale (1 = very uncertain, 7 = very certain).

**Stress.** We utilized Munton’s (1990) work to account for the influence of the job relocation and personal life stresses associated with the uncertainty of the change. Participants
indicated how stressful they and their families have found each aspect to be (0 = not applicable, 1 = not at all stressful, 2 = only slightly stressful, 3 = somewhat stressful, 4 = quite a bit stressful, 5 = very stressful). Example items included “self/spouse losing social ties” and “buying/selling house”. Uncertainty and stress were added as controls due to the magnitude of the move and organizational restructuring. Milliken (1987) suggests those experiencing environmental uncertainty spend more time searching and scanning for relevant information and when individuals are in states of uncertainty it is difficult to adequately identify and assess threats and opportunities, all of which could have an impact on the voice calculus process when determining whether to speak up.

Perceptions of voice safety and voice efficacy. To control for perceptions of voice safety and efficacy we utilized Van Dyne and LePine’s (1998) six-item voice scale combined with Morrison et al.’s (2011) voice safety stem of “To what extent do you personally feel it is safe for you to do each of the following at Apex?” where participants responded using a 7-point Likert scale (1 = definitely not safe, 7 = definitely safe), and the voice efficacy stem of “To what extent do you personally feel capable of effectively doing the following at Apex?” with participants responding using a 7-point Likert scale (1 = definitely not capable, 7 = definitely capable). Some examples of items in Van Dyne and LePine’s (1998) voice scale are “Develop and make recommendations concerning issues that affect the organization” and “Speak up and encourage others to get involved in issues that affect members of this organization”. These were added as controls since research has found individual’s perceptions of voice safety and efficacy to effect the likelihood of engaging in voice behavior (Morrison, 2011).

Connection to Job and Apex. To assess a participant’s level of interconnectedness and self-identity with their job we utilized Aron, Aron, and Smollan’s (1992) inclusion of the other in
the self (IOS) single-item pictorial measure of 7 Venn-like diagrams with self and their job circles overlapping at varying degrees. Further, we examined the respondents level of interconnectedness and self-identity with Apex Corp. utilizing the same measure containing self and Apex circles overlapping at varying degrees. Participants were prompted to “select the picture which best represents your relationship with your job (Apex)?”. Participants connection to their job and Apex were included as controls given that research by Morrison et al. (2011) demonstrated perceptions of voice efficacy are influenced by both the individual as well as group level beliefs.

**Mediators**

Below are the three proposed mediators (see Appendix G) for Hypothesis 1, Hypothesis 2, and Hypothesis 6, which were collected from the morning surveys.

**Perceptions of voice safety and efficacy.** Voice safety and voice efficacy were measured utilizing the same items from the morning surveys (Van Dyne and LePine’s, (1998) six-item voice scale). However, Morrison et al.’s (2011) voice safety stem was altered to ask “Right now, to what extent do you personally feel it is safe for you to do each of the following?”, and the voice efficacy stem asked “Right now, to what extent do you personally feel capable of effectively doing the following?”.  

**Power.** We utilized Anderson, John, and Keltner’s (2012) 8-item sense of power measure where participants were asked to indicate the extent to which they agree or disagree with the items in regards to “Right now, in my relationships with others at work” utilizing a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Sample items included “I can get them to listen to what I have to say” and “Even if I voice them, my views have little sway”.
The mediator variables of voice safety, voice efficacy, and power were first calculated by averaging the scale item responses to form daily scores. Next, the Monday, Tuesday, and Wednesday daily scores were then averaged to provide an overall score per mediator. For example, the Monday voice safety responses were averaged to provide a mean daily voice safety score per participant. This was repeated for Tuesday and Wednesday. Subsequently, the mean daily mediator scores were averaged resulting in an overall voice safety score for the participant.

Analysis

Idea Disaggregation

In order to count and code the ideas provided by participants, I separated participant’s responses from the Thursday survey into distinct ideas, producing a total idea count per participant. Sample ideas included, “Standardized on-time performance reports” and “Provide more cross-collaboration opportunities for employees, such as rotational programs for graduating college students”. Across 113 participants, 479 unique ideas that were subject to rating.

Idea Rating Process

To determine the desirability, feasibility, and novelty of each idea, a panel of subject matter experts (SME) was utilized to rate the ideas, which included the author who has experience in various aspects of the industry as well as 10 Apex employees from the main finance, sales, and operations departments at the company. During the two-round training process, six raters were dropped due to their inability to complete the ratings within the required deadline or effectively understand and apply the rating scale, which resulted in four SMEs being utilized for the final full list of ideas. Training for the raters consisted of providing definitions and examples of idea responses for the categories on each of the three constructs (see Appendix H).
**Desirability.** Desirable ideas were defined as those ideas that “Involve the value of the action’s end-state” where ideas that are more desirable are those that are more valuable to Apex, team members, customers, etc. Raters indicated “To what extent does this response match the definition of desirability?” utilizing a 5-point scale (1 = not at all desirable, 2 = slightly desirable, 3 = somewhat desirable, 4 = moderately desirable, 5 = extremely desirable). Example ideas provided to raters with a not at all desirable score included “Assign a person to develop standardized work documentation” and example ideas of an extremely desirable score included “Partner with [supplier] to conduct hurricane risk assessment at ports along the eastern seaboard and triggers to relocate [final product] inland to mitigate exposure to damage.”

**Feasibility.** Feasible ideas were defined as suggestions that “Involve the means used to reach the end state” where more feasible ideas require minimal resources and time to implement. Raters indicated “To what extent does this response match the definition of feasibility?” utilizing a 5-point scale (1 = not at all feasible, 2 = slightly feasible, 3 = somewhat feasible, 4 = moderately feasible, 5 = extremely feasible). Example ideas provided to raters for a not at all feasible score included “Rapidly expand the alternative energy infrastructure throughout the country focusing on the large metro areas first” whereas example ideas with an extremely feasible score included “More stories from the company showing how team member’s contributions made a difference to a customer or coworker”.

**Novelty.** Lastly, novelty was defined as “how unique, original, and new the suggestion is”. It was explained that ideas rated not at all novel are commonplace at Apex, whereas highly novel ideas as those that are very different from Apex’s current state and may also include unique industry ideas. Raters indicated “To what extent does this response match the definition of novelty?” utilizing a 5-point scale (1 = not at all, 2 = slightly novel, 3 = moderately novel, 4 =
novel, 5 = very novel). Example ideas provided to raters for a not at all novel score included “Build teamwork and collaboration” and example ideas with a very novel score included “Rapidly expand the alternative energy infrastructure throughout the country focusing on the large metro areas first.”

**Rater Training.** A procedural meeting was held to review rating instructions, definitions, and clarify open questions. Following the first round of training, raters received a random 25 sample of ideas provided from Apex employees and were asked to rate them using the definitions and scales mentioned above. Once the scores were obtained, an interclass correlation (ICC) analysis was conducted to determine interrater agreement (desirability = .64; feasibility = .83; novelty = .60).

