

ANTECEDENTS OF VERBAL RUMINATION IN ORGANIZATIONS

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ANTECEDENTS OF VERBAL RUMINATION IN  
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## Antecedents of Verbal Rumination in Organizations

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Organizations are riddled with complex interpersonal relationships in which many types of communication strategies are employed. Verbal rumination is one such communicative pattern, often used by organizational members as an attempt to talk through an ongoing problem or issue. Though verbal rumination has been a popular topic among interpersonal communication scholars, most organizational communication research has focused on the prevalence and ensuing harms of co-rumination in organizations, a distinctively different form of dyadic communication. The present study sought to examine what, if any, organizational, relational, and individual factors might encourage or inhibit verbal rumination in workplace settings. Results indicated that the prevalence of verbal rumination among coworkers is strongly influenced by relational factors such as perceived level of social support from coworkers and quality of exchanges in the workplace. Analysis of individual factors revealed that stress level and demographic differences proved influential on these behaviors as well.

TABLE OF CONTENTS

Introduction	6
Theoretical Warrant	7
Rumination	7
Antecedents of Rumination	12
Social Support and Rumination in Organizations	14
Stress in Organizations	17
Organizational Antecedents	19
Relational Antecedents	21
Individual Antecedents	23
Method	24
Recruitment	24
Measures	24
Results	28
Social Support and Rumination	28
Stress and Rumination	29
Organizational Influences	29
Relational Influences	30
Individual Influences	31
Discussion	32
Organizational-Level Results	32
Relational-Level Results	34
Individual-Level Results	38
Practical Applications	39
Limitations and Future Research	41
Conclusion	42
References	44
Appendix	53

## LIST OF TABLES AND FIGURES

1. Figure 1: Organizational Culture Assessment Index	20
2. Table 1: Means, Standard Deviations, Reliabilities, and Correlations	51
3. Table 2: Means and Standard Deviations of Individual and Organizational Antecedents	52

### Antecedents of Verbal Rumination in Organizations

Research has linked rumination behaviors to a variety of outcomes such as stress, anxiety, relational satisfaction and depression (Afifi, Afifi, Merrill, Denes, & Davis, 2013; Boren, 2014; Rose, 2002). Communication scholars have studied the enactment of these behaviors within the context of interpersonal dyads, and psychologists have uncovered intrapersonal impacts on ruminating individuals as well (Calmes & Roberts, 2008; Nolen-Hoeksema & Morrow, 1991). Additionally, rumination can affect the well-being of the whole organization (Boren, 2013; 2014; Haggard, Robert, & Rose, 2010). For example, Boren (2014) revealed that levels of stress and feelings of burnout among employees is often increased when rumination behaviors are prevalent in an organization. Therefore, since the presence of rumination in an organization can affect individual and relational health, identifying the preceding factors which may lead to greater levels of verbal rumination in an organization is essential; this knowledge can serve as a unique building block for future research such as how various organizations might be uniquely impacted by these behaviors.

Organizations by nature are inherently rich with interpersonal, often complex, relationships between individuals. Due to the inseparability between organizational life and interpersonal relationships, research is needed to further uncover the full nature and implications of such relationships. Within these workplace relationships, verbal rumination behaviors may be impacting job-related stress levels or satisfaction with coworkers or leaders, while simultaneously going completely unnoticed. To examine the complex nature of these potential antecedents of verbal rumination, this study used an approach similar to that found in Kassing's (1997) work on dissent expression. Kassing acknowledged that studying dissent in an organization cannot be accomplished by simply examining an individual; rather, he recognized

the complexity of what influences expressions in organizations. His approach considered three layers of influence on these expressions: organizational, relational, and individual. Expression of dissent and verbal rumination in organizations certainly differ; however, this conceptual approach is pertinent for studying rumination.

Therefore, the present study sought to examine the organizational, relational, and individual influences that may be fostering or diminishing verbally ruminative communication in a workplace setting. The study begins by providing an explanation of rumination as a unique form of social support, describing several types of ruminative behavior and contexts in which they have been studied, before outlining the multi-layered approach used to fully uncover how rumination in an organization was approached, and offering an overview of some of the predicted related outcomes of workplace rumination. The method used to recruit participants and the survey items employed are also described, as well as the ensuing results, and the interpretation and significance of findings for future research.

### **Theoretical Warrant**

#### **Rumination**

Rumination is “a class of conscious thoughts that revolve around a common instrumental theme and that recur in the absence of immediate environmental demands requiring the thoughts” (Martin & Tesser, 1996, p. 1). In other words, when a set of thoughts invade and interrupt one’s thinking related to other subjects, particularly in a repetitive or intrusive manner, this process is rumination. “Brooding rumination,” in which the ruminative action is strictly a cognitive process, has been studied by psychologists to reveal intrapersonal implications (Nolen-Hoeksema & Morrow, 1991). However, transitioning from brooding rumination to a verbal process is extremely common. The act of verbalizing these thoughts can be categorized based on

the degree of mutuality in ruminating and the intention of conversational participants. The next sections briefly define and contrast verbal rumination, co-rumination, deliberate rumination, and intrusive rumination.

**Verbal Rumination.** Afifi et al. (2013) defined verbal rumination as “continually talking about a problem and its potential consequences, negative emotions surrounding the problem, and one’s role in it” (p. 396). Considering Martin and Tesser’s (1996) definition of rumination, for discourse to be considered ruminative, it must be repetitive. When the same issue is repeatedly brought up by an individual and discussed at numerous points of time in a cyclical manner, verbal rumination is occurring. The repetitive, ongoing nature of rumination behaviors is what distinguishes rumination from acts of self-disclosure, which can occur in one single instance. While similarities exist, verbal rumination is not conceptually equivalent to self-disclosure. Self-disclosure is “the act of revealing personal information about oneself to another” and is regarded as a central tenet of interpersonal relationships (Collins & Miller, 1994, p. 457). For instance, if a person were to reveal a secret to a close friend, the friends discussed the secret, and then subsequently moved on from the conversation to another topic, this would be an example of self-disclosure. However, if a person repetitively engaged in conversations with numerous coworkers about a new company policy, repeatedly weighed the positive and negative outcomes of the policy, as well as how it might affect working conditions, such encounters would be considered verbal rumination.

Researchers have repeatedly approached rumination through a negative lens and have linked outcomes such as depression, worry, loneliness, and negative moods in individuals who choose to enact rumination behaviors (Nolen-Hoeksema & Davis, 1999; Nolen-Hoeksema & Morrow, 1991; Segerstrom, Tsao, Alden, & Craske, 2000; Zawadzki, Graham, & Gerin, 2012).



Such research has associated rumination with depression tendencies, particularly regarding how some individuals respond to a traumatic event with or without enacting ruminative tendencies (Nolen-Hoeksema & Morrow, 1991). In such studies, the ruminative behavior under examination is centered around the negative emotions mentioned in Afifi et al.'s (2013) definition, which then instigates more distressing feelings in the individual after the interaction has ended. Zawadzki et al. (2012) stated that "rumination and anxiety can create a reciprocally determinative cycle in which each tends to promote and prolong the other" (p. 2). Because this cycle can have such negative outcomes, further research is warranted to determine the antecedents of ruminative behavior or a ruminative environment, as well as the organizational implications of these behaviors.

Another defining characteristic of verbal rumination is that it does not require the presence of the same second individual also repeatedly engaging in the ruminative process. Because this second individual is not simultaneously discussing the problem, he/she is likely providing social support to the ruminator throughout the process of the conversation. In these instances of verbal rumination, scholars have shown the quality of social support received to be a crucial determinant of the ensuing outcomes felt by the ruminating individual (Afifi et al., 2013). Afifi and colleagues (2013) found that "when individuals were verbally ruminating and received poor support, they became more anxious and dissatisfied with the friendship" but "when individuals verbally ruminated and were provided with good support, their satisfaction with the friendship was enhanced, but their anxiety was not significantly reduced" (p. 412). This finding suggests that not only are verbal rumination conversations a unique form of dyadic communication, but more importantly that the potential consequences or benefits of that interaction for the ruminating individual often rest in the hands of the social support provider.

**Co-Rumination.** Rose (2002) described co-rumination as instances where “excessively discussing personal problems within a dyadic relationship” is occurring (p. 1830). It typically involves a pair of individuals repeatedly discussing the same problem or speculating about potential problems, and almost always incorporates negative feelings into the dialogue (Rose, 2002). Unlike verbal rumination, co-rumination is the intentional, repetitive act of *both* individuals discussing the problems at hand. Dyads who have fallen into a cycle of co-rumination essentially cannot *not* discuss the issue when they are with one another. Even though there is typically little attempt to solve the problem, the topic is still continually brought up and discussed at length. An example of co-rumination would be a pair of coworkers who repeatedly talk about how frustrated they are that their boss often makes them work late or expects them to do extra work on the weekends, though they never attempt to incorporate any sort of solution-focused discussion into the conversation. They simply talk about their frustrations related to the extra work whenever they are together, without integrating any true constructive action integrated into their dialogue.

Researchers have studied a wide variety of features, outcomes, and contexts of co-rumination. Rose (2002) closely examined co-rumination within adolescent friendships and resulting emotions associated with the rumination process. Her research found that girls reported higher levels of satisfaction and emotional closeness in friendships where co-rumination is present, but also greater anxiety levels as well. These anxious symptoms, along with signs of depression, are typically long term trade-offs to co-rumination within same sex female friendships, although closeness and friendship quality may increase more immediately following co-rumination (Rose, Carlson, & Waller, 2007).

Furthermore, Haggard et al. (2010) examined co-rumination habits between coworker dyads. In conjunction with Rose's (2002) findings, their results revealed that women typically engage in more co-rumination in the workplace than men do, and that "co-rumination was related to high-quality relationship with the friend with whom problems were discussed" (Haggard et al., 2010, p. 35). Moreover, the existence of extreme job stressors, such as abusive supervision, drastically increased the negative effects these women already experience following co-rumination in a normal work environment and was associated with more work-to-family conflicts as well (Haggard et al., 2010).

Finally, investigation into the types of relationship housing this dialogue has also contributed to a greater understanding of the potential harmful outcomes of co-rumination. Calmes and Roberts (2008) examined the co-rumination tendencies of young adults in several types of interpersonal relationships. Their results indicated similar findings to those in Rose's (2002) work on adolescents; they found that individuals who engaged in co-rumination with their closest friend reported higher levels of depression and anxiety, while parent-based co-rumination behaviors only influenced anxious symptoms, and roommate- and romantic partner-based co-rumination did not have significant impacts on depression or anxiety levels. Each of these studies have certainly contributed to uncovering the implications of engaging in co-rumination. However, since verbal rumination and co-rumination are not identical constructs, these findings are not directly transferrable to assumptions about potential implications for verbal rumination. Thus, further investigation into verbal rumination behaviors in the workplace is warranted.

**Deliberate Rumination.** Just as ruminative behaviors can be distinguished based upon the involvement or enactment of a second ruminating individual, they can also be defined in terms of the focus and orientation of the rumination. As such, the term "deliberate rumination" is

often attached to instances where the act has a specific solution-focused intent. The individual or individuals are voluntarily and purposefully engaging in ruminative behaviors with the specific goal of trying to strategically solve a particular problem or issue (Cann, Calhoun, Tedeschi, & Solomon, 2010). The chief objective with this type of rumination is discussing the issue until a practical solution has been derived. Recently, scholars have begun to examine the potential merits and positive outcomes that can result from individuals purposefully engaging in deliberate rumination behaviors. For instance, Carr (in press) found that deliberate rumination and co-rumination each play a mediating role in the “explanatory process for understanding how the impact of a stressful experience predicts posttraumatic growth.”

**Intrusive Rumination.** Though such purposeful discussion of issues can lead to the discovery of productive, potential solutions, more often than not, rumination does not involve solution-focused attitudes. This category of “intrusive rumination” is particularly common within instances of co-rumination, wherein individuals are merely engaging in repetitive talk about the problems they are concerned about without incorporating any type of brainstorming related to resolving or admonishing the issues (Cann et al., 2010). Often, this intrusive co-ruminative behavior becomes woven into the pattern of how those two individuals relate to one another on a regular basis.

### **Antecedents of Rumination**

As was previously noted, verbal rumination behaviors might be enacted with a variety of different listeners, whereas co-rumination is studied between the same dyad. As such, the relational characteristics between the two individuals are more difficult to examine in instances of verbal rumination. Nonetheless, a clear understanding of factors in organizations which might contribute to members engaging in more verbal rumination is vital to discovering the

implications they might have on the overall health and well-being of an organization and its members. Psychologists have thoroughly examined the impact of cognitive rumination behaviors, but most communicatively-focused research has been focused on intrusive rumination or co-rumination. Beyond an interpersonal communication focus, few researchers have recently examined co-rumination within an organizational context (Boren, 2013, 2014; Haggard et al., 2010). However, due to the distinctions between co-rumination and verbal rumination, it stands to reason that investigating the potential causes and outcomes of verbal rumination within an organizational context will greatly enhance interpretation of these concepts.

Verbal rumination behaviors may be negatively impacting organizational members due to increased stress and anxiety in the workplace without organizational leadership even being aware of its existence or effects. It also stands to reason that certain facets of an organization's culture inherently promote or constrict verbal rumination behaviors in the organization due to a focus or lack thereof on promoting strong interpersonal relationships among coworkers. Additionally, verbal rumination in the workplace could have completely different effects on those who engage in it than co-rumination workplace experiences or verbal rumination between friendship dyads. Without proper investigation, the potential relationships between any of these constructs is unknown.

Communication scholars have approached the various means of understanding organizational actions, trends, and behaviors in a multitude of ways. One particularly useful lens is Kassing's (1997) analysis of how employees select an audience for expressing dissent in an organization. Due to the complexity of organizational life, Kassing (1997) argued that "dissent strategy selection occurs in light of individual, relational, and organizational influences...which collectively represent strategy selection influences" (p. 322). Kassing's (1997) work defines

individual influences as "individual communication behaviors, behaviors enacted within organizations, and behaviors or values imported from outside organizations," while relational influences are those which "concern the types and quality of relationships people maintain within organizations" and organizational influences are "how people relate to and perceive organizations" (p. 324).

Just as Kassing (1997) theorized dissent expression to be shaped by individual, relational, and organizational influences, it stands to reason that verbal rumination behaviors would be similarly affected by such factors. Though dissent and rumination are not identical, they do share similarities. Indeed, Kassing's lateral dissent, dissent expressed to coworkers, bears much in common with verbal rumination. Both communicative actions involve strategic, verbal expression to another individual. As such, antecedents of verbal rumination were examined using this framework.

### **Social Support and Rumination in Organizations**

There are many types of social support one can enact in times of stress, and scholars have provided varied definitions about which actions constitute proper social support in particular situations and which do not. In order to fully understand verbal rumination and the factors that influence rumination in organizations, one must also consider the context of social support from which rumination develops. Pierce, Sarason, Sarason, Joseph, and Henderson (1996) conceptualized social support as comprised of three components. *Support schemata* is the perceived mental network of "the availability of others upon whom they can rely for support," *supportive relationships* are the those who provide the support to individual in need, and *supportive transactions* serve to comprise and develop the network of support schemata in the context of those supportive relationships (Pierce et al., 1996, p. 5). These three components are

vital to conceptualizing rumination in organizations because they provide an in-depth picture of how social support behaviors come to life and affect interpersonal interactions.

Obtaining a grasp on the support schemata of an organization serves to inform an individual which of their colleagues might be available and willing to provide socially supportive behaviors; additionally, the supportive relationships and encounters comprising one's workplace experiences will also help define when and from whom social support might be received from a coworker. As such, the link between social support and rumination cannot be ignored. When an individual is engaging in ruminative behaviors, the source of response and level of support provided by the partner or listener in the situation can have a profound impact on the amount of stress or perceived anxiety for the ruminator.

In many instances, the ability to identify and offer the appropriate form of social support in each scenario can mitigate or buffer negative effects of stress on overall health (Afifi et al., 2013). Moreover, social support in an interaction between two individuals must be of high quality in order for the individual requiring support to be able to cope with the issue (Afifi, T. D., Merrill, A., Davis, A., Denes., A., & Coveleski, S., 2016). However, if the second individual is not actually offering quality support, and is instead engaging in the discursive process with the original ruminator, the dyad may slip into co-rumination, "which could further perpetuate the ruminator's anxiety and potentially hurt the relationship" (Afifi et al., 2013). Understanding social support, how it is enacted in organizations, and more specifically how it is related to verbal rumination patterns is particularly important to being able to fully discover what some of the more specific relational level antecedents of verbal rumination behaviors might be.

Though disciplines such as communication, psychology, and health have extensively studied both social support and rumination, minimal research examines these concepts in an

organizational context. Boren (2014) studied the mediating influence of co-rumination on social support and the resulting negative outcomes of stress and burnout, corroborating previous scholars' conclusions that "when coworkers engage in a co-ruminative interaction at work, they are doing so to help ease the experience of stress and burnout" (p. 16). However, his results found that sharing such experiences may only actually be beneficial when the "content of the social support remains focused around solving problems and not dwelling on problems," which many dyadic pairs often fail to do (p. 16). Paradoxically, Boren found that even though co-rumination was often enacted to reduce stress, it actually diminished the inverse effects between social support and perceived stress and burnout. In theory, the more socially supported a person feels at work, the lower his level of job-related stress and burnout should be; however, when co-rumination was prevalent, the ability of social support to reduce these negative outcomes was restricted. This finding holds strong implications for organizational members. The very relationships that employees look to for social support may end up undermining the employee's well-being.

Beyond job stress and burnout, scholars have also investigated the relationship between various types of social support and outcomes such as coworker exclusion, job tension, performance to compare differences in organizational-based self-esteem (Scott, Zagenczyk, Schippers, Purvis, & Cruz, 2014). Their study revealed that "perceived organizational support mitigated the negative relationship between co-worker exclusion and organizational-based self-esteem while family and social support intensified these effects (Scott et al., 2014, p. 1250). This finding suggested that if an organization can create an environment where its employees feel as if they are supported, the employee may not feel as affected by the exclusivity of their coworkers. Another important factor pertaining to social support related to coworker interactions



is the maintenance of workplace relationships, examined by Sias (2012). Dependent upon whether an individual perceives their peer friendship to be escalating or deteriorating, maintenance tactics will be utilized to "communicatively manage the boundary between the personal and work spheres" (Sias, 2012, p. 261).

Scholars have also considered social support in organizations in light of its ability to influence job satisfaction and psychological well-being. Brough and Pears (2004) conducted a study which revealed the importance of evaluating not only the presence of workplace social support, but the source of the support. Their findings indicated that in some organizations, social support from coworkers did not significantly influence job satisfaction or work-related psychological well-being, whereas "social support received from supervisors demonstrated strong associations with job satisfaction" (Brough & Pears, 2004, p. 480).

Given that rumination is a unique communicative encounter which mediates the role between social support and specific negative outcomes, and that social support plays a distinctive role numerous organizationally-bound factors, social support in organizations as it pertains to the enactment of verbal rumination must be considered within this study. It stands to reason that greater perceived social support in an organization will be associated with increased verbal rumination.

H1: Social support will be positively associated with verbal rumination.

### **Stress in Organizations**

Stress is often a precursor of needing social support. Though it is commonly assigned a negative connotation, stress can often serve as the catalyst the body or mind needs to make faster decisions, work harder or protect against an impending harm. Cohen and McKay (1984) demonstrated how stress can serve as a buffer against such harms. Their results indicated that

individuals with strong social support are much less affected by psychosocial stress than those with little to no social support. Ganster, Fusilier, and Mayes (1986) tested the impact of various levels of perceived social support from one's supervisor, coworkers, and family and friends on six key job stressors. Their analysis revealed significant findings that "support from the supervisor is clearly the dominant factor" while "co-worker support is also significantly related" to reported job stressors (p. 105). As such, it was concluded that "a lack of social support from individuals at work, and in particular, from the supervisor, is most strongly related to workplace strain (job dissatisfaction)" (Ganster et al., 1986, p. 105).

Penney and Spector (2005) also studied incivility, conflict, and counterproductive workplace behaviors which include "acts such as theft, sabotage, verbal abuse, withholding of effort, lying, refusing to cooperate, and physical assault" as outcomes of job stressors (p. 777). They found a strong, negative relationship between such stressors and overall job satisfaction. Using self- and peer-reported data, their results demonstrated a relationship between workers experiencing job stressors and some of these counterproductive behaviors being enacted thereafter (Penney & Spector, 2005). Tracy (2009) has also uncovered linkages between stress and significant reduction in employee engagement in the workplace. Therefore, due to these observed relationships between stress and other various impacts on workplace interactions, further analysis into its relationship with verbal rumination behaviors is warranted. Stressful interactions, particularly in the workplace, often prompt employees to feel like they must discuss the issues with their colleagues as a coping mechanism, perhaps in a repetitive, ruminative manner. However, as research has suggested, enacting such ruminative behaviors is likely not the most productive method, though it commonly used (Boren, 2014; Cohen & McKay, 1984; Haggard et al., 2010) As such, the following hypothesis is proposed.

H2: Perceived stress will be positively associated with verbal rumination.

### **Organizational Antecedents**

As previously discussed, three levels of antecedents likely play a role in an individual's decision to verbally ruminate in an organization. Kassing (1997, 1998, 2000) posited that organizational identification, perceived level of tolerance, and the organization's socialization process as reflections of organizational culture which might affect dissent expression. Cameron and Quinn (1999) defined organizational culture as "the core values, assumptions, interpretations, and approaches that characterize an organization" (p. 28).

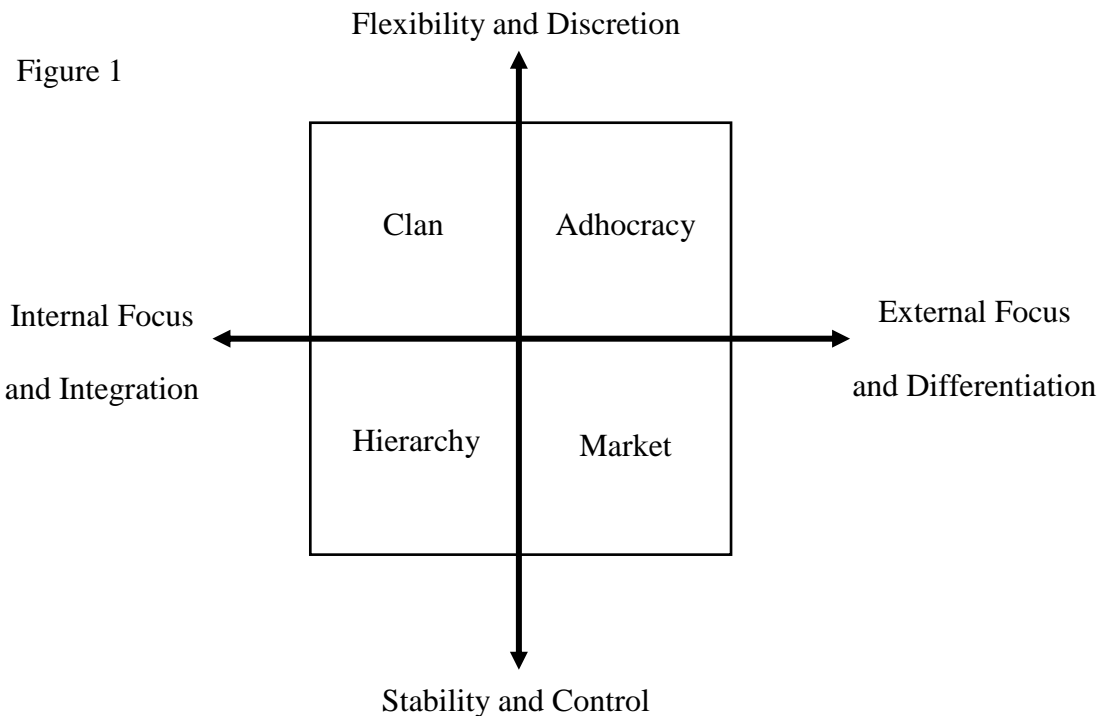
Cameron and Quinn's (1999) Organizational Culture Assessment Instrument (OCAI) seeks to simplify organizational culture, a massively complex concept, by asking employees a series of questions focused on six key areas: dominant characteristics, organizational leadership, management of employees, organizational glue, strategic emphases, and criteria of success (Cameron & Quinn, 1999, pp. 20-22). Based on the member's responses to these six categories, the OCAI plots the organization within a four-quadrant grid, based on two pairs of polarizing features. The first pair is flexibility and discretion/stability and control; the second pair is internal focus and integration/external focus and differentiation. The four major culture types which emerge from these distinctions are as follows: clan, adhocracy, hierarchy, and market (see Figure 1).

Organizations in the "clan" category, named for their familial-like tendencies, contain strong hints of "shared values and goals, cohesion, participativeness, individuality, and a sense of we-ness" (Cameron & Quinn, 1999, p. 36). In such environments, remnants of the human relations movement are prominent. Teamwork and employee development are central themes of every day interactions, and managers "empower employees and facilitate their participation,

commitment, and loyalty” (p. 37). Due to the ever-changing conditions of technologically driven organizations, the adhocracy culture was formed. It rests on the premise that “innovative and pioneering initiatives are what lead to success...and that the major task of management is to foster entrepreneurship, creativity, and activity on the cutting edge” (p. 38).

Viewing bureaucracy as “the ideal form of organization because it led to stable, efficient, highly consistent products and services” is reflective of a hierarchy culture (Cameron & Quinn, 1999, p. 33). Many organizations still align with these values today, and those that do are typically comprised of “large numbers of standardized procedures, multiple hierarchical levels, and an emphasis on rule-enforcement” (p. 34). The market culture “refers to a type of organization that functions as a market itself” and is characterized by “competitiveness and productivity...through a strong emphasis on external positioning and control” (p. 35).

Though each of these four culture types has distinct merits and benefits for organizations in their respective industries, it is clear that some culture types offer certain affordances that



others may not. To that end, organizations with a more flexible environment are expected to house an environment where verbal rumination is more accepted and more common than in organizations with a more stable culture. Therefore, it is hypothesized that clan and adhocracy cultures will be associated with greater amounts of verbal rumination than those in hierarchy and market cultures.

H3: Employees in organizations displaying a “clan” or “adhocracy” culture will engage in more verbal rumination behaviors as compared to those in “hierarchy” or “market” cultures.

### **Relational Antecedents**

Workplace relationships are often extremely influential on outcomes such as job satisfaction and employee morale. Researchers have studied interactions with peers and leaders from countless perspectives, each adding unique pieces of understanding to the communicative body of knowledge related to the topic. Two such examples are insights gained from examining leader-member exchanges (LMXs) and coworker exchanges (CWXs). Team member exchanges (TMXs) (Seers, Petty, & Cashman, 1995) and work group exchanges (WGXs) (Dunegan, Tierney, & Duchon, 1992) have previously been analyzed to “focus on a member’s relationship to his or her team as a whole” (Sherony & Green, 2002, p. 542). However, analyzing the quality of CWXs in a workplace is more informative as an antecedent of verbal rumination because CWX research focuses on dyadic relationships in the workplace (Sherony & Green, 2002).

Scholars have investigated LMX interactions to uncover the implications that a favorable or unfavorable leader-member relationship might hold for employees. LMX theory is rooted in the idea that leaders develop unique, individualistic relationships with each of their employees, each founded upon mutual respect, trust and obligation between the two parties (Graen & Uhl-

Bien, 1995). In the process of developing a CWX theory to accompany these other conceptualizations of workplace interactions, Sherony and Green (2002) “conceptualized CWX as a dyadic process and measured the quality of CWX along similar dimensions as used by LMX” for several critical reasons (p. 542). Namely, Sherony and Green argued that the LMX dimensions of mutual respect, trust, and obligation are also present in relationships among coworkers, and that “group members provide each other with social support and feelings of personal worth” (p. 542).

It also stands to reason that the enactment of verbally ruminative action among employees might be encouraged or discouraged based on the quality of LMXs of various employees in the organization. As such, Sherony and Green (2002) adapted the tenets of LMX theory and developed a measure of coworker exchanges (CWXs) which allowed for greater insight into the network of dyadic relationships that emerge in workgroups. Their work considered “whether LMX relations have any effect on exchange quality between coworkers” (p. 543). Using Heider’s (1958) theory of balance, Sherony and Green proposed that an LMX-CWX triad (depicting the relationships between one leader, two subordinates, and the coworker relationship between the two subordinates) likely has a propensity to move towards a balanced state. An example of a balanced triad would be if the two coworkers have positive sentiments toward each other, and each have high quality exchanges with their leader. Another balanced triad would be if the leader had negative exchanges with both coworkers, but the CWXs were positive between each other. Sherony and Green investigated whether an unbalanced triad would move toward a more balanced state, wherein either the LMXs or CWXs would suffer or improve along the way. Sherony and Green’s (2002) results confirmed their prediction that “within a triad of dyadic relationships there will be a tendency to move toward balance” (p. 547).

As such, to truly understand the breadth of relational influences on the inclination of an employee to engage in verbal rumination in the workplace, examination of LMXs and CWXs is imperative to reveal a more accurate depiction of the dyadic relationships in play. Since verbal rumination conversations require social support and a certain amount of trust between the two individuals, it is predicted that an employee is more likely to engage in verbal rumination behaviors in the workplace if he/she has access to coworkers or leaders with whom a close relationship is already in place. Therefore, it is predicted that strong interpersonal ties in the form of LMXs and CWXs in an organization is indicative of an environment where verbal rumination might be more likely to occur among these dyadic relationships.

H4a: High-quality LMXs will be associated with increased verbal rumination.

H4b: High-quality CWXs will be associated with increased verbal rumination.

### **Individual Antecedents**

Individual factors also influence an employee's choice to engage in ruminative behavior. First, amount of perceived stress is thought to be correlated to verbal rumination levels, for reasons previously discussed. The more perceived stress an individual has, the more he/she will engage in verbal rumination as a coping mechanism. Individual antecedents may also include elements such as tenure within the organization, organizational rank, industry, and demographic elements. Tenure and rank are likely related to verbal rumination for a couple of reasons. A long-time member or highly regarded employee might be more willing to openly express his/her feelings about the organization, may have developed more strong ties with other members, or may feel exempt from sanctions. Additionally, certain industries may lend themselves to fostering a greater amount of verbal rumination among employees either due to the nature of the work or common issues faced by employees that they feel need to be discussed more repetitively.

RQ: To what extent do individual factors influence verbal rumination behaviors?

H5a: Members who have been in their organizations longer are more likely to verbally ruminate than those who have been in their organizations for a shorter period of time.

H5b: Higher-ranked organizational members are more likely to verbally ruminate than lower-ranked organizational members.

## **Method**

### **Recruitment**

Students in a basic communication course at a private university in the United States earned class credit by submitting email addresses of potential participants. Criteria for participants were as follows: 1) must be 18 or older 2) must work at least 35 hours per week at their current organization 3) must have been at their organization for at least one year and 4) not hold a position in upper management (CEO, CFO, etc.). Students received tiered credit based on the number of completed responses of their provided contacts. This sampling method was used because it enables a researcher to obtain respondents from an assortment of organizations with varying cultures (e.g. Kramer & Tan, 2006).

Of the 807 responses, 73 participants did not meet the criteria listed above and were removed from the data set. The sample ( $N = 734$ ) was comprised of 339 males and 376 females; 19 participants chose not to provide this information. The most commonly reported age groups were 45-54 ( $N = 288$ ), 55-64 ( $N = 131$ ), and 25-34 ( $N = 117$ ). Most participants had been in their organization for 1-5 years ( $N = 288$ ), 6-10 years ( $N = 146$ ), or for more than 20 years ( $N = 123$ ).

### **Measures**

The survey began by guaranteeing anonymity; respondents were not asked to list their name or the name of their organization, and the data was not affiliated with the email address



used to distribute the survey. All respondents began the survey by completing the verbal rumination measures and ended with demographic data. I organized the survey in such a way as to present all other scales in a random order to reduce the potential impact of participant fatigue.

**Verbal Rumination Measures.** The first section of the survey provided participants with a brief definition of verbal rumination, then instructed them to think of interactions with one or more coworkers in which they have engaged in these behaviors (see Appendix). Respondents first indicated the number of coworkers they ruminate with in a two-week period. With those individuals and instances in mind, they then completed items from a modified version of the Co-Rumination Questionnaire (CRQ) (Rose, 2002). Participants answered each item on a 5-point Likert scale ranging from 1 (*not at all true*) to 5 (*really true*).

The original CRQ items included measures such as “we talk for a long time trying to figure out all the different reasons why the problem might have happened” and “we usually talk about the problem every day even if nothing new has happened” to assess the repetitive behaviors between a specific dyad (Davidson et al., 2014). However, since verbal rumination does not require the presence of the second ruminating individual in the same way that co-rumination does, I modified it accordingly. I also adjusted the measure to reflect behaviors among coworkers rather than among friends. For example, the adapted versions of the two example items provided stated “I talk to my coworker(s) for a long time trying to figure out all the different reasons why the problem might have happened” and “I talk to my coworker(s) about the problem every day even if nothing new has happened.”

**Organizational-Level Influence Measures.** Next, respondents completed the Organizational Culture Assessment Instrument (OCAI) and evaluated the current state of their organization’s culture (Cameron & Quinn, 1999). Analysis of a culture using the OCAI has been

“extremely useful in helping to organize and interpret a wide variety of organizational phenomena” (p. 28). In this measure, respondents allocated 100 points over a series of four statements within each of the six culture aspects listed previously: dominant characteristics, organizational leadership, management of employees, organizational glue, strategic emphases, and criteria of success (Cameron & Quinn, 1999, pp. 20-22). The order of each of the six culture assessments was randomized.

Each of the six categories contained four statements among which the 100 points were divided. Each of those four statements corresponds with one of the four culture types: clan, adhocracy, hierarchy, and market. For example, the clan statement under organizational leadership stated “the leadership in the organization is generally considered to exemplify mentoring, facilitating, or nurturing” and the adhocracy statement in the same category read “the leadership in the organization is generally considered to exemplify entrepreneurship, innovating, or risk taking” (Cameron & Quinn, 1999, p. 23) This method of analysis and cultural categorization has proven to be “very robust in explaining the different orientations, as well as the competing values, that characterize human behavior” because each represents “basic assumptions, orientations and values – the same elements that comprise an organizational culture” (p. 33).

**Relational-Level Influence Measures.** To evaluate relational-level antecedents, respondents completed the LMX-MDM and CWX scales (Liden & Maslyn, 1998; Sherony & Green, 2002). The 11-item 7-point LMX-MDM scale asks questions such as “I respect my supervisor’s knowledge of and competence on the job” and “I do work for my supervisor that goes beyond what is specified in my job description” with responses ranging from “*strongly disagree*” to “*strongly agree*” (Liden & Maslyn, 1998, p. 56).

Sherony and Green (2002) adapted questions from an earlier LMX scale (Graen & Uhl-Bien, 1995) to measure coworker exchanges, and removed one item due to its lack of applicability to a coworker relationship. The CWX scale is comprised of six 5-point items each with a unique scale. For example, “How well [do your coworkers] understand your job problems and needs” is rated from “*not a bit*” to “*a great deal*” while “How would you characterize your working relationship with your [coworkers]” ranges from “*extremely ineffective*” to “*extremely effective*” (Graen & Uhl-Bien, 1995, p. 237). Though the items in the LMX-MDM scale and the CWX scale do not mirror one another, the LMX-MDM was still thought to be a more appropriate selection for this study due to its reliability over the original LMX. Sherony and Green’s (2002) CWX was retained as it is also the most appropriate selection for the current study.

To assess perceived social support from supervisors, other workplace sources, and outside sources, Ganster et al.’s (1986) 4-item 5-point scale was used. This measure includes items such as, “How much does each of the following people go out of their way to do things to make your life easier for you?” which was rated from “*a great deal*” to “*none at all*” and “How easy is it to talk with each of the following people?” rated from “*extremely easy*” to “*extremely difficult*” (Ganster et al., 1986, pp. 103-104). Respondents rated the four items once each for supervisors, other workplace sources, and sources outside the workplace.

**Individual-Level Influences Measures.** Finally, the survey focused in on the individual. Scholars have used the Perceived Stress Scale (PSS) (Cohen, Kamarck, & Mermelstein, 1983) to assess the level of perceived stress of an individual. In three initial studies, the PSS demonstrated high reliability ( $\alpha = .84, .85, .86$ ) in each of the samples (Cohen et al., 1983, p. 390). Scholars have since re-examined and confirmed its reliability and validity in further in-depth analysis

(Roberti, Harrington, & Storch, 2006). The PSS assesses how often respondents feel they have been affected by certain stressors in the past month such as “How often have you felt that you were on top of things?” and “How often have you found yourself thinking about the things you have to accomplish?” with responses ranging from “*never*” to “*very often*” on a 5-point scale (Cohen et al., 1983, pp. 394-395). To conclude, the survey collected each respondent’s length of tenure at their current organization, positions currently and formerly held within the organization, the organization’s industry, and demographic data.

Each different segment of the survey held a crucial aspect of being able to understand the various organizational, relational, or individual influences which may be most likely to foster or inhibit an environment of verbally ruminative actions by employees. Based upon the results collected, it is my hope that managers or Human Resources representatives alike may be able to use the findings to better their respective organizations. If high levels of verbal rumination were found to be associated with any combination of variables tested, either organizationally, relationally, or individually, effective training strategies to combat these trends could be developed and implemented in the future.

## **Results**

Descriptive statistics, scale reliabilities, and correlations between variables are provided in Table 1. As will be discussed in subsequent sections, results indicated minimal support garnered for the organizational level variables, while relational and individual factors each revealed significant and intriguing findings.

### **Social Support and Rumination**

Hypothesis 1 proposed that perceived social support in an organization will be associated with verbal rumination behaviors. I used a multiple linear regression model to predict verbal

rumination behaviors based on perceived social support received from three groups: immediate supervisor, other people at work, and others outside of work (spouse, friends and relatives). The overall regression model was not significant, ( $F(3, 728) = 2.53, p = .06$ ). However, perceived social support from coworkers was significantly, inversely associated with verbal rumination, ( $\beta = -.11, SE = .04, t(-2.59) = -.12, p = .01, R^2 = .01$ ). One potential explanation is that the less perceived social support an employee feels from his/her coworkers, the more verbal rumination behaviors he/she engages in with them. Alternatively, it is also possible that the more prone an individual is to verbally ruminate, he/she may receive less support from other people. Thus, hypothesis 1 received partial support.

### **Stress and Rumination**

Hypothesis 2 examined the effects of stress on verbal rumination patterns. A regression demonstrated that the presence of stress is significantly associated with a greater level of verbal rumination, ( $\beta = .47, SE = .06, t(8.45) = .30, p = .000, R^2 = .09$ ), indicating full support for H2. This positive association indicates that the more stress a person has felt over the course of the past month, the more he or she ruminated with coworkers; it could also be the case that the more verbal rumination one engages in, the greater his/her ensuing stress level is.

### **Organizational Influences**

Regarding organizational influence, the Organizational Culture Assessment Instrument (Cameron & Quinn, 1999) measured each respondent's perceptions of his/her organization's culture. Recall that the OCAI measured six dimensions of organizational culture. Each dimension contained four statements which describe the aspects of that dimension for each of the four culture types (see Appendix). The first statement for each of the six dimensions, Statement

A, was a description of a clan culture. Each of the second statements, Statement B, was indicative of an adhocracy culture, and so on.

My intention for using this scale was to assess the degree to which participants felt their organization aligned with each culture type and which type they aligned most closely with. To accomplish this, I summed each participant's responses along the six dimensions for each of the four culture types. In other words, each of the six "Statement A" point values were totaled to create an overall identification value for clan culture. Each of the six "Statement B" values were totaled for an overall adhocracy score. I followed the same process for market and hierarchy cultures as well. Once those four totals were attained, I then matched participants to one culture type based on which of the four summations was highest. This process allowed me to determine which set of statements each participant felt was most descriptive of his/her organization's culture. The breakdown of participants per culture type was as follows: clan ( $N = 316$ ), adhocracy ( $N = 61$ ), hierarchy ( $N = 138$ ), and market ( $N = 219$ ).

The first ANOVA test corresponded with the proposition of H3 that individuals in clan and adhocracy cultures would display more verbal rumination behaviors than those in hierarchy and market cultures. This hypothesis was not supported ( $F(1, 732) = .39, p = .53$ ). I then conducted an ANOVA to determine if rumination behaviors differed between any of the culture types individually, rather than grouped into the two pairs (see Table 2). Results indicated non-significance in this case as well ( $F(3, 730) = 1.10, p = .35$ ). Thus, hypothesis 3 was not supported although it should be noted that a small number of respondents in "adhocracy" cultures as compared to the other three types could have influenced results.

### **Relational Influences**

Next, I analyzed relational-level influences on verbal rumination behaviors. Hypotheses 4a and 4b predicted that high-quality leader-member exchanges (LMXs) and high-quality coworker exchanges (CWXs) would be indicative of greater amounts of verbal rumination in the workplace. A regression analysis revealed overall significance for the relationship between workplace exchanges and rumination when considering LMXs and CWXs together, ( $F(2, 731) = 3.81, p = .02, R^2 = .01$ ). In this particular test, results indicated a significant inverse relationship for LMXs and rumination in H4a, ( $\beta = -.07, SE = .03, t(-2.59) = -0.11, p = .01$ ) and a significant positive relationship for CWXs and rumination in H4b, ( $\beta = .09, SE = .05, t(2.03) = 0.08, p = .04$ ). However, neither type of exchange yielded significant results individually. LMXs were still negatively associated with rumination behaviors, though non-significantly ( $\beta = -.04, SE = .02, t(-1.87) = -0.07, p = .06$ ) and CWXs revealed an even weaker association ( $\beta = .04, SE = .04, t(0.94) = 0.04, p = .35$ ).

Due to the significant, positive correlation between LMXs and CWXs (see Table 1) and the results listed above, there is reason to assume there is some level of shared variance between the LMX and CWX constructs. Additionally, there are likely suppression effects acting on both, which are impacting overall contribution to verbal rumination outcomes. Nonetheless, when considering the individual components of LMXs and CWXs, apart from their shared portions, the regression results reveal that these individual pieces still have significant associations with verbal rumination patterns.

### **Individual Influences**

Finally, I measured the extent to which individual factors such as sex, age, tenure, role, or industry determine verbal rumination. Of these five individual elements, age was the only factor with significant differences in verbal rumination in an organization. An ANOVA examined how

age influenced verbal rumination outcomes across groups and revealed a significant overall difference, ( $F(5, 714) = 6.07, p = .00, \eta^2 = 0.04$ ). Respondents ages 18-24 were significantly more likely to verbally ruminate ( $p < .01$ ) in the workplace than those ages 45-54, 55-64, and 65-74. Additionally, respondents 35-44 also engaged in significantly more verbal rumination ( $p < .05$ ) than those ages 45-54.

Hypothesis 5a proposed that tenure in the organization would be associated with verbal rumination behaviors and was not supported, ( $F(4, 727) = 1.17, p = .32$ ), nor was Hypothesis 5b related to rank in the organization, ( $F(12, 720) = 1.40, p = .16$ ). There were no significant differences observed between males and females (see Table 2), ( $F(2, 726) = 0.90, p = .40$ ), or between industries, ( $F(28, 698) = 1.12, p = .30$ ).

### **Discussion**

The purpose of this study was to determine the degree to which verbal rumination in an organization might be influenced by organizational, relational, and individual factors. My goal was to assess whether verbal rumination behaviors were occurring more frequently in some types of organizations than others, the features of organizational relationships which might impact amounts of verbal rumination, if the decision to ruminate is a product by individual motivations, or some combination of the three. Results revealed that organizational culture did not significantly impact this communication pattern, but that relational and individual factors held strong associations with verbal rumination in organizations. Each level and its corresponding variables will be discussed separately, before overall applications and limitations are presented.

#### **Organizational-Level Results**

Participants in the present study are from a vast array of organizations, each with their own cultures, traditions, expectations, and norms. While it seems logical that a member's



communicative behavior may be shaped by these elements of his/her organization, that was not the case in these data. The lack of association found between organizational culture types and verbal rumination behaviors could be due to a variety of factors. From a broad perspective, perhaps organizational culture does not influence this unique form of dyadic communication. As will be discussed in forthcoming sections, it appears that coworkers choose to engage in or refrain from verbal rumination as a result of close relationships and individual variables, regardless of the cultural expectations of the organization as a whole. It stands to reason that perhaps organizational culture influences the *types* of interpersonal relationships or the amount of stress employees experience which in turn prompt rumination, rather than being its own indicator of these interactions.

Another explanation could be related to the use of Cameron and Quinn's (1999) OCAI as the instrument of assessment, which is certainly not without its own limitations. Culture is such a complex and difficult concept to define, and perhaps even more daunting to measure. Martin (2002) described two approaches to organizational culture and how each has implications for continued research. She described how some scholars have approached culture as "a reified object, a 'thing' 'out there' that can be objectively perceived and measured, the same way, by anyone who views it," which informed the perspective used in this study (Martin, 2002, p. 34). On the other hand, researchers have argued that "cultural members subjectively interpret and represent what they observe rather than perceiving an objective reality" (p. 34). However, in her analysis, Martin clearly asserted that these assessments are neither mutually exclusive nor polarized; each contribute to the ways in which our understanding of culture is both informed and constrained. As such, although the OCAI has plenty of merits, one of its major drawbacks is that each organization's classification into one of the four culture types came from a single

member's perspective, based on his/her perception of reality within the organization. That is to say, culture is an organizational-level variable, but I measured it at the individual level of analysis.

Additionally, the means of reducing participants' responses to a single culture type could have limited the analysis. Recall that the highest scores on each culture dimension determined each participant's organizational culture. The OCAI's original function was to plot the four sums on the four-quadrant grid to create a polygonal shape for each organization. This method allowed for the visual realization that perhaps some organizations have two culture sums that are both very high or almost equivalent; unfortunately, this method of analysis was not feasible for the current study. Finally, the overall results were likely affected by the fact that there was such a small proportion of participants in adhocracy cultures as compared to the other three types (see Table 2).

### **Relational-Level Results**

Perhaps unsurprisingly, verbal rumination behaviors were highly associated with several relational-level influences. Furthermore, some of the conclusions within this realm were unexpected and provide interesting outlets for future research. First, the examination of social support from the three groups (immediate supervisor, other people at work, and spouse, relatives, and friends) indicated that only support from others at work is significantly associated with verbal rumination behaviors. However, these two constructs are inversely related. This result indicates either that less perceived social support from coworkers is associated with more verbal rumination, or that more social support in the workplace is linked to decreased verbal rumination. Interestingly, coworker exchanges (CWXs) yielded a significant positive

relationship with verbal rumination behaviors. While these two results appear contradictory on the surface, a reexamination of the items in these two measures may provide additional clarity.

The items in the CWX scale (Sherony & Green, 2002) focus on the nature of the working relationship among coworkers. It is meant to assess how people function in the workplace together, their level of understanding of each other's job functions, and overall satisfaction with the relationship. Ganster et al.'s (1986) social support scale, to some extent, measures the depth of the relationships an individual has with each of these groups of potential support providers. It probes underlying aspects of interpersonal relationships such as being reliable in tough situations and the level of perceived sacrifice. The seemingly contradictory findings suggest that the formation of solid working relationships with others at work can provide an outlet for verbal rumination behaviors to take place; however, if those relationships are not deep enough to be a source of social support, this can actually increase rumination as well. Perhaps the absence of truly supportive, meaningful relationships with coworkers keeps the dyad stuck in the ruminative cycle because they do not feel comfortable sharing enough details with one another to engage in creative problem solving with one another.

There are other possibilities for these results. It could also be the case that individuals are engaging in rumination behaviors with coworkers with whom they share high-quality exchanges out of desperation for a socially supportive workplace relationship, which perhaps they are lacking. Each time the ruminating individual brings up the topic once more, he/she could be begging for that coworker to dig deeper into the issue, but the conversation idles in rumination until the next time the topic resurfaces. Another way of interpreting this finding is that high-quality CWXs in the workplace provide an outlet for verbal rumination, as was mentioned before, but when those dyadic relationships are indeed capable of providing social support to one

another, the urge to ruminate in the workplace is reduced because the issue is resolved or eventually dissipates. Finally, it stands to reason that individuals with a high propensity to engage in verbal rumination in the workplace are less likely to receive social support from their coworkers, even if they perceive these to be high-quality relationships.

Considering scholars have already discovered that receiving poor social support during an instance of verbal rumination further increases the amount of anxiety felt after the conversation, the importance of the relationship between social support and rumination in the workplace cannot be understated (Afifi et al., 2013). As was mentioned previously, though these results seem to clash against one another at first glance, deeper examination of the potential underlying causes of these behaviors prompt intriguing ideas for future scholarship pertaining to workplace dyads and rumination.

Another element of relational-level influences to consider is the significant, inverse relationship found between leader-member exchanges (LMXs) and verbal rumination. This inverse relationship suggests that high-quality exchanges between a leader and organizational member are associated with reduced prevalence of verbal rumination in the workplace. Perhaps individuals have fewer concerns on which to ruminate when positive relationships with supervisors are present, or feel the need to ruminate more when these relationships are burdensome. Though this finding is significant in the opposite direction than I originally hypothesized, it may be logical to assume that low LMXs invoke stronger desires for employees to ruminate, especially if they do not feel empowered to directly solve underlying issues with their supervisor. Furthermore, negative leader-member exchanges could be a popular conversation in ruminative interactions among coworkers with high-quality exchanges. The more often subordinates in the same workgroup experience negative interactions with a leader, they

may feel prompted to discuss the issues after the fact. Without agency to effectively manage exchanges with the leader, the cycle of rumination would continue to perpetuate itself.

Now that the CWX and LMX effects on rumination have been presented individually, it is important to acknowledge the previously mentioned suppression effect on these variables. There is a myriad of factors which could be contributing to the shared variance observed between leader-member exchanges and coworker exchanges. Perhaps an all-around more affable person is more likely to have higher quality exchanges with leaders and coworkers alike; maybe an employee's level of organizational commitment influences desire to maintain positive relationships. Regardless of the underlying reasons for the overlap between these constructs, after accounting for their shared variance, results indicated each still has a unique relationship with verbal rumination.

Sherony and Green's (2002) application of Heider's (1958) balance theory in organizational triads is a unique potential explanation for the observed relationship between LMXs, CWXs, and verbal rumination. Balance theory suggests that if a triad, in this sense, one leader and two subordinates, is in an unbalanced state, it will eventually move toward balance (Sherony & Green, 2002). The exchanges between dyads are likely to improve or suffer over time to allow for this shift. Taking this theoretical application into consideration provides intriguing support for why these constructs cannot be considered as completely independent from one another. As balance theory suggests, the quality of these relationships is continually impacting other sides of the triad as the three try to achieve a balanced state. As such, if low-quality LMXs and high-quality CWXs both contribute to increased verbal rumination, the relationship between an individual's coworker and his/her leader ought to be examined as well in order to gain a more complete view of whether this triad is in a balanced or unbalanced state.

### **Individual-Level Results**

Finally, I analyzed perceived stress levels and demographic variables against verbal rumination. Consistent with previous research (Boren, 2014) stress and rumination behaviors were highly significantly associated with one another. This finding is reasonable especially when considering the defining characteristics of verbal rumination as provided by Afifi et al. (2013) that it involves “continually talking about a problem and its potential consequences, negative emotions surrounding the problem, and one’s role in it” (p. 396). Taking into consideration Zawadzki et al.’s (2012) cyclical conceptualization of the relationship between stress and verbal rumination, it stands to reason that the more stress a person feels, the more verbal rumination he/she will engage in about the problem and its potential consequences, likely to try to ward off the issue or deal with its ramifications. By engaging in more verbal rumination rather than active problem solving, stressors are likely to continue thereafter, further increasing the propensity for future rumination. Even so, scholars have shown that the presence of rumination diminishes the typical buffering effect socially supportive relationships have on stress or related outcomes (Boren, 2014; Rose, 2002).

The final element of individual influence found to be significantly associated with verbal rumination behaviors was age. In general, younger participants, particularly those ages 18-24, engaged in significantly more verbal rumination behaviors than older individuals (see Table 2); this difference could be the result of a multitude of factors. Perhaps seasoned organizational members are more resigned to typical job stressors and thus less likely to ruminate about them later. Younger organizational members may feel as if they have less job security, do not feel equipped to handle stressors in the workplace in a forthright manner, or perhaps are inclined to seek the council of older organizational members in a ruminative manner when work issues do

arise. It could also be the case that this younger group, made up of Millennials, could be engaging in more rumination because they “place a high value on and expect personal achievement” which is likely due to socialization patterns from parents (Myers & Sadaghiani, 2010, p. 234). When considering also that tenure and rank in an organization did not have significant associations with rumination, the discrepancy in these patterns based on age is a curious finding, and deserves further study. I found no significant differences between sex and rumination behaviors, despite numerous studies indicating sex is likely a determinant of rumination behaviors (Haggard et al., 2010; Rose, 2002; Rose et al., 2007).

In comparison to studies which have examined co-rumination outcomes in the workplace (Boren, 2013; 2014; Haggard et al., 2010), findings are similar. Haggard et al. (2010) revealed that extreme instances of workplace stress such as abusive supervision were significantly, positively correlated with instances of co-rumination among coworkers. Boren’s (2013; 2014) two studies were concerned with how rumination acts as a mediator on the relationship between social support and outcomes such as stress, burnout, and emotional exhaustion in the workplace. Though these scholars examined co-rumination rather than verbal rumination, and were concerned with a different combination of variables than the present study, my findings align with the previous body of literature. However, by analyzing verbal rumination from an organizational, relational, and individual perspective in the same study, my results contribute to a more informed understanding of how these behaviors are enacted within and alter interpersonal relationships of organizational dyads. Additionally, the relational-level results bolster previous research on rumination in organizations by revealing more detail about how the specific features and relative depths of relationships between coworkers contribute to these behaviors.

### **Practical Applications**

There are numerous approaches one could take to apply this research to an organizational context, particularly from the relational-level results. Encouraging employees to engage in more socially supportive behaviors with one another would likely reduce the prevalence of these instances. Participating in solution-focused dialogue with a ruminating individual would ideally prompt action toward solving the issue, rather than continuation of cyclical discourse. Along these same lines, improvements in leader-member exchanges would likely aid in diminishing the harmful effects of verbal rumination as well. For most individuals, a great deal of their interpersonal interactions occur in the workplace; as such, practitioners should strive to encourage organizational members to keep these relationships as healthy and beneficial as possible, and reducing instances of verbal rumination would certainly be one way to do so.

Additionally, employees should take into consideration all three aspects of their organizational triadic relationships when evaluating these interpersonal relationships, rather than just their own exchanges with leaders and coworkers. As Sherony and Green (2002) demonstrated, an unbalanced state can impact organizational members and could potentially be contributing to increased verbal rumination as well. Regardless of the combination of relational level variables, it should be emphasized to those prone to rumination that even though the relationship is strengthened through each iteration of these conversations, mental health issues and stress continue to linger thereafter (Rose, 2002).

From the individual level, based on the results of this study, I would encourage younger organizational members to seek mentorship and guidance from older, more seasoned members if they are not doing so already. The results indicated that older individuals are much less prone to ruminative patterns, and therefore may be able to offer helpful solutions or advice regarding proper methods to handle the troublesome issues which have prompted the rumination in the first



place. In doing so, this younger generation of employees may be empowered to take action toward solving the issue in the most appropriate manner, having been advised by their mentor on how to do so.

### **Limitations and Future Research**

The most limiting element of this project is that each participant was provided by a student at a small, predominately white, private institution. Though the sample was very large, it was still somewhat homogenous. In terms of the contributions of the OCAI for organizational-level analysis, the results were limited by forcing each respondent to be categorized into one of the four culture types based solely on their highest response value. Organizational culture is such a robust construct, thus using a split-level method to group participants hindered the amount of potential insight to be gained from each individual. In some cases, the difference in overall scores between two different culture types was only one or two points, yet the method of analysis here was unable to account for such instances.

Additionally, measuring organizational- and relational-level factors from an individual level of analysis presented challenges to the results as well. The culture of an organization is such a robust construct, and verbal rumination is inherently interpersonal; thus, without confirmation on the accuracy of organizational culture assessment or the frequency of these ruminative behaviors from others in the organization, the results were limited. Finally, issues that arise from common method biases and from using a self-report survey were inevitable as well.

Returning to the original OCAI format to plot each response along the four dimensions and comparing those results with verbal rumination behaviors would be an intriguing project. Cameron and Quinn (1999) also presented composite plots of organizational culture based on industry identification of multiple organizations, which could also be a potential future project

using the current data set. There is much to be explored concerning organizational-level relationships and verbal rumination behaviors, perhaps with an alternative measure of organizations or with varying methods.

Another potential avenue for future research would be to examine an employee's perception of the third side of organizational triads. The current study measured only perceptions of his/her own exchanges with leaders and coworkers, but being able to evaluate the third dyadic relationship between the individual's leader and his/her coworkers would allow for analysis of the state of the triad. It stands to reason that perhaps an unbalanced state contributes to greater workplace stress which in turn increases verbal rumination, rather than the quality of exchanges in each individual relationship. However, my results were limited to only evaluating the state of the two dyadic relationships involving each respondent.

Finally, due to the fact that relational-level antecedents, along with stress and age, proved to be more closely associated with verbal rumination, it would be fascinating to use in-depth analysis to assess individuals and their workplace rumination conversations to determine the topics that young organizational members are discussing and how these conversations may or may not be aligned with their stressors. Further research should also explore the relationship between coworker exchanges and social support from coworkers, why the perceived gap in these relationships exists, and how it specifically impacts verbal rumination among workplace behaviors.

### **Conclusion**

Verbal rumination is a unique form of dyadic communication in which cyclical talk about a single issue has become commonplace in a relationship. In reality, it often does more harm than good to its participants (Afifi et al., 2013; Boren, 2013; Rose, 2002). One of my chief goals with

this project was to discover the types of organizations where this behavior might be more accepted, more prevalent, or more encouraged and to further probe what specifically about those organizations make them so. Though this specific result was not attained, I think it is equally as fascinating that it seems to occur in all types of organizations alike. Rather, it is the unique composition of interpersonal relationships and variances between individuals that prompt these interactions.

It is important for practitioners to understand the implications of this behavior on their employees and attempt to reduce its harmful outcomes. Encouraging leaders to have more positive exchanges with their employees and advocating for coworkers to find ways to provide truly socially supportive behavior to one another could prove to be effective strategies in combatting verbal rumination, thus improving the overall health and prosperity of the organization and its members.

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Table 1

*Means, Standard Deviations, Reliabilities, and Correlations*

	<i>M</i>	<i>SD</i>	$\alpha$	1	2	3	4	5	6
1. Verbal Rumination	2.38	0.78	.95	—					
2. LMX	5.46	1.27	.95	-.07	—				
3. CWX	3.68	0.69	.86	.04	.46**	—			
4. PSS (supervisor)	2.44	1.01	.88	-.01	-.72**	-.47**	—		
5. PSS (coworkers)	2.37	0.80	.81	-.07	-.32**	-.64**	.49**	—	
6. PSS (others)	1.66	0.74	.81	.03	-.24**	-.34**	.28**	.43**	—
7. Stress	2.63	0.50	.85	.30**	-.22*	-.31**	.22**	.23**	.18**

\*\* . Correlation is significant at the 0.01 level.

\* . Correlation is significant at the 0.05 level.

PSS = perceived social support

Table 2

*Means and Standard Deviations of Individual and Organizational Antecedents*

		<i>N</i>	<i>M</i>	<i>SD</i>
Age	18-24	82	2.68	0.79
	25-34	117	2.52	0.78
	35-44	86	2.46	0.73
	45-54	288	2.27	0.72
	55-64	131	2.30	0.85
	65-74	16	1.94	0.74
Sex	Male	339	2.35	0.73
	Female	376	2.40	0.81
Culture Type	Clan	316	2.36	0.78
	Adhocracy	61	2.36	0.83
	Markey	138	2.34	0.73
	Hierarchy	219	2.48	0.82

## Appendix

Please read this brief definition:

Verbal rumination behaviors are occurring when the same topic or issue is repeatedly discussed or brought up by an individual for discussion at numerous points in time. These conversations may be repetitive in nature, but are generally centralized around the same common theme. A ruminating individual may discuss this topic with one or many different people.

With this definition in mind, please recall at least one time you enacted verbal rumination behaviors in your workplace. **Use these encounters as your guide as you complete the following portion of the survey.**

In a two week period, with how many different coworkers do you ruminate with?

- None
- 1
- 2
- 3 or more

With these individuals and instances in mind, please complete the following set of items.

	Not at all true		Somewhat true		Really true
We spend most of our time together talking about problems that my coworker(s) or I have	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If one of us has a problem, we will talk about the problem rather than talking about something else or doing something else	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After my coworker(s) tells me about a problem, I always try to get him/her to talk about it more later	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I have a problem, my coworker(s) always tries really hard to keep me talking about it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When one of us has a problem, we talk about it for a long time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When we see each other, if one of us has a problem, we will talk about the problem even if we had planned to do something else together	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When my coworker(s) has a problem, I always try to get him/her to tell me every detail about what happened	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

With these individuals and instances in mind, please complete the following set of items.

	Not at all true		Somewhat true		Really true
We spend most of our time together talking about problems that my coworker(s) or I have	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If one of us has a problem, we will talk about the problem rather than talking about something else or doing something else	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After my coworker(s) tells me about a problem, I always try to get him/her to talk about it more later	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I have a problem, my coworker(s) always tries really hard to keep me talking about it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When one of us has a problem, we talk about it for a long time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When we see each other, if one of us has a problem, we will talk about the problem even if we had planned to do something else together	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When my coworker(s) has a problem, I always try to get him/her to tell me every detail about what happened	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

With these individuals and instances in mind, please complete the following set of items.

	Not at all true		Somewhat true		Really true
After I've told my coworker(s) about a problem, my coworker(s) always tries to get me to talk more about it later	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We talk about problems that my coworker(s) and I are having almost every time we see each other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If one of us has a problem, we will spend our time together talking about it, no matter what else we could do instead	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When my coworker has a problem, I always try really hard to keep him/her talking about it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I have a problem, my coworker(s) always tries to get me to tell every detail about what happened	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We will keep talking even after we both know all of the details about what happened	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We talk for a long time trying to figure out all the different reasons why the problem might have happened	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



With these individuals and instances in mind, please complete the following set of items.

	Not at all true		Somewhat true		Really true
We try to figure out every one of the bad things that might happen because of the problem	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We spend a lot of time trying to figure out parts of the problem we can't understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We talk a lot about how bad the person with the problem feels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We'll talk about every part of the problem over and over	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We talk a lot about the problem in order to understand why it happened	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We talk a lot about all of the different bad things that might happen because of the problem	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We talk a lot about parts of the problem that don't make sense to us	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

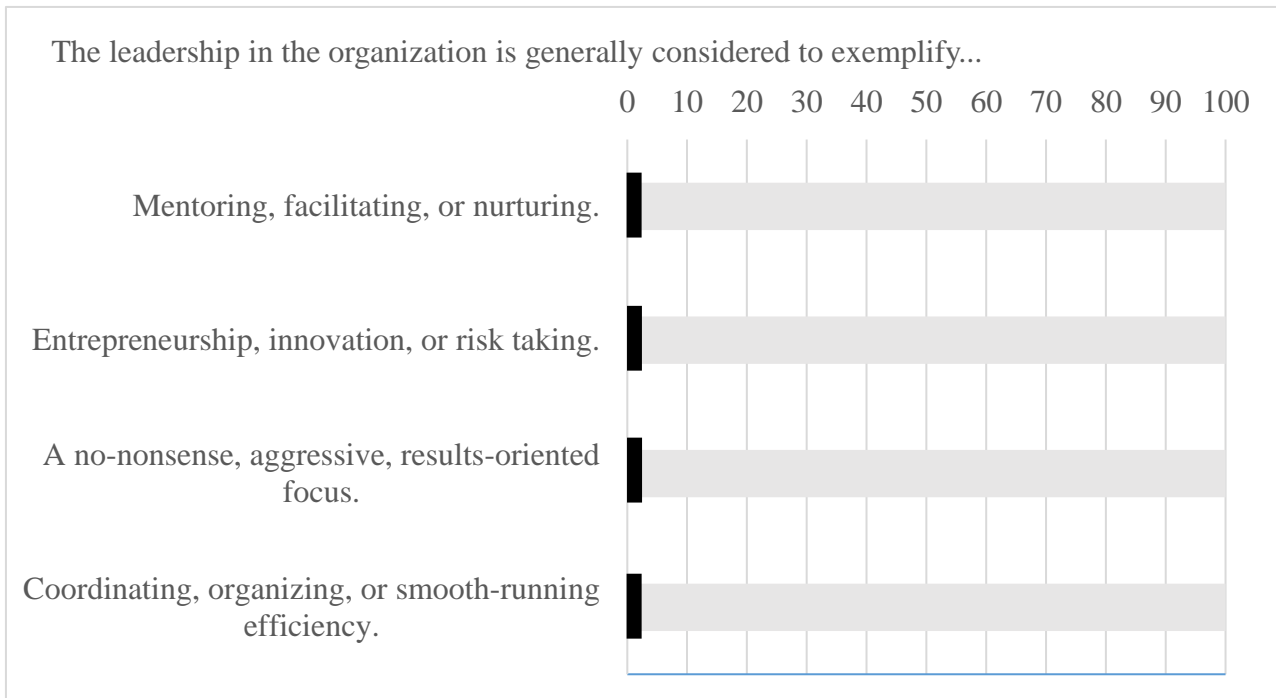
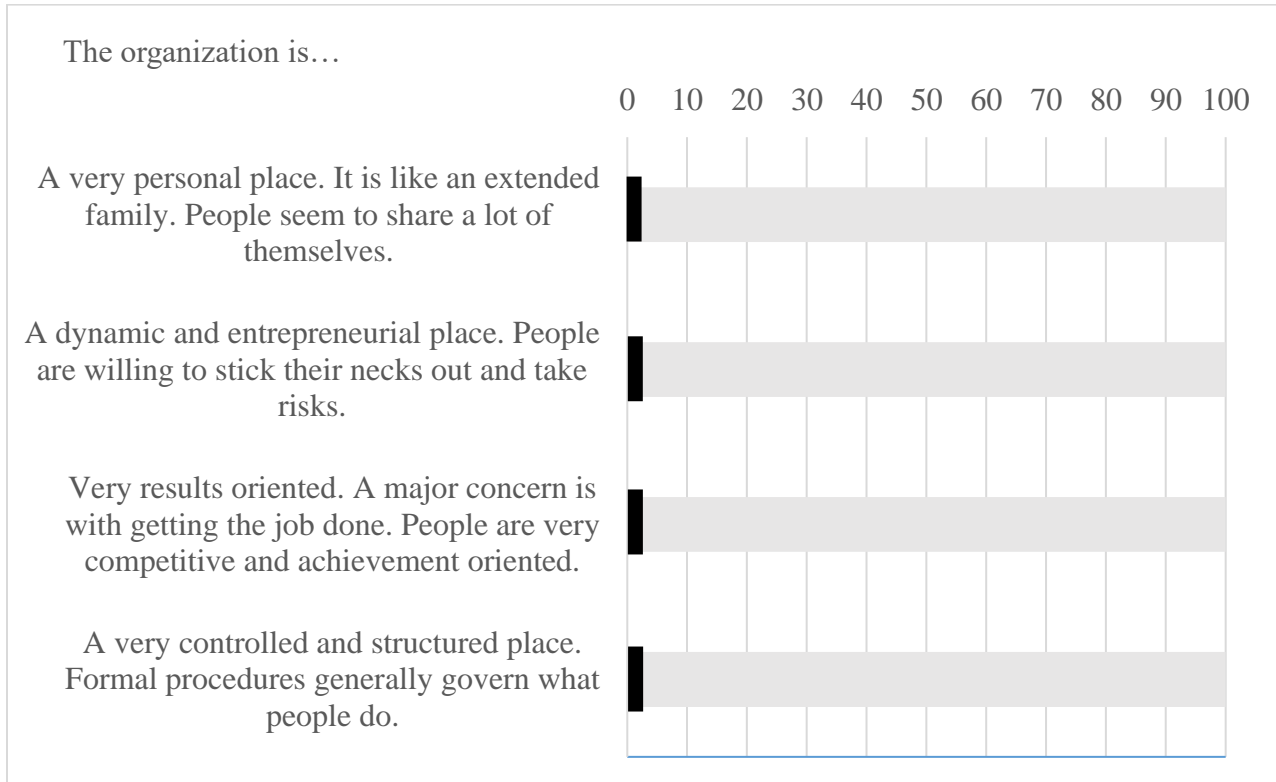
With these individuals and instances in mind, please complete the following set of items.

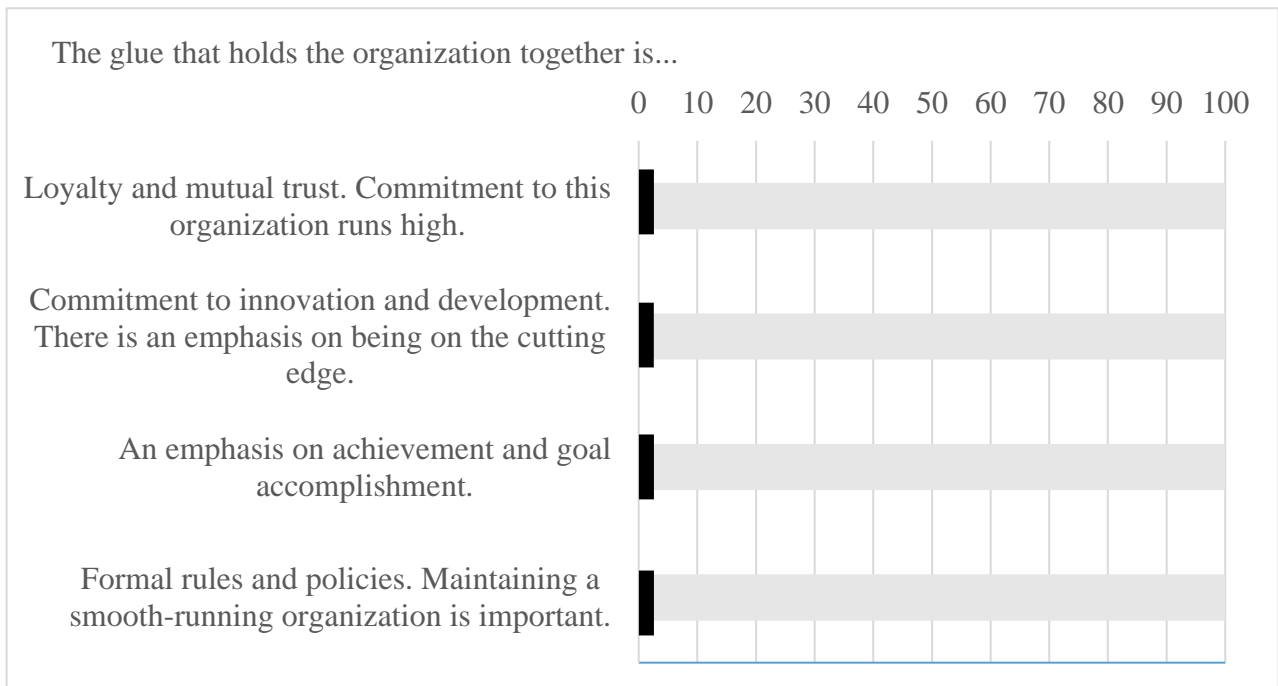
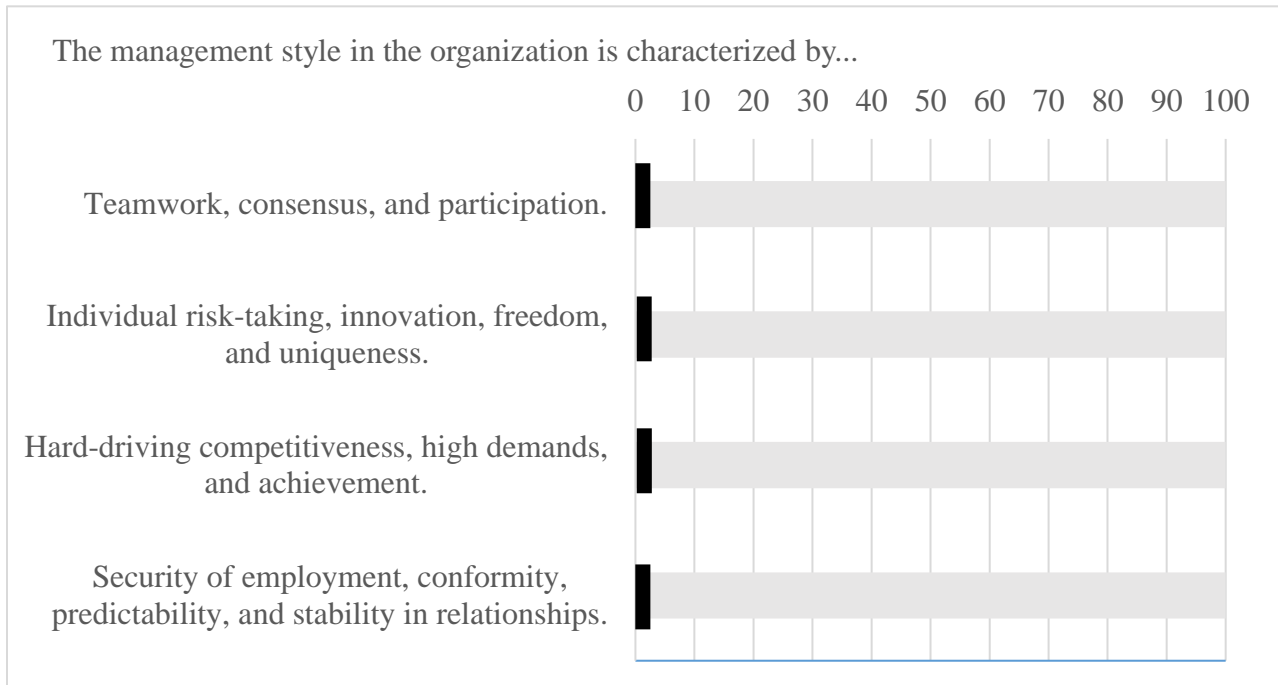
	Not at all true		Somewhat true		Really true
We talk for a long time about how upset it has made one of us with the problem	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We usually talk about that problem every day even if nothing new has happened	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We talk about all of the reasons why the problem might have happened	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We spend a lot of time talking about what bad things are going to happen because of the problem	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We try to figure out everything about the problem, even if there are parts we may never understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We spend a long time talking about how sad or mad the person with the problem feels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

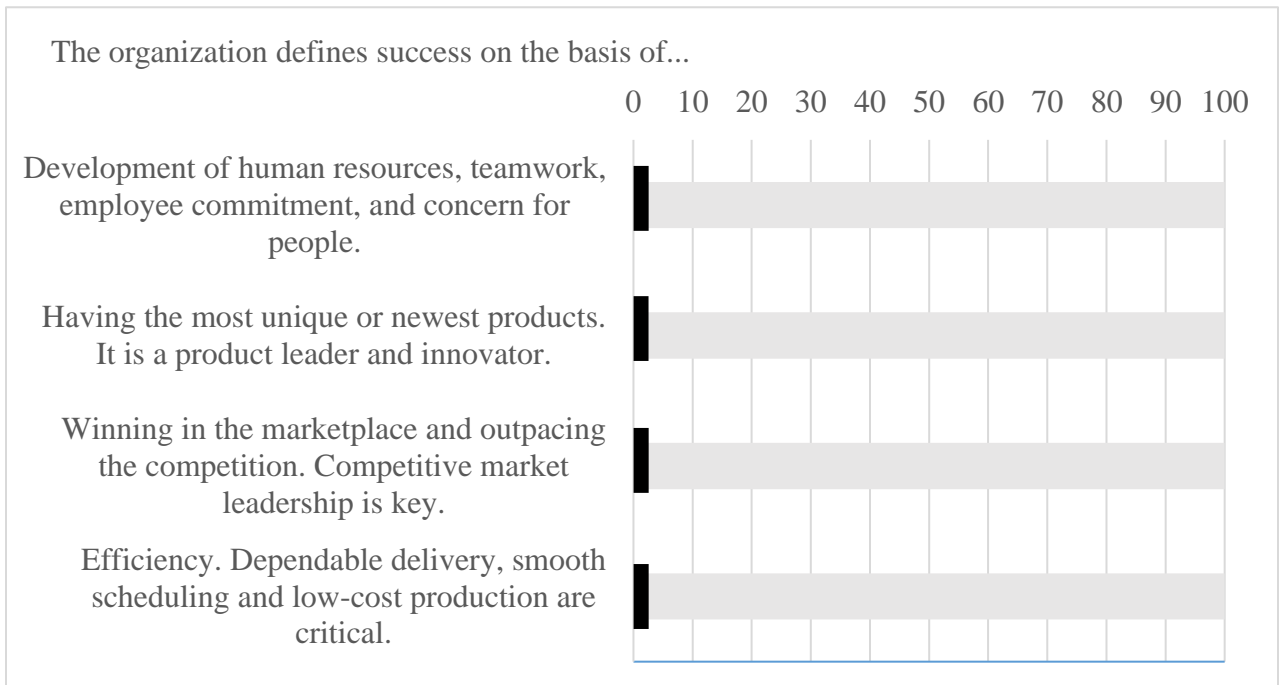
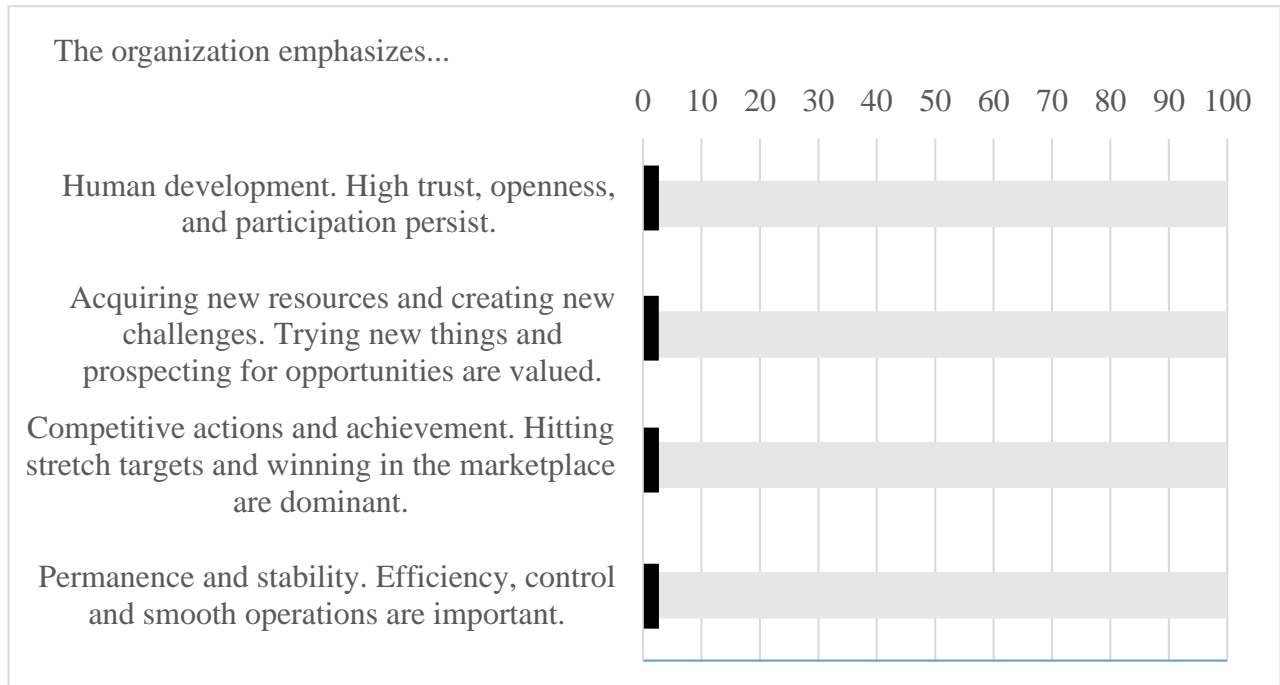
For the following six questions, each question contains four statements. Among the four statements, please divide 100 points based upon the extent to which you believe that statement describes your organization's culture.

For example, if you believe statement A is very descriptive of your organization, statements B and C are somewhat descriptive, and statement D is hardly descriptive, you might assign 50 points to A, 20 to both B and C, and 10 to D, totaling to 100 points.

The assigned point totals will be listed at the bottom of each chart for your convenience.













Please answer the following questions in regard to your coworkers.

Do you know where you stand with your coworkers? Do you usually know how satisfied they are with what you do?

Rarely	Occasionally	Sometimes	Fairly Often	Very Often
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How well do your coworkers understand your job problems and needs?

Not a Bit	A Little	A Fair Amount	Quite a Bit	A Great Deal
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Regardless of how much formal authority they have built into their positions, what are the chances your coworkers would use their power to help you solve problems in your work?

None	Small	Moderate	High	Very High
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Again, regardless of the amount of formal authority your coworkers have, what are the chances that they would "bail you out" at their expense?

None	Small	Moderate	High	Very High
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I have enough confidence in my coworkers that I would defend and justify their decisions if they were not present to do so.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How would you characterize your working relationship with your coworkers?

Extremely Ineffective	Worse Than Average	Average	Better Than Average	Extremely Effective
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How much does each of these people go out of their way to do things to make your life easier for you?

	A great deal	A lot	A moderate amount	A little	None at all
Your immediate supervisor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other people at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your spouse, friends, and relatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How easy is it to talk with each of the following people?

	Extremely easy	Somewhat easy	Neither easy nor difficult	Somewhat difficult	Extremely difficult
Your immediate supervisor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other people at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your spouse, friends, and relatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How much can each of these people be relied on when things get tough at work?

	A great deal	A lot	A moderate amount	A little	None at all
Your immediate supervisor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other people at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your spouse, friends, and relatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How much is each of the following people willing to listen to your personal problems?

	A great deal	A lot	A moderate amount	A little	None at all
Your immediate supervisor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other people at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your spouse, friends, and relatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please answer the following questions about your feelings and thoughts during the last month.

	Never	Almost Never	Sometimes	Fairly Often	Very Often
How often have you been upset because of something that happened unexpectedly?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often have you felt that you were unable to control the important things in your life?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often have you felt nervous and stressed?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often have you dealt successfully with irritating life hassles?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often have you felt that you were effectively coping with important changes that were occurring in your life?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often have you felt confident about your ability to handle your personal problems?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often have you felt that things were going your way?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please answer the following questions about your feelings and thoughts during the last month.

	Never	Almost Never	Sometimes	Fairly Often	Very Often
How often have you found that you could not cope with all the things you had to do?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often have you been able to control irritations in your life?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often have you felt that you were on top of things?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often have you been angered because of things that happened that were outside of your control?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often have you found yourself thinking about things that you have to accomplish?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often have you been able to control the way you spend your time?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often have you felt difficulties were piling up so high that you could not overcome them?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate your length of tenure at your current organization.

- Less than a year
- 1-5 years
- 5-10 years
- 10-15 years
- 15-20 years
- More than 20 years

Which of the following best describes your role in your organization?

- |  |   |
|--|---|
| <input type="radio"/> Upper Management     | <input type="radio"/> Skilled Laborer       |
| <input type="radio"/> Middle Management    | <input type="radio"/> Consultant            |
| <input type="radio"/> Lower Management     | <input type="radio"/> Temporary Employee    |
| <input type="radio"/> Trained Professional | <input type="radio"/> Researcher            |
| <input type="radio"/> Administrative Staff | <input type="radio"/> Self-employed/Partner |
| <input type="radio"/> Support Staff        | <input type="radio"/> Retired/Unemployed    |
| <input type="radio"/> Student              | <input type="radio"/> Other _____           |

What is your current title in your organization?

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Please list all former titles you have held in your current organization, if any.

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Which of the following industries best describes the primary function of your organization?

- |  |  |  |
|--|--|--|
| <input type="radio"/> Agriculture, Forestry, Fishing and Hunting | <input type="radio"/> Homemaker                                | <input type="radio"/> Scientific or Technical Services |
| <input type="radio"/> Arts, Entertainment, and Recreation        | <input type="radio"/> Hotel and Food Services                  | <input type="radio"/> Software                         |
| <input type="radio"/> Broadcasting                               | <input type="radio"/> Information Services and Data Processing | <input type="radio"/> Telecommunications               |
| <input type="radio"/> College, University, and Adult Education   | <input type="radio"/> Legal Services                           | <input type="radio"/> Transportation and Warehousing   |
| <input type="radio"/> Computer and Electronics Manufacturing     | <input type="radio"/> Military                                 | <input type="radio"/> Utilities                        |
| <input type="radio"/> Construction                               | <input type="radio"/> Mining                                   | <input type="radio"/> Other Education Industry         |
| <input type="radio"/> Finance and Insurance                      | <input type="radio"/> Primary/Secondary (K-12) Education       | <input type="radio"/> Other Information Industry       |
| <input type="radio"/> Government and Public Administration       | <input type="radio"/> Publishing                               | <input type="radio"/> Other Manufacturing Industry     |
| <input type="radio"/> Health Care and Social Assistance          | <input type="radio"/> Real Estate, Rental and Leasing          | <input type="radio"/> Other _____                      |
|  | <input type="radio"/> Religious                                |  |
|  | <input type="radio"/> Retail                                   |  |

Please indicate the highest level of education you have completed.

- |   |  |
|---|--|
| <input type="radio"/> Less than high school | <input type="radio"/> Master's Degree                    |
| <input type="radio"/> High school graduate  | <input type="radio"/> Doctoral Degree (PhD)              |
| <input type="radio"/> Some college          | <input type="radio"/> Professional Degree (MD, JD, etc.) |
| <input type="radio"/> 2 year degree         | <input type="radio"/> Other _____                        |
| <input type="radio"/> 4 year degree         |  |

Please indicate your current total household income in U.S. dollars.

- |   |   |
|---|---|
| <input type="radio"/> Less than \$10,000  | <input type="radio"/> \$70,000 - \$79,999   |
| <input type="radio"/> \$10,000 - \$19,999 | <input type="radio"/> \$80,000 - \$89,999   |
| <input type="radio"/> \$20,000 - \$29,999 | <input type="radio"/> \$90,000 - \$99,999   |
| <input type="radio"/> \$30,000 - \$39,999 | <input type="radio"/> \$100,000 - \$149,999 |
| <input type="radio"/> \$40,000 - \$49,999 | <input type="radio"/> More than \$150,000   |
| <input type="radio"/> \$50,000 - \$59,999 | <input type="radio"/> Prefer not to answer  |
| <input type="radio"/> \$60,000 - \$69,999 |   |

What is your age?

- |                                |  |
|--------------------------------|--|
| <input type="radio"/> Under 18 | <input type="radio"/> 55 - 64              |
| <input type="radio"/> 18 - 24  | <input type="radio"/> 65 - 74              |
| <input type="radio"/> 25 - 34  | <input type="radio"/> 75 - 84              |
| <input type="radio"/> 35 - 44  | <input type="radio"/> 85 or older          |
| <input type="radio"/> 45 - 54  | <input type="radio"/> Prefer not to answer |

What is your sex?

- Male
- Female
- Not listed \_\_\_\_\_
- Prefer not to answer