

THE MORE WE KNOW; THE LESS WE KNOW: THE EFFECTS OF INTERPERSONAL
NETWORKS ON EMPLOYEES MISPERCEPTION OF PEERS PREFERENCES TO
UTILIZE FAMILY-FRIENDLY BENEFITS

by

ASHLEY MANDEVILLE

JONATHON R. B. HALBESLEBEN, COMMITTEE CHAIR

MARILYN V. WHITMAN

KIM SYDOW CAMPBELL

LAURA M. LITTLE

SAMANTHA PAUSTIAN-UNDERDAHL

MAURA MILLS

A DISSERTATION

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ABSTRACT

Pluralistic ignorance is a situation in which individuals inaccurately perceive the attitudes of their peers within their work group to be different from their own and subsequently align their behavior with what they mistakenly believe are the attitudes of their peers. Prior research on has tended to focus on the consequences of pluralistic ignorance, including a recent study on family-friendly benefit utilization. This study seeks to examine the predictors of misperceptions, a key ingredient of pluralistic ignorance, in the context of peers' preferences to utilize family-friendly benefits, using social network analysis. Specifically, this study examines the role of centrality on the degree to which central members misperceive their peers' preferences over time and the degree to which their preferences influence the group over time. Further, this study examines how the overall network structure can suppress the relationship between centrality and misperceptions. Contrary to what one may assume, the more central an employee in their network, the greater their misperceptions of their peers' preferences towards family-friendly benefit utilization. The results of this study imply that pluralistic ignorance is a possibility, even for work groups with close interpersonal relationships.

Key Words: Family-friendly benefits, Benefit Utilization, Pluralistic Ignorance, Interpersonal Relationship Network, Social Network Analysis

LIST OF ABBREVIATIONS AND SYMBOLS

B	Beta coefficient.
CFI	Comparitive fit index. Analyzes the model fit by examining the discrepancy between the data and the hypothesized model.
df	Degrees of freedom – the number of values free to vary after certain restrictions have been placed on the data.
F	Fischer’s F-statistic.
ICC(1)	Interclass Coefficient. An inferential statistic that can be used when quantitative measurement are made on units that organized into groups. It describes how strongly units in the same group resemble each other.
LGM	Latent Growth Modeling. A statistical technique used in Structural Equation Modeling (SEM) to estimate growth trajectory.
<i>M</i>	Mean – the sum of a set of measurements divided by the number of measurements in the set.
N	Number of participants in a limited portion of the total sample.
N	Number of participants in a total sample.
ns	Not Significant.
P	Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value.
PI	Pluralistic Ignornace. A situation in which individuals misperceive the attitudes and/or behaviors of peers within their work group to be different from their own, and as such align their behavior accordingly.
PTO	Paid Time Off. A benefit provided to employees which encompasses sick days, vacation days, and personal days to use at the discretion of the employee.
RMSEA	Root mean square error of approximation. Analyzes the discrepancy between the hypothesized model and the population covariance.

R^2	A statistical measure of how close the data are to the fitted regression line.
SD	Standard deviation. A quantity calculated to indicate the extent of deviation for a group as a whole.
TLI	Tucker Lewis Index. A model fit indices that resolves negative bias typically reported by the NFI.
TVC	Time-variant covariates.
χ^2	The chi-squared test indicates the difference between observed and expected covariance matrices.

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CONTENTS

ABSTRACT.....	ii
LIST OF ABBREVIATIONS AND SYMBOLS	iii
ACKNOWLEDGEMENTS	v
LIST OF TABLES	viii
LIST OF FIGURES	ix
CHAPTER 1: INTRODUCTION.....	1
CHAPTER 2: REVIEW OF LITERATURE.....	8
CHAPTER 3: METHODOLOGY	24
CHAPTER 4: RESULTS.....	34
CHAPTER 5: DISCUSSION & CONCLUSION.....	66
REFERENCES	76

Appendix A.....	85
Appendix B.....	100

LIST OF TABLES

4.1 Descriptive statistics and correlations among variables.....	38
4.2 In-degree central employees (participant number) at each time by type of network.....	51
4.3 Cross-level moderation results for misperception of peers' preferences towards utilizing PTO given in-degree centrality.....	60
4.4 Cross-level moderation results for misperception of peers' preferences towards utilizing PTO given proximity to the most central employee	60