**Rater Retraining.** Next, a second round of training and discussion occurred. Discussion was focused on reviewing definitions and answering questions, especially those related to the lower ICC’s for desirability and novelty. It was discovered that a key reason for disagreement was due to raters having specialized knowledge within their area of expertise and limited knowledge about specific issues occurring in other departments. For example, one rater experienced in sales would rate an idea very novel whereas another rater experienced in operations would rate the same idea as not at all novel, as that suggestion was common practice within their department. Based on this feedback, for the second round of rating, each of the new 20 sample ideas were rated by the author and a rater who is employed in the same functional area of Apex where the participant providing this idea works. Reallocating the questions by raters expertise, provided raters with greater context and better utilized their specific knowledge resources to improve the quality of the ratings.
Results from the retraining exercise were analyzed to show improved agreement between myself and the SMEs for desirability and novelty (desirability = .72, feasibility = .80, and novelty = .75). At this time, the full list of 479 ideas were segmented into participant’s functional area to match ideas with a SME. The ideas were rated by teams of two raters: the author of this study who has broad expertise across functional areas, and a rater who worked in the same functional area as that of the participant providing the idea, producing two ratings for each item. The scores from the two raters were averaged to form a score for desirability, feasibility, and novelty for each idea. Then the ratings for each idea were averaged to form an overall score for desirability, feasibility, and novelty per participant.

Controls

Several control variables were added to the analyses to control for characteristics of individuals that might affect their responses to the independent and dependent variables. The first set of controls were stable individual differences which included gender, age, organization tenure, job tenure, and management status. The second set of controls were individual’s attitudes and beliefs about Apex which included uncertainty, stress, voice safety, voice efficacy, participant’s connection to their job and connection to Apex Corp. The two sets of controls were added to all the regression analyses in order to best test for the impact of our independent variables on the dependent variables while accounting for other outside influences.

Proposed Mediation

Preacher and Hayes’s (2004) framework was utilized to test $H1$, $H2$, and $H6$, which proposed voice safety, voice efficacy, and power would mediate the relationship between construal level and ideas generated. To test for a mediated relationship, we ran four multiple linear regressions. First, a regression analysis was conducted examining the relationship between
experimental condition and the mediator (i.e., path $a$). Next, a regression analysis was run for the relationship between the mediator and idea count after controlling for experimental condition (i.e., path $b$). The product of $a$ and $b$ produced the mediation or indirect effect. Then, a regression was conducted examining the relationship between experimental condition and the dependent variable, idea count, which produced the total effect (i.e., path $c$). Finally, a regression was ran to examine the relationship between experimental condition on idea count after controlling for the mediator, to produce the direct effect (i.e., path $c'$). Following this, Selig and Preacher’s (2008) Monte Carlo Method for Assessing Mediation (MCMAM) using 20,000 re-samples was used to create confidence intervals for the indirect effect. A mediated relationship is considered significant when the confidence intervals exclude zero.

**Proposed Direct Relationships**

To test $H3$, $H4$, and $H5$ which proposed construal level would influence desirability, feasibility, and novelty characteristics of generated ideas, we utilized participant’s average scores from the SME ratings. Three separate multiple linear regressions were conducted to examine the effect of the dependent variables (desirability, feasibility, and novelty scores) on the independent variable, experimental condition.

**Results**

Table 1 reports the reliability and descriptive statistics for all the measures in the analyses. Scale reliabilities demonstrated an acceptable level of agreement and exceeded the .7 alpha minimum threshold for all measures. Table 2 reports the inter-correlations for our study. We examined zero order correlations between the construal level manipulation, mediators, and dependent variables. Construal level was not significantly correlated with voice safety, voice
efficacy, or power, nor with desirability, feasibility, novelty, or idea count. Figure 3 compares the means between high and low construal manipulation for desirability, feasibility, and novelty.

Table 1. Reliabilities and Descriptive Statistics.

<table>
<thead>
<tr>
<th>Segment</th>
<th>Variable</th>
<th>Reliability</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background</td>
<td>Gender</td>
<td>-</td>
<td>.51</td>
<td>.50</td>
</tr>
<tr>
<td>Background</td>
<td>Age</td>
<td>-</td>
<td>41.21</td>
<td>9.51</td>
</tr>
<tr>
<td>Background</td>
<td>Organization Tenure</td>
<td>-</td>
<td>11.82</td>
<td>8.41</td>
</tr>
<tr>
<td>Background</td>
<td>Job Tenure</td>
<td>-</td>
<td>2.70</td>
<td>3.41</td>
</tr>
<tr>
<td>Background</td>
<td>Management Status</td>
<td>-</td>
<td>.26</td>
<td>.44</td>
</tr>
<tr>
<td>Background</td>
<td>Uncertainty</td>
<td>.84</td>
<td>4.71</td>
<td>1.09</td>
</tr>
<tr>
<td>Background</td>
<td>Stress</td>
<td>.87</td>
<td>3.01</td>
<td>1.01</td>
</tr>
<tr>
<td>Background</td>
<td>Voice Efficacy</td>
<td>.92</td>
<td>4.05</td>
<td>.72</td>
</tr>
<tr>
<td>Background</td>
<td>Voice Safety</td>
<td>.92</td>
<td>3.92</td>
<td>.75</td>
</tr>
<tr>
<td>Background</td>
<td>Connection to Job</td>
<td>-</td>
<td>4.88</td>
<td>1.55</td>
</tr>
<tr>
<td>Background</td>
<td>Connection to Apex</td>
<td>-</td>
<td>4.83</td>
<td>1.71</td>
</tr>
<tr>
<td>Daily</td>
<td>Voice Safety</td>
<td>.95</td>
<td>3.79</td>
<td>.72</td>
</tr>
<tr>
<td>Daily</td>
<td>Voice Efficacy</td>
<td>.95</td>
<td>4.08</td>
<td>.66</td>
</tr>
<tr>
<td>Daily</td>
<td>Power</td>
<td>.93</td>
<td>3.18</td>
<td>.67</td>
</tr>
<tr>
<td>End of Week Ideas</td>
<td>Desirability</td>
<td>.73</td>
<td>3.22</td>
<td>.64</td>
</tr>
<tr>
<td>End of Week Ideas</td>
<td>Feasibility</td>
<td>.80</td>
<td>3.23</td>
<td>.55</td>
</tr>
<tr>
<td>End of Week Ideas</td>
<td>Novelty</td>
<td>.82</td>
<td>2.08</td>
<td>.60</td>
</tr>
<tr>
<td>End of Week Ideas</td>
<td>Idea Count</td>
<td>-</td>
<td>4.56</td>
<td>3.65</td>
</tr>
</tbody>
</table>

Note: Segment refers to the survey process step where the variable was captured. Reliability for all background and daily variables are Cronbach’s alphas, end of week ideas are ICC. Gender coded as 0 = male, 1 = female; Management status coded as 0 = individual contributor, 1 = manager.
Table 2. *Inter-correlations for All Measures.*

<table>
<thead>
<tr>
<th>Study Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Condition</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Gender</td>
<td>-.05</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Age</td>
<td>.09</td>
<td>-.10</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Organization Tenure</td>
<td>-.05</td>
<td>-.19</td>
<td>.79**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Job Tenure</td>
<td>.19</td>
<td>.03</td>
<td>.48**</td>
<td>.44**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Management Status</td>
<td>-.25*</td>
<td>-.10</td>
<td>.08</td>
<td>.16</td>
<td>-.11</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Uncertainty</td>
<td>.02</td>
<td>-.07</td>
<td>-.06</td>
<td>-.08</td>
<td>-.13</td>
<td>.13</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Stress</td>
<td>-.21</td>
<td>.13</td>
<td>-.13</td>
<td>.01</td>
<td>-.04</td>
<td>-.11</td>
<td>-.19</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Voice Efficacy—Background</td>
<td>-.03</td>
<td>-.08</td>
<td>-.01</td>
<td>-.11</td>
<td>-.05</td>
<td>.12</td>
<td>.45**</td>
<td>-.20</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Voice Safety—Background</td>
<td>-.09</td>
<td>-.01</td>
<td>-.07</td>
<td>-.13</td>
<td>-.08</td>
<td>.21</td>
<td>.73**</td>
<td>-.26*</td>
<td>.54**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Connection to Job</td>
<td>.11</td>
<td>.03</td>
<td>.27*</td>
<td>.22</td>
<td>.11</td>
<td>-.04</td>
<td>.19</td>
<td>-.13</td>
<td>.39**</td>
<td>.18</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Connection to Apex</td>
<td>.13</td>
<td>-.08</td>
<td>.17</td>
<td>.22*</td>
<td>-.01</td>
<td>.19</td>
<td>.26*</td>
<td>-.20</td>
<td>.42**</td>
<td>.24*</td>
<td>.38**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Voice Safety—Daily</td>
<td>-.07</td>
<td>.07</td>
<td>.10</td>
<td>-.05</td>
<td>.04</td>
<td>.22</td>
<td>.59**</td>
<td>-.22*</td>
<td>.47**</td>
<td>.69**</td>
<td>.30**</td>
<td>.17</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Voice Efficacy—Daily</td>
<td>-.04</td>
<td>.07</td>
<td>.14</td>
<td>-.01</td>
<td>.11</td>
<td>.11</td>
<td>.34**</td>
<td>-.19</td>
<td>.72**</td>
<td>.42**</td>
<td>.38**</td>
<td>.38**</td>
<td>.62**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Power</td>
<td>.00</td>
<td>-.06</td>
<td>.08</td>
<td>-.10</td>
<td>.29**</td>
<td>.53**</td>
<td>-.19</td>
<td>.41**</td>
<td>.62**</td>
<td>.26**</td>
<td>.28**</td>
<td>.64**</td>
<td>.42**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Desirability</td>
<td>.21</td>
<td>-.33**</td>
<td>.08</td>
<td>.04</td>
<td>-.11</td>
<td>.10</td>
<td>.14</td>
<td>-.24**</td>
<td>.16</td>
<td>.14</td>
<td>-.12</td>
<td>.13</td>
<td>-.01</td>
<td>-.05</td>
<td>.15</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Feasibility</td>
<td>.03</td>
<td>-.13</td>
<td>.00</td>
<td>-.02</td>
<td>-.10</td>
<td>.17</td>
<td>-.04</td>
<td>-.09</td>
<td>.22*</td>
<td>.01</td>
<td>-.02</td>
<td>.15</td>
<td>-.08</td>
<td>.05</td>
<td>.04</td>
<td>.52**</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Novelty</td>
<td>.13</td>
<td>-.17</td>
<td>-.25*</td>
<td>-.28*</td>
<td>.03</td>
<td>-.14</td>
<td>-.06</td>
<td>-.03</td>
<td>.03</td>
<td>.05</td>
<td>-.13</td>
<td>-.02</td>
<td>-.09</td>
<td>.07</td>
<td>.00</td>
<td>-.04</td>
<td>-.08</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>19. Thursday Idea Count</td>
<td>-.05</td>
<td>-.01</td>
<td>.13</td>
<td>-.07</td>
<td>.17</td>
<td>.10</td>
<td>.07</td>
<td>.26**</td>
<td>.12</td>
<td>.21</td>
<td>.10</td>
<td>.15</td>
<td>.24**</td>
<td>.22*</td>
<td>.10</td>
<td>.12</td>
<td>-.10</td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>

*Note: N = 82. Condition coded as 0 = low construal manipulation, 1 = high construal manipulation. Gender coded as 0 = male, 1 = female. Management status coded as 0 = individual contributor, 1 = manager. * p < .05; ** p < .01.*
Note: $N = 100$; * $p < .05$

*Figure 3. Mean ratings for idea characteristics.*
Proposed Mediated and Direct Relationships

Hypothesis 1 predicted voice safety would mediate the relationship between construal level and idea count. Results indicated construal level was not a significant predictor of voice safety ($B = -.045, ns$) nor was voice safety a significant predictor of idea count after controlling for construal level ($B = .244, ns$). Additionally, the total effect of construal level on idea count was not significant ($B = -.119, ns$). The direct effect of construal level on idea count while controlling for voice safety was also not significant ($B = -.098, ns$). The indirect effect of construal level through voice safety on idea count was -.011 (-.044 * .244) and shown to be non-statistically significant (95% CI = -.284 to .224). This indicates that the effect of construal level on quantity of ideas was not mediated through voice safety, thus Hypothesis 1 was not supported (see Figure 4). A summary of the direct and indirect effects for construal level on idea count via voice safety is shown in first row of Table 3. Additionally, full regression results including controls are presented in Table 4.

Note: The coefficients reported in the model are unstandardized beta coefficients. The direct effect is in parentheses. The confidence interval for the mediation effect (-.011) ranges from -.284 to .224 indicating that the effect of condition on idea count are not mediated through voice safety.

*p < .05

Figure 4. Path model linking construal level to idea count through voice safety.
Table 3. Direct, Indirect, and Total Effects of Construal Level on Idea Count, via Voice Safety, Voice Efficacy, and Power.

<table>
<thead>
<tr>
<th>Mediator Variables</th>
<th>a</th>
<th>b</th>
<th>c'</th>
<th>a*b</th>
<th>c</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voice Safety – Daily</td>
<td>-.045</td>
<td>.244</td>
<td>-.098</td>
<td>-.011</td>
<td>-.119</td>
</tr>
<tr>
<td>Voice Efficacy – Daily</td>
<td>-.116</td>
<td>.488</td>
<td>-.087</td>
<td>-.057</td>
<td>-.119</td>
</tr>
<tr>
<td>Power</td>
<td>.004</td>
<td>.741</td>
<td>-.162</td>
<td>.003</td>
<td>-.119</td>
</tr>
</tbody>
</table>

Note: a is the effect of construal level on the mediator (n = 124). b is the effect of the mediator on idea count, controlling for construal level (n = 90). c' is the effect of construal level on idea count, after controlling for the mediator (n = 90). c is the total effect of construal level on idea count (n = 90). The coefficients reported in the model are unstandardized beta coefficients. *p < .05.
Table 4. Regression Results for Construal Level, Mediators, and Outcomes.

<table>
<thead>
<tr>
<th></th>
<th>DV = Voice Safety (Daily)</th>
<th>DV = Voice Efficacy (Daily)</th>
<th>DV = Power (N = 90)</th>
<th>DV = Idea Count (N = 90)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(N = 124)</td>
<td>(N = 124)</td>
<td>(N = 90)</td>
<td>(N = 90)</td>
</tr>
<tr>
<td>Intercept</td>
<td>-.31 (.58)</td>
<td>.02 (.61)</td>
<td>-.22 (.56)</td>
<td>-1.96 (4.04)</td>
</tr>
<tr>
<td>Controls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.08 (.12)</td>
<td>.11 (.13)</td>
<td>-.12 (.12)</td>
<td>.54 (.84)</td>
</tr>
<tr>
<td>Age</td>
<td>.01 (.01)</td>
<td>.02† (.01)</td>
<td>-.01 (.01)</td>
<td>-.00 (.08)</td>
</tr>
<tr>
<td>Organization Tenure</td>
<td>-.01 (.01)</td>
<td>-.00 (.01)</td>
<td>.03* (.01)</td>
<td>.09 (.09)</td>
</tr>
<tr>
<td>Job Tenure</td>
<td>.02 (.02)</td>
<td>.02 (.02)</td>
<td>-.01 (.02)</td>
<td>-.17 (.13)</td>
</tr>
<tr>
<td>Management Status</td>
<td>.08 (.14)</td>
<td>-.06 (.14)</td>
<td>.08 (.13)</td>
<td>.50 (.96)</td>
</tr>
<tr>
<td>R²</td>
<td>.057</td>
<td>.068</td>
<td>.102*</td>
<td>.046</td>
</tr>
<tr>
<td>Uncertainty</td>
<td>.08 (.08)</td>
<td>-.04 (.08)</td>
<td>.07 (.08)</td>
<td>-.13 (.55)</td>
</tr>
<tr>
<td>Stress</td>
<td>.00 (.06)</td>
<td>.03 (.07)</td>
<td>.02 (.06)</td>
<td>.31 (.42)</td>
</tr>
<tr>
<td>Voice Safety –Background</td>
<td>.69** (.11)</td>
<td>.23* (.12)</td>
<td>.49** (.11)</td>
<td>-.37 (.93)</td>
</tr>
<tr>
<td>Voice Efficacy –Background</td>
<td>.06 (.10)</td>
<td>.57** (.10)</td>
<td>.14 (.10)</td>
<td>1.25 (.76)</td>
</tr>
<tr>
<td>Connection to Job</td>
<td>.02 (.05)</td>
<td>-.08 (.05)</td>
<td>.03 (.04)</td>
<td>.25 (.31)</td>
</tr>
<tr>
<td>Connection to Apex</td>
<td>.00 (.04)</td>
<td>.08* (.04)</td>
<td>.04 (.04)</td>
<td>-.11 (.86)</td>
</tr>
<tr>
<td>R² (ΔR²)</td>
<td>.525** (.468**)</td>
<td>.421** (.353**)</td>
<td>.458** (.356**)</td>
<td>.114 (.068)</td>
</tr>
<tr>
<td>Independent Variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voice Safety –Daily</td>
<td>.24</td>
<td>.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voice Efficacy –Daily</td>
<td></td>
<td></td>
<td>.49</td>
<td>.94</td>
</tr>
<tr>
<td>Power</td>
<td></td>
<td></td>
<td>.74</td>
<td>.81</td>
</tr>
<tr>
<td>Condition</td>
<td>-.05 (.12)</td>
<td>-.12 (.13)</td>
<td>.00 (.12)</td>
<td>-.10 (.84)</td>
</tr>
<tr>
<td>R² (ΔR²)</td>
<td>.526** (.001)</td>
<td>.425** (.004)</td>
<td>.458** (.000)</td>
<td>.115 (.000)</td>
</tr>
</tbody>
</table>

Note: Unstandardized coefficients reported. Gender coded as 0 = male, 1 = female. Management status coded as 0 = individual contributor, 1 = manager. Condition coded as 0 = low construal manipulation, 1 = high construal manipulation. † p < .10; * p < .05; ** p < .01.
Next, Hypothesis 2 was tested which predicted that voice efficacy would mediate the relationship between construal level and idea count. Results, in the second row of Table 3, indicated that construal level was not a significant predictor of voice efficacy (\(B = -0.116, \text{ns}\)) nor was voice efficacy a significant predictor of idea count after controlling for construal level (\(B = 0.488, \text{ns}\)). Additionally, the direct effect of construal level on idea count while controlling for voice efficacy was not significant (\(B = -0.087, \text{ns}\)). Furthermore, the indirect effect of construal level through voice efficacy on idea count was \(-0.057 (-0.116 \times 0.488)\) and shown to be non-statistically significant (95% CI = -0.473 to 0.252). This indicates that the effect of construal level on idea count was not mediated through voice efficacy, thus Hypothesis 2 was not supported (see Figure 5).

![Path model linking construal level to idea count through voice efficacy.](image)

*Note:* The coefficients reported in the model are unstandardized beta coefficients. The direct effect is in parentheses. The confidence interval for the mediation effect (-0.057) ranges from -0.473 to 0.252 indicating that the effect of condition on idea count are not mediated through voice efficacy.

*p < .05*

Following this, Hypothesis 3, Hypothesis 4, and Hypothesis 5 were tested which predicted construal level would be positively associated with idea desirability and novelty and negatively associated with idea feasibility. Table 5 presents the results of our tests of H3, H4,
and H5. We found a positive statistically significant relationship between construal level and desirability of ideas ($B = .32, p < .05$), thus Hypothesis 3 was supported. Results indicated no significant associations between construal level and the feasibility ($B = .09, ns$) or novelty ($B = .09, ns$) of ideas, thus, Hypotheses 4 and Hypothesis 5 were not supported.

### Table 5. Effects of Construal Level on Idea Desirability, Feasibility, and Novelty.

<table>
<thead>
<tr>
<th></th>
<th>Desirability</th>
<th>Feasibility</th>
<th>Novelty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>2.79**</td>
<td>2.92**</td>
<td>2.63**</td>
</tr>
<tr>
<td>Controls</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.30*</td>
<td>-.09</td>
<td>-.31*</td>
</tr>
<tr>
<td>Age</td>
<td>.01</td>
<td>.00</td>
<td>.01</td>
</tr>
<tr>
<td>Organization Tenure</td>
<td>.01</td>
<td>.00</td>
<td>.02</td>
</tr>
<tr>
<td>Job Tenure</td>
<td>-.04†</td>
<td>-.02</td>
<td>.04</td>
</tr>
<tr>
<td>Management Status</td>
<td>.05</td>
<td>.18</td>
<td>-.15</td>
</tr>
<tr>
<td>R²</td>
<td>.138*</td>
<td>.05</td>
<td>.185**</td>
</tr>
<tr>
<td>Uncertainty</td>
<td>-.01</td>
<td>-.09</td>
<td>-.13</td>
</tr>
<tr>
<td>Stress</td>
<td>-.08</td>
<td>-.02</td>
<td>.01</td>
</tr>
<tr>
<td>Voice Safety –Background</td>
<td>.07</td>
<td>-.05</td>
<td>.19</td>
</tr>
<tr>
<td>Voice Efficacy –Background</td>
<td>.15</td>
<td>.25*</td>
<td>-.03</td>
</tr>
<tr>
<td>IOS Job</td>
<td>-.11*</td>
<td>-.05</td>
<td>-.03</td>
</tr>
<tr>
<td>IOS Apex</td>
<td>.01</td>
<td>.02</td>
<td>.04</td>
</tr>
<tr>
<td>R² (ΔR²)</td>
<td>.224† (.086)</td>
<td>.140 (.086)</td>
<td>.222† (.038)</td>
</tr>
</tbody>
</table>

**Notes:** $N = 82$. Gender coded as 0 = male, 1 = female. Management status coded as 0 = individual contributor, manager = 1. Condition coded as 0 = low construal manipulation, 1 = high construal manipulation. † $p < .10$; * $p < .05$; ** $p < .01$.

Finally, Hypothesis 6 predicted that power would mediate the relationship between construal level and idea count. Results, in the third row of Table 3, indicated that construal level was not a significant predictor of power ($B = .004, ns$) nor was power a significant predictor of idea count after controlling for construal level ($B = .741, ns$). The direct effect of construal level on idea count while controlling for power was also not significant ($B = -.162, ns$). The indirect effect of construal level through power on idea count was .056 ($.125 * .445$) and shown to be
non-statistically significant (95% CI = -.277 to .285). This indicates that the effect of construal level on idea count was not mediated through power, thus Hypothesis 6 was not supported (see Figure 6).

Note: The coefficients reported in the model are unstandardized beta coefficients. The direct effect is in parentheses. The confidence interval for the mediation effect (.003) ranges from -.277 to .285 indicating that the effect of condition on idea count are not mediated through power. *p < .05

Figure 6. Path model linking construal level to idea count through power.

**General Discussion**

The purpose of this paper was to explore the relationship between construal level theory and employee voice behavior. We built our hypotheses based upon previous research that voice safety, voice efficacy, and power influence the likelihood of employees speaking up in organizations (Edmondson, 2003; Morrison, 2011). Furthermore, we utilized construal level theory, which proposes greater levels of psychological distance leads to more abstract decontextualized assessments and argued that higher construal levels would increase an individual’s sense of voice safety, voice efficacy, and power resulting in greater quantities of ideas. Additionally, we proposed relationships between construal level and the characteristics of employee voice. Specifically, we explored whether high construal level would result in more desirable and novel ideas, and whether low construal level would result in more feasible ideas.
The results of our analysis for week 1 of our study were mixed. The inter-correlation results showed no significant correlations between construal level and the dependent variables. There was a significant association with the mediator voice efficacy and dependent variable idea count ($r = .24, p < .05$) which corroborates previous research by Withey and Cooper (1989) who highlights perceived efficacy to affect an individual’s decision to voice. The mediator variable, power was also shown to have a positive statistically significant correlation with idea count ($r = .22, p < .05$) which substantiates previous research by Edmondson (2003) who found individuals with mitigated power differentials in organizations engage in more voice. The results from our mediation analyses, however did not demonstrate statistically significant relationships between construal level and the quantity of ideas via voice safety, voice efficacy, or power with the two sets of control variables.

Furthermore, our results did not show support for the proposed direct relationships between construal level and idea feasibility and novelty. We did however find support for a direct relationship between construal level and idea desirability. Participants in the high construal manipulation voiced more desirable ideas. This extends previous research linking construal level with desirability in preferences and behavior. Liberman and Trope (1998) note decisions at a high construal level give more weight to the desirability of an idea or course of action over the means to obtain or implement the action. This is an important finding that can assist leaders in obtaining more valuable feedback from employees. Our analysis suggests that when an issue is framed abstractly employees will have a greater propensity to provide more desirable ideas.

A strength of our study was the ESM field-based research design. Previous literature testing construal level theory relied almost exclusively on laboratory-based settings. Therefore,
our analysis helps to improve the generalizability of construal level theory. Additionally, this study had a diverse sample of participants from several operational and administrative departments across the United States. The average age of participants in our sample was 41 years old with an average 11-year tenure at Apex while previous construal level research was typically conducted on undergraduate students with little mention of professional tenure (Fujita et al., 2006; Nussbaum et al., 2008). Furthermore, our study design allowed for experimental manipulation and data capture from a one-week timeframe in comparison to previous research obtaining results from a single-day experiment (Todorov et al., 2007).

**Limitations**

There were some limitations to consider within our study. The first limitation was the unprecedented amount of change occurring for the participants within a traditionally stable environment. The change participants experienced was multifaceted in that the majority of employees were planning, or in the process of, physically relocating across the country while also working in new positions within substantially restructured organizations. The experimental manipulation in our study required a significant amount of contemplation and reflection that may have been difficult to achieve in this unique and dynamic environment. For future research, it may be beneficial to employ a similar study design within a more stable environment to allow for deeper reflection. Conversely, it may be beneficial to conduct the study in an environment where high dynamics are the norm. Previous researchers (Edmondson, 2003; Tangirala & Ramanujam, 2008) have studied voice in this context where employees demonstrated voice behavior despite the consistently changing work environment. These scholars have been successful at exploring factors influencing voice which allow employees to contemplate and provide ideas to improve their dynamic environment.
An additional limitation was the requirement for individuals to identify themselves in the surveys. To send out the surveys containing the correct manipulation link, participants work email addresses were utilized. Respondents were also asked to provide their name on the surveys to match responses with their previous daily surveys and to aid in administering compensation for those who completed the duration of the study. Since voice safety is a component of the voice calculus process of assessing risks when determining to speak up, having participants self-identify, may have influenced whether they shared and/or the content of their ideas. There were two known cases of this effect, as one new team member and early participant removed herself from the survey and noted she did not feel comfortable with any potential risk of being associated with her ideas. Another individual mentioned they were “silent here on some ideas because I know I would be wasting my ‘breath’ and certainly anyone reading this would know who came up with the ideas”. Even though this participant did go on to provide 12 unique ideas for the Thursday responses, they hinted at having more ideas but were not driven to do so either because of low confidence of being heard or because they did not want to be linked to the idea. We took steps to mitigate this situation by stating in the consent that only non-identifiable responses would be seen by a few select Apex employees and taking steps to protect their survey responses by assigning participant’s random IDs after they consented to replace their names when analyzing the data. Future research may benefit by potentially providing a random ID up front and asking participants to log into the survey site versus direct communicate to them through work email.

A further limitation to consider is the computation used to calculate the dependent variables of desirability, feasibility, and novelty. By averaging the two rater responses per idea and then averaging each idea score to obtain an overall participant score for each variable, we
could have lessened the effects of the high and low construal manipulation. An alternative method may be using the maximum score per participant to understand its impact on the results. This will be most relevant in cases where an individual provided several extremely desirable ideas accompanied with a few average ideas.

While our results did not show support for all our hypotheses, this area of research is still important for both academic researchers and practitioners. Our research shows by understanding how leaders can frame issues requiring team member input, they will be more capable of generating desirable ideas from all members of the organization. Future research could benefit from additional exploration into mechanisms to improve voice safety, efficacy, and power to increase the amount of employee voice to drive constructive challenge and continuous improvement. Construal level theory provides a rich context to further explore voice behavior and support organizations in driving grassroots innovation in order to achieve competitive excellence.
References


Appendix A

Background Survey

Welcome to the background survey!

Thank you for agreeing to participate in the Apex Continuous Improvement research!

To get started, you will need to complete this one-time background survey. This survey will take about 10-15 minutes and should be completed today.

There are three sections:

Section 1: Questions about you

Section 2: Questions about Apex

Section 3: Questions about your work

Some of these questions may seem repetitive or unrelated to work, but they provide important background information for my research. I ask that you please read each one and respond carefully.

Best regards,

Tony Sanor

Doctoral Candidate, University of Florida

Section One: Questions About You

Please enter your first name.

Please enter your last name. This information will be used only to match your responses across multiple surveys.

What is your gender?

☐ Male

☐ Female

☐ Prefer to self-identify: ____________________
How old are you?

- 19 years old or younger
- 20 years old
- 21 years old
- 22 years old
- 23 years old
- 24 years old
- 25 years old
- 26 years old
- 27 years old
- 28 years old
- 29 years old
- 30 years old
- 31 years old
- 32 years old
- 33 years old
- 34 years old
- 35 years old
- 36 years old
- 37 years old
- 38 years old
- 39 years old
- 40 years old
- 41 years old
- 42 years old
- 43 years old
- 44 years old
- 45 years old
- 46 years old
- 47 years old
- 48 years old
- 49 years old
- 50 years old
- 51 years old
- 52 years old
- 53 years old
- 54 years old
- 55 years old
- 56 years old
- 57 years old
☐ 58 years old
☐ 59 years old
☐ 60 years old
☐ 61 years old
☐ 62 years old
☐ 63 years old
☐ 64 years old
☐ 65 years old
☐ 66 years old or older
How long have you worked at Apex?

- 6 months or less
- 1 year
- 2 years
- 3 years
- 4 years
- 5 years
- 6 years
- 7 years
- 8 years
- 9 years
- 10 years
- 11 years
- 12 years
- 13 years
- 14 years
- 15 years
- 16 years
- 17 years
- 18 years
- 19 years
- 20 years
- 21 years
- 22 years
- 23 years
- 24 years
- 25 years
- 26 years
- 27 years
- 28 years
- 29 years
- 30 years
- 31 years
- 32 years
- 33 years
- 34 years
- 35 years
- 36 years
- 37 years
- 38 years
39 years
40 years
over 40 years

How long have you been in your present job?
6 months or less
1 year
2 years
3 years
4 years
5 years
6 years
7 years
8 years
9 years
10 years
11 years
12 years
13 years
14 years
15 years
16 years
17 years
18 years
19 years
20 years
21 years
22 years
23 years
24 years
25 years
26 years
27 years
28 years
29 years
30 years
31 years or more
Please indicate whether you are an individual contributor or a manager at Apex.

- Individual contributor
- Manager

Section Two: Questions About Apex

In this section, we want you to think about Apex, as it is today. Please indicate your level of certainty about the following issues.

<table>
<thead>
<tr>
<th>About the direction in which the organization is heading?</th>
<th>Very uncertain</th>
<th>Uncertain</th>
<th>Somewhat uncertain</th>
<th>Neither uncertain or certain</th>
<th>Somewhat certain</th>
<th>Certain</th>
<th>Very certain</th>
</tr>
</thead>
<tbody>
<tr>
<td>About the business environment in which the organization will have to exist?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>About the overall objective/mission of the organization?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>About the existing reporting structures (ie the chain of command) in the organization?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>About the role/function of different work units within the organization?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>About how your work unit contributes to the overall mission of the organization?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>About the future of your position in the</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>About what you need to do to advance within the organization?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
When you think about Unified Apex, please indicate how stressful you and your family have found each aspect to be.

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Not at all stressful</th>
<th>Only slightly stressful</th>
<th>Somewhat stressful</th>
<th>Quite a bit stressful</th>
<th>Very stressful</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self/spouse losing social ties</td>
<td>○</td>
<td></td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
</tr>
<tr>
<td>Finding the right house</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
</tr>
<tr>
<td>Disruption to family/home</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
</tr>
<tr>
<td>Problems for spouse employment</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
</tr>
<tr>
<td>Starting a new job</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
</tr>
<tr>
<td>Buying/selling house</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
</tr>
<tr>
<td>Establishing new relationships at work</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
</tr>
</tbody>
</table>

In this next set of questions, we want you to think about your experiences with Apex.

To what extent do you personally feel it is safe for you to do each of the following at Apex?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Definitely Not Safe</th>
<th>Probably Not Safe</th>
<th>Neutral</th>
<th>Probably Safe</th>
<th>Definitely Safe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop and make recommendations concerning issues that affect the organization.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Speak up and encourage others in this organization to get involved in issues that affect the organization.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Communicate your opinions about work issues to others in the organization even</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
if your opinion is different and others in the organization disagree with you.

Keep well informed about issues where your opinion might be useful to this organization.

Get involved in issues that affect the quality of work life here in this organization.

Speak up in this organization with ideas for new projects or changes in procedures.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This is the final set of questions in Section Two! To what extent do you personally feel capable of effectively doing the following at Apex?
### Section Three: Questions About Your Work

This is a short section. You are almost finished with the Background Survey.

Please select the picture that best describes your relationship with your job.

<table>
<thead>
<tr>
<th>Question</th>
<th>Definitely Not Capable</th>
<th>Probably Not Capable</th>
<th>Neutral</th>
<th>Probably Capable</th>
<th>Definitely Capable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop and make recommendations concerning issues that affect the organization.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Speak up and encourage others in this organization to get involved in issues that affect the organization.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Communicate your opinions about work issues to others in the organization even if your opinion is different and others in the organization disagree with you.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Keep well informed about issues where your opinion might be useful to this organization.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Get involved in issues that affect the quality of work life here in this organization.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Speak up in this organization with ideas for new projects or changes in procedures.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Please select the picture that best describes your relationship with Apex.

1
2
3
4
5
6
7

Thank you for completing the one-time background survey!
You will receive an email from me when the daily brief surveys are about to begin.
(You may now close this window as the survey is complete.)

Best regards,
Tony Sanor
Appendix B
Morning High Construal Manipulation Survey

Welcome to your morning survey!

Thank you for participating in my research study. It is much appreciated and beneficial for me as well as Apex.

In this survey, and in each morning survey this week, you will be asked to pause and reflect on Apex. Please, take your time in doing this!

Once your reflection is complete, we will ask you a few questions about you and your job.

This survey will take about 4 minutes to complete.

Thanks again,
Tony Sanor
Doctoral Candidate, University of Florida

Please enter your first name.

Please enter your last name, so that we can match this survey to your other responses.

The following questions ask about your thoughts and feelings right now. However, you should try to keep your reflection on Unified Apex a year from now, in Chattanooga, Tennessee in the back of your mind as you answer.

Right now, to what extent do you personally feel it would be safe for you to do each of the following?
<table>
<thead>
<tr>
<th></th>
<th>Definitely not safe</th>
<th>Probably not safe</th>
<th>Neutral</th>
<th>Probably safe</th>
<th>Definitely safe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop and make recommendations concerning issues that affect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>the organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speak up and encourage others in this organization to get</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>involved in issues that affect the organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communicate your opinions about work issues to others in the</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>organization even if your opinion is different and others in</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>the organization disagree with you.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Keep well informed about issues where your opinion might be</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>useful to this organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Get involved in issues that affect the quality of work life</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>here in this organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speak up in this organization with ideas for new projects or</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>changes in procedures.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Right now, to what extent do you feel you personally are capable of effectively doing each of the following?

<table>
<thead>
<tr>
<th></th>
<th>Definitely not capable</th>
<th>Probably not capable</th>
<th>Neutral</th>
<th>Probably capable</th>
<th>Definitely capable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop and make recommendations concerning issues that affect the organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speak up and encourage others in this organization to get involved in issues that affect the organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communicate your opinions about work issues to others in the organization even if your opinion is different and others in the organization disagree with you.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Keep well informed about issues where your opinion might be useful to this organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Get involved in issues that affect the quality of work life here in this organization.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speak up in this organization with ideas for new projects or changes in procedures.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please indicate your agreement or disagreement with the following statements. Right now, in my relationships with others at work...
<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can get them to listen to what I have to say.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>My wishes don't carry much weight.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>I can get them to do what I want.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Even if I voice them, my views have little sway.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>I think I have a great deal of power.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>My ideas and opinions are often ignored.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Even when I try, I am not able to get my way.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>If I want to, I get to make the decisions.</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

Thank you for completing the morning survey! It is very much appreciated.

You will receive an email from me later today with a link for your afternoon survey. (You may now close this window as the survey is complete.)

Best regards,
Tony Sanor
Appendix C

Morning Low Construal Manipulation Survey

Welcome to your morning survey!

Thank you for participating in my research study. It is much appreciated and beneficial for me as well as Apex.

In this survey, and in each morning survey this week, you will be asked to pause and reflect on your job. Please, take your time in doing this!

Once your reflection is complete, we will ask you a few questions about you and your job.

This survey will take about 4 minutes to complete.

Thanks again,
Tony Sanor
Doctoral Candidate, University of Florida

Please enter your first name.

Please enter your last name, so that we can match this survey to your other responses.

The following questions ask about your thoughts and feelings right now. However, you should try to keep your reflection on your job activities today, in your current location in the back of your mind as you answer.

Right now, to what extent do you personally feel it would be safe for you to do each of the following?
<table>
<thead>
<tr>
<th></th>
<th>Definitely not safe</th>
<th>Probably not safe</th>
<th>Neutral</th>
<th>Probably safe</th>
<th>Definitely safe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop and make recommendations concerning issues that affect the organization.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Speak up and encourage others in this organization to get involved in issues that affect the organization.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Communicate your opinions about work issues to others in the organization even if your opinion is different and others in the organization disagree with you.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Keep well informed about issues where your opinion might be useful to this organization.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Get involved in issues that affect the quality of work life here in this organization.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Speak up in this organization with ideas for new projects or changes in procedures.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Right now, to what extent do you feel you personally are capable of effectively doing each of the following?

<table>
<thead>
<tr>
<th></th>
<th>Definitely not capable</th>
<th>Probably not capable</th>
<th>Neutral</th>
<th>Probably capable</th>
<th>Definitely capable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop and make recommendations concerning issues that affect the organization.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Speak up and encourage others in this organization to get involved in issues that affect the organization.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Communicate your opinions about work issues to others in the organization even if your opinion is different and others in the organization disagree with you.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Keep well informed about issues where your opinion might be useful to this organization.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Get involved in issues that affect the quality of work life here in this organization.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Speak up in this organization with ideas for new projects or changes in procedures.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Please indicate your agreement or disagreement with the following statements about your relationships with others at work. Right now...
<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can get them to listen to what I have to say.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>My wishes don’t carry much weight.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I can get them to do what I want.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Even if I voice them, my views have little sway.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I think I have a great deal of power.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>My ideas and opinions are often ignored.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Even when I try, I am not able to get my way.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>If I want to, I get to make the decisions.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Thank you for completing the morning survey! It is very much appreciated.

You will receive an email from me later today with a link for your afternoon survey. (You may now close this window as the survey is complete.)

Best regards,
Tony Sanor
Appendix D

Thursday High Construal Manipulation Survey

Thank you for taking the time to participate in my research project. Today is the day you get to provide your ideas!

Best regards,
Tony Sanor
Doctoral Candidate, University of Florida

Please enter your first name.

Enter your last name, so that we can match this survey to your other responses.

In order for Apex to remain competitive, all employees are encouraged to focus on the core elements of the Apex Way: respect for people and continuous improvement. It is more important than ever for team members to focus on improving Apex: every job, every day. Today, your job is to write down as many ideas as you can think of to improve and enrich Apex. There is no area at Apex without problems, and all areas can benefit from everyone working together. Your goal is to think about ways to make Apex better.

REMINDER: This is an informal process; you are not restricted by any formal Apex process and your ideas do not have to be fully developed. Rough ideas and spontaneous thoughts are welcome. The ideas you offer today will be read by a small group of Apex employees and a team of UF researchers. Your name will NOT be identified with your ideas. You will be assigned a random ID number and only the UF research team will have a link between your name and your ID number, so that you can receive your gift card and an invitation to present if your ideas are chosen.

Timing
First Click
Last Click
Page Submit
Click Count

Please view the very short (1 minute) video below and then click the next button.
When you have some ideas in mind, click forward to record them. Please list as many ideas as you can think of, even if you recorded them during the week. More is better!

Think about Apex’s future. In the area below, please provide as many improvement opportunities for Apex as you can think of.

This is the end of your study activities for the week. Before you go, can you think of anything else? We want to be sure we capture all the ideas you have.

This completes the surveys for this week!

Thank you again for being a part of this effort!!
(You may now close this window as the survey is complete.)

Best regards,
Tony Sanor
Appendix E

Thursday Low Construal Manipulation Survey

Thank you for taking the time to participate in my research project. Today is the day you get to provide your ideas!

Best regards,
Tony Sanor
Doctoral Candidate, University of Florida

Please enter your first name.

Enter your last name, so that we can match this survey to your other responses.

In order for your unit to remain competitive, all employees are encouraged to focus on their core activities along with respect for people and continuous improvement. It is more important than ever for team members such as yourself to focus on doing their jobs well: every task, every day. Today, your job is to write down as many ideas as you can think of to improve and enrich your job. There is no area at Apex without problems, and all areas can benefit from everyone working together. Today, your goal is to think about ways to make your job better.

REMINDER: This is an informal process; you are not restricted by any formal Apex process and your ideas do not have to be fully developed. Rough ideas and spontaneous thoughts are welcome. The ideas you offer today will be read by a small group of Apex employees and a team of UF researchers. Your name will NOT be identified with your ideas. You will be assigned a random ID number and only the UF research team will have a link between your name and your ID number, so that you can receive your gift card and an invitation to present if your ideas are chosen.

Timing

First Click
Last Click
Page Submit
Click Count
Please view the very short (1 minute) video below and then click the next button.

When you have some ideas in mind, click forward to record them. Please list as many ideas as you can think of, even if you recorded them during the week. More is better!

Think about your job today. In the area below, please provide as many improvement opportunities for your job as you can think of.

This is the end of your study activities for the week. Before you go, can you think of anything else? We want to be sure we capture all the ideas you have.

This completes the surveys for this week!

Thank you again for being a part of this effort!!
(You may now close this window as the survey is complete.)

Best regards,
Tony Sanor
Appendix F
Measures for Controls

A. Demographics
   Gender, age, organization tenure, job tenure, management status.

B. Attitudes Toward Apex
   a. Uncertainty during organizational change (Bordia, Hobman, Jones, Gallois, & Callan, 2003).
      Please indicate your level of certainty about the following issues.
      \[1 = \text{very uncertain}, 2 = \text{uncertain}, 3 = \text{somewhat uncertain}, 4 = \text{neither uncertain nor certain}, 5 = \text{somewhat certain}, 6 = \text{certain}, 7 = \text{very certain}\]
      1. About the direction in which the organization is heading?
      2. About the business environment in which the organization will have to exist?
      3. About the overall objective/mission of the organization?
      4. About the existing reporting structures (ie the chain of command) in the organization?
      5. About the role/function of different work units within the organization?
      6. About how your work unit contributes to the overall mission of the organization?
      7. About the future of your position in the organization?
      8. About what you need to do to advance within the organization?
      When you think about Unified Apex, please indicate how stressful you and your family have found each aspect to be.
      \[0 = \text{not applicable}, 1 = \text{not at all stressful}, 2 = \text{only slightly stressful}, 3 = \text{somewhat stressful}, 4 = \text{quite a bit stressful}, 5 = \text{very stressful}\]
      1. Self/spouse loosing social ties
      2. Finding the right house
      3. Disruption to family/home
      4. Problems for spouse employment
      5. Starting a new job
      6. Buying/selling house
      7. Establishing new relationships at work
   c. Perceived voice safety and efficacy (Voice safety and efficacy stems (Morrison, Wheeler-Smith, & Kamdar, 2011), voice items (Van Dyne & LePine, 1998)).
      To what extent do you personally feel it is safe for you to do each of the following at Apex?
      \[1 = \text{definitely not safe}, 2 = \text{probably not safe}, 3 = \text{neutral}, 4 = \text{probably safe}, 5 = \text{definitely safe}\]
      To what extent do you personally feel capable of effectively doing the following at Apex?
      \[1 = \text{definitely not capable}, 2 = \text{probably not capable}, 3 = \text{neutral}, 4 = \text{probably capable}, 5 = \text{definitely capable}\]
      1. Develop and make recommendations concerning issues that affect the organization.
2. Speak up and encourage others in this organization to get involved in issues that affect the organization.
3. Communicate your opinions about work issues to others in the organization even if your opinion is different and others in the organization disagree with you.
4. Keep well informed about issues where your opinion might be useful to this organization.
5. Get involved in issues that affect the quality of work life here in this organization.
6. Speak up in this organization with ideas for new projects or changes in procedures.

Please select the picture that best describes your relationship with your job.

Please select the picture that best describes your relationship with Apex.
Appendix G

Measures for Mediators

A. Perceived voice safety and efficacy (Voice safety and efficacy stems (Morrison, Wheeler-Smith, & Kamdar, 2011), voice items (Van Dyne & LePine, 1998)).

Right now, to what extent do you personally feel it is safe for you to do each of the following?

1 = definitely not safe, 2 = probably not safe, 3 = neutral, 4 = probably safe, 5 = definitely safe

Right now, to what extent do you personally feel capable of effectively doing the following?

1 = definitely not capable, 2 = probably not capable, 3 = neutral, 4 = probably capable, 5 = definitely capable

1. Develop and make recommendations concerning issues that affect the organization.
2. Speak up and encourage others in this organization to get involved in issues that affect the organization.
3. Communicate your opinions about work issues to others in the organization even if your opinion is different and others in the organization disagree with you.
4. Keep well informed about issues where your opinion might be useful to this organization.
5. Get involved in issues that affect the quality of work life here in this organization.
6. Speak up in this organization with ideas for new projects or changes in procedures.


Please indicate your agreement or disagreement with the following statements about your relationships with others at work.

Right now...

1 = strongly disagree, 5 = strongly agree

1. I can get them to listen to what I have to say.
2. My wishes don’t carry much weight.
3. I can get them to do what I want.
4. Even if I voice them, my views have little sway.
5. I think I have a great deal of power.
6. My ideas and opinions are often ignored.
7. Even when I try, I am not able to get my way.
8. If I want to, I get to make the decisions.
Appendix H

Measures for Dependent Variables

A. Desirability ideas “Involve the value of the action’s end-state”. In other words, desirability refers to the “why” aspect of an action. Ideas that are desirable are those that are more valuable to Apex, team members, customers, etc.

Use the rating scale to help you evaluate desirability for each response; rate how desirable you personally think each idea is. It may help you first to decide whether you think a response is low/medium/high in one aspect, then decide on a specific numeric rating.

When rating each response, try to answer the question, “To what extent does this response match the definition of desirability?

? = Highly ambiguous; cannot rate without group discussion (use sparingly!)
1 = Not at all desirable (Responses offer no new value to employees or Apex)
2 = Slightly desirable (Responses offer only slight value)
3 = Somewhat desirable (Responses offer some value to select employees but not necessarily all of Apex)
4 = Moderately desirable (Responses are valuable to employees and Apex)
5 = Extremely desirable (Responses are very valuable to employees and Apex)

B. Feasibility ideas “Involve the means used to reach the end state”. In other words, feasibility-focused ideas refer to the “how” aspect of an activity. Feasibility involves the ease or difficulty of reaching the end state. Ideas that are highly feasible require minimal resources and time to implement.

Use the rating scale to help you evaluate feasibility for each response; rate how feasible you personally think each idea is. It may help you first to decide whether you think a response is low/medium/high in one aspect, then decide on a specific numeric rating.

When rating each response, try to answer the question, “To what extent does this response match the definition of feasibility?

? = Highly ambiguous; cannot rate without group discussion (use sparingly!)
1 = Not at all feasible (Responses are very time and resource intensive, taking years to put into place; not practical to implement)
2 = Slightly feasible (Responses are slightly practical but require great deal of resources and time to initiate)
3 = Somewhat feasible (Responses are somewhat easy to implement and slightly time and resource intensive)
4 = Moderately feasible (Responses are fairly easy to implement, and few resources are being used in the process)
5 = Extremely feasible (Responses are extremely easy to implement, possibly within the next week or so for free)

C. Novelty refers to how unique, original, and new the response is. For example, an idea with low novelty refers to a response that is already implemented at the company, and/or makes very slight changes to current practices. An idea with high novelty refers to responses that are very different from what already occurs at Apex and could also include highly unique ideas for the industry.

Use the following rating scale to evaluate the **novelty** of each response. That is use the scale to answer the question “To what extent does this response match the definition of novelty?”

? = Highly ambiguous; cannot rate without group discussion (use sparingly!)
1 = Not at all (Responses are not novel and already commonplace at Apex/routine)
2 = Slightly novel (Responses are minor novel additions or changes to existing things at Apex)
3 = Moderately novel (Responses are more novel additions or changes to existing things at Apex)
4 = Novel (Responses may be novel for particular department or all of Apex, but not entirely original to the industry or other companies)
5 = Very novel (Responses are very different from what Apex is already doing and could be very unique to the industry)
BIOGRAPHICAL SKETCH

The author, Anthony Sanor, is a 2007 graduate of Kent State University with his Bachelor of Business Administration. He received his Master of Business Administration in 2011 from Florida Institute of Technology. He has over 10 years of experience in manufacturing, supply chain, and finance roles within Global 500 corporations.