LIST OF FIGURES

2.1 Network Centrality.....	14
2.2 Network Density.....	16
3.1 Example of Sociomatrix	30
4.1 Interaction between proximity to the most central employee and density (Work-family balance advice network) on misperception of peers' preferences to utilize PTO.....	61

CHAPTER 1

INTRODUCTION

Organizations are increasingly offering family-friendly benefits, such as paid paternity leave and on-site childcare, in attempts to alleviate employee work-family conflict. While this effort has good merits, managers have found that employees are underutilizing the benefits offered (Blair-Loy & Wharton, 2002; Edwards & Rothbard, 2000; Kreiner, 2006; Lobel, 1999; Osterman, 1995; Parasuraman & Greenhaus, 2002; Rice, Frone & McFarlin, 1992). Research has found utilization may be low for several reasons. For example, if employees perceive that co-workers and/or supervisors do not support benefit utilization, employees tend towards not utilizing them (Blair-Loy & Wharton, 2002; Lobel, 1999; Osterman, 1995). Further complicating the issue, research has shown that employees may misperceive their peers' attitudes of family-friendly benefit utilization and, as a result, be resistant to utilizing them (a situation known as pluralistic ignorance) (Mandeville, Halbesleben, & Whitman, 2016). To remedy pluralistic ignorance of family-friendly benefit utilization, researchers suggest that managers communicate employees' true preferences, as means to combat misperceptions that utilization is not preferred (Mandeville et al., 2016). While these insights and recommendations help fix or alleviate the issue of low utilization, more research is needed that might lead to solutions that keep pluralistic ignorance from occurring. As such, the predictors of pluralistic ignorance need to be further examined.

Pluralistic ignorance (PI) is a situation in which individuals misperceive the attitudes and/or behaviors of peers within their work group to be different from their own, and thus align their behavior to what they believe to be the majority consensus (Munsch et al., 2014; Prentice & Miller, 1993). Following the misperception, individuals align their behavior with what they mistakenly believe are the preferences of others in the workgroup. The consequences of PI have been examined in many contexts (Halbesleben, Wheeler, & Buckley, 2007; Lambert, Kahn, & Apple, 2003; Prentice & Miller, 1993; Westphal & Bednar, 2005) however, the predictors of PI are not well established. Research that has investigated predictors of PI focused on individual perceptions based on a group norm or an observed peer behavior (Sanders & Mullen, 1983; Westphal & Bednar, 2005). While this research is important, the literature on PI has yet to capture the important idea that individuals are nested within groups. That is, an individual's perception may vary depending on his/her position within a group and on the relationships s/he has with other group members. It is important to understand the if individuals relationships have a role in reducing misperceptions of their group's preferences, as having certain relationships can provide information that extend beyond observed behaviors and established group norms.

Prior research has generally examined PI as a phenomenon that exists in various contexts to help explain why an individual's behavior would depart from a personal attitude or belief (Halbesleben et al., 2007; Lambert et al., 2003; Mandeville et al., 2016; Prentice & Miller, 1993; Zhu & Westpahl, 2011). For example, Prentice and Miller (1993) used PI to help explain excessive college drinking behavior given individual preferences for more conservative use. These studies focused on the result of PI on individual behavior, as opposed to conditions that would exacerbate or reduce the issue for the group. Instead, this study treats PI as a phenomenon that can vary between groups. Further, this study explores how individual

misperception can fluctuate as a result of being within a given group, and how aggregate PI of the group can fluctuate given the individuals within the group. One avenue for examining the differences between groups and the individuals within groups is social network analysis.

Social network analysis involves the study of a set of actors and the relationships that connect or separate them (Kilduff & Tsai, 2003; Kilduff & Brass, 2010). Analyzing a group in terms of the relationships that exist can provide important insight on the degree to which PI exists in a group and how it can fluctuate. First, social network analysis can identify which members are central to the group (Carpenter et al., 2012; Kilduff & Brass, 2010). Central members are known to have easy access to and easy distribution of information due to having many, strong relationships with others in the group (Kilduff & Brass, 2010). In the context of preferences to utilize family-friendly benefits, this can have important implications for the degree to which an individual misperceives others' preferences. Specifically, central members should have a better sense for other group member's preferences to utilize family-friendly benefits due to having many, strong connections, which should decrease their PI. Further, a recent study on social networks found that established relationships in a network tend to persist and further, relationships with central members are frequently sought (Dahland & McFarland, 2013). This suggests that the degree to which central members misperceive group preferences should decrease over time.

Similarly, since central members are focal and have the power to distribute information with relative ease, their preferences for utilization of family-friendly benefits may influence the perceptions others have of what is considered a majority opinion of the group. This may not be an issue if central members hold a majority opinion, and that opinion is in favor of family-friendly benefit utilization. However, if a central member is in the minority opinion, and has the

opinion that family-friendly benefits should not be utilized, then other group members are likely to misperceive group preferences and subsequently not utilize family-friendly benefits. Since, utilization of benefits can lead to positive outcomes for both the individual and organization (i.e. increased commitment, increased job satisfaction, increased performance, and lowered turnover intentions (Allen, 2001; Bloom et al., 2011; Breugh and Frye, 2007; Casper and Harris, 2008; Jones & Murrell, 2001), there is merit for further investigation. Taken together, this leads me to my first three research questions:

1. Does position within a network change employee misperceptions of peers' preferences towards utilizing family-friendly benefits?
2. Does the relationship between network position and misperception change over time?
3. How do the preferences of the central employee influence group member perceptions over time?

Social network analysis also examines the structure of the group, or the group density. Group density measures the amount of close relationships that exist among group members (Carpenter et al., 2012; Kilduff & Brass, 2010). A network with high density would have many, strong relationships. This would be seemingly important for PI of preferences to utilize family-friendly benefit. That is, misperceptions should be reduced as group members are able to easily gauge preferences of the group. However, this would also weaken the power or influence that the central member holds. This leads me to my fourth research question:

4. How does network density influence group member misperceptions of peers' preferences to utilize family-friendly benefits?

This research contributes to the literature in several ways. First, the literature on PI is extended by including a multilevel and longitudinal design to examine the predictors of PI. Prior research has generally focused on the effects of PI by measuring the degree to which individuals misperceive others attitudes, disregarding group level effects (Lambert et al., 2003; Westphal & Bednar, 2005; Zhu & Westphal, 2011). The research that has included information on employee relationships focused on the changes in an outcome variable, rather than changes in PI (Westphal & Bednar, 2005; Zhu & Westphal, 2011). Specifically, Westphal & Bednar (2005) found mediating effects of relational ties between board members on expressed concern on corporate strategy. This research captured relational ties and pluralistic ignorance at a single point in time, which was appropriate given that study's intention was to capture variance in board member's vocalization of concerns on strategy. Instead, I focus on changes of pluralistic ignorance given several types of interpersonal relationship networks. Further, Zhu & Westphal (2011) examined the role of communication ties on pluralistic ignorance of stock repurchase plans within a dyad as reported by one member of the dyad. Again, the communication ties and measures of PI were captured at one point in time, as the focus of the study was on variance in investors' reservations on repurchasing a stock. Instead, I am able to capture ties between all members within a given interpersonal relationship network on how those changes effect pluralistic ignorance over time.

Second, I contribute to the literature on PI by examining how preferences of the central member will influence group members' misperceptions of others preferences for family-friendly benefit utilization. This will enable me to test the vocal minority hypothesis in the context of

preferences to utilize family-friendly benefits. Specifically, if the central member holds a majority opinion, then others' misperceptions of group preferences will be low. This is due to the central member's influence on the information flow throughout the network. Conversely, if the central member holds a minority opinion, then others' misperceptions of group preferences will be high. Reason being, others in the network will misconstrue the central member as sharing similar attitudes with all others in the network. This can be problematic when considering the impact PI has on benefit utilization. Specifically, if the most central member holds a minority opinion regarding family-friendly benefit utilization (an opinion most others do not share) and s/he is not in favor of family-friendly benefit utilization, then others may perceive a negative group attitude regarding utilization and subsequently not use the benefits they may otherwise prefer to use.

Finally, I contribute to the literature on family-friendly benefit utilization by examining PI, a predictor of low utilization. This should be of interest for practitioners attempting to increase utilization of existing benefits and/or new family-friendly benefits (such as paid paternity leave). To prevent PI of preferences to utilize family-friendly benefits, practitioners can focus on the interpersonal relationships between employees in their work group. I explain suppression effects of a dense network on central member's PI, a condition that should be sought in order to decrease misperceptions of peers' preferences for family-friendly benefit utilization. Group members, and groups, with limited established interpersonal relationships, will tend to misperceive others' preferences and attitudes, thus increasing PI. However, if group members are all considered to have close interpersonal relationships, misperceptions of preferences should be low, decreasing PI. Further, this research suggests that practitioners should be particularly concerned when the central group member has a minority opinion and prefers to not utilize

family-friendly benefits. Having access to many employees through interpersonal relationships networks, others may misperceive the central member as sharing an attitude with others, thus increasing PI in the group.

CHAPTER 2

REVIEW OF LITERATURE

Pluralistic Ignorance

Pluralistic Ignorance (PI) is a situation in which individuals inaccurately perceive the attitudes and/or behaviors of peers within their work group to be different from their own (Miller & McFarland, 1991). Following, individuals generally behave in ways congruent with what is perceived to be the attitudes and/or behaviors of their affiliated group. The two important facets of PI are misalignment and misperception (Mandeville, Halbesleben, & Whitman, 2016). Misalignment refers to a difference between an individual's attitude and that of others in the work group. More importantly, misperception is a difference between an individual's perception of peer attitudes and an actual peer attitude, which predicates an individual towards believing his/ her attitudes do not align with that of his/her peers.

Misperceptions of group member attitudes can be found in conditions where social norms are well established and strong. Social norms are rules that emerge in a group over time to govern behavior of group members in attempts to improve productivity and ensure group survival (Feldman, 1984). These rules help members predict other members' behavior and help guide individual behavior. While explicit social norms, such as formal written policy, leave little room for misinterpretation, informal social norms are somewhat vague. Informal social norms are rules for behavior that are not explicit, and instead may be observed or held in the collective consciousness of all members (Cialdini & Trost, 1998). For example, an explicit policy on business

casual dress attire can be formal, though the array of attire that constitutes business casual remains open for interpretation by group members (i.e., dressing in khakis or a business suit without the jacket). When social norms are well established, individual behavior tends to conform to that of the norm, even if members maintain a different attitude. In conditions where the social norms are well established and informal, group members tend to behave in ways consistent with what is believed to be the social norm.

PI exists due to attribution bias (Wesphal & Bednar, 2005; Zhu & Westphal, 2011). Attribution bias is a psychological error made by individuals when evaluating their own and others' behavior (Heider, 1958; Kelley, 1973). Individuals seek to make attributions to the cause of their own and others' behavior. Further, there is a tendency for individuals to attribute that peers' behavior is a result of having certain attitudes that correspond with such behavior, however this attribution is a product of information processing errors and usually false. However, when an individual displays the same behavior as their peers', they attribute personal behavior as a result of the situation. When considering social norms in an organization, if peers are behaving in a manner consistent with these social norms, an individual may attribute peer behavior as a reflection of their peers' personal attitudes, while attributing personal behavior to be following the social norm (a condition of the situation).

Related to attribution bias is another suggested cause of PI: the minority influence (Halbesleben, Wheeler, & Buckley, 2007). The minority influence explanation, sometimes referred to as the vocal minority hypothesis, suggests that when an individual in the minority opinion (one that holds an opinion different from most others in the group) expresses his/her opinion, that information increases the likelihood of PI among the others in the group (Halbesleben et al., 2007; Miller & Prentice, 1994). In situations where the group has a member

that holds a minority opinion and vocalizes that opinion, others in the work group may confuse the vocal member as sharing a similar opinion with the majority of other's in the work group. Similarly, when an important member of the group holds a minority opinion, group members may mistake the important member's opinion as reflective of others in the group (Halbesleben et al., 2007; Schanck, 1932).

Support for the vocal minority hypothesis has been found in several contexts. For example, Sanders and Mullen (1983) found that group members holding a majority opinion tended to underestimate the support for their opinion, and instead overestimated a vocal minority members' opinion to be that of the group majority. In an organizational setting, Westphal and Bednar (2005) studied pluralistic ignorance of corporate board decision-making and found that outside board members tended to underestimate the concern of other board members' regarding the firm's performance. Specifically, they found that members with the majority opinion tended to be silent, while board members in the minority expressed their opinion, which led outside members of the board to overestimate the vocal minority member opinion as the opinion for the majority of the group.

Without remedy, PI tends to be ongoing (Prentice & Miller, 1993). Group members take social risks when they express a minority opinion on an important issue (Miller & Nelson, 2002). While people tend to react favorably to those who share their attitudes and those of the group, they instead react biased against those who do not share their attitudes, forcing the individual with a minority opinion to be in the "out-group" (Moscovici & Doise, 1994). This bias can result in a negative evaluation of the individual's capabilities, less positive affect and a tendency to avoid social interaction with the person holding the minority view, limiting their social status and/or capital with others (Fiske, 2002). To prevent these negative effects, individuals feel

pressure to remain silent (termed quiescent silence) regarding relevant ideas in order to protect themselves (Dyne et al., 2003), thus aiding in more iterations of the misinterpretation. This is somewhat ironic when accounting for the role of the vocal minority. When a vocal minority expresses an opinion, others deem it an opinion of the majority of the group, and thus they decide to withhold expressing their mistakenly divergent opinion.

PI research has been found in several contexts. For example, Prentice & Miller (1993) studied PI in college student drinking habits. They found that students were drinking alcohol in excess to conform to what they believed was the college norm, while privately preferring a more conservative use of alcohol. Further, students tended to misperceive their peers drinking preferences, but maintained the norm of heavy drinking. Similarly, Lambert, Kahn & Apple (2003) found PI in a study of casual sexual relations. Specifically, they found that female and male college students rated their peers as being more comfortable in engaging in “hooking up” behaviors than their peers actually were. In the management literature, PI has been studied in the implementation of business ethics training (Halbesleben, Wheeler & Buckley, 2005) and the adoption of stock repurchase plans by security analysts (Zhu & Westphal, 2011).

More recently, researchers have applied PI to understand why employees do not use family-friendly benefits (Mandeville et al., 2016). They found that when employees’ preferences for benefit utilization were misaligned with the perceived group norm, they adjusted their family-friendly benefit utilization in a manner congruent with the norm, even though that norm was misperceived. When employees’ behavior aligned with the misperceived norm, individuals did not utilize family-friendly benefits to the extent that they would have otherwise preferred, which led to an increase in work-family conflict. The tragedy of PI, at least in this context, falls on misperception. Should misperception be reduced, employee preferences and majority group

preferences would be known. In the case of family-friendly benefit utilization, should misperceptions be reduced, a majority group preference for utilization may emerge, and subsequently actual utilization could increase. As the aim of this study is to examine groups in which misperception may vary, the relationships between individuals is of interest, thus social network analysis may provide further insight.

Social Networks

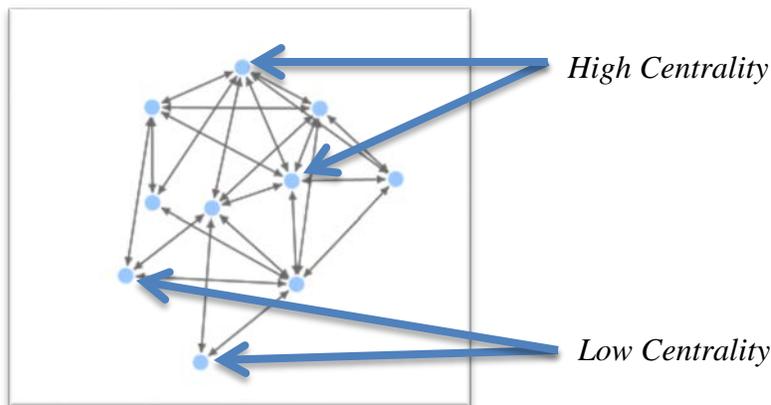
Social network analysis involves the study of a set of actors, generally referred to as nodes, and the relationships, or ties, that connect or separate them (Kilduff & Tsai, 2003; Kilduff & Brass, 2010). A group of actors of the same type are referred to as a mode (i.e., people in a work group), and are analyzed as a collective of relationships (Wasserman & Faust, 1994). Ties between two actors can be dichotomous (present or absent, as in the relationship exists or not) or valued (measured on a scale to indicate strength of the tie) (Borgatti & Foster, 2003). Relational ties can take several forms (Knoke & Kiklinski, 1982) and the types of relational ties that exist define a different network (Borgatti & Foster, 2003). For example, the relationships between two actors can be measured in terms of their interactions at work (interaction network) or their friendship (friendship network).

When a network is analyzed, researchers examine the positions actors hold within the network (given their ties to every other actor within the network) and characteristics of the network structure. Centrality is a concept related to an actor's network position (see Figure 2.1). Specifically, centrality is the extent to which an actor is in the center of a network and reflects the power an actor has in the network (Brass, 1984; Kilduff & Tsia, 2004). Centrality is examined at the individual level, meaning individuals within a network can be measured and

described as having more or less centrality. There are three different types of centrality: degree centrality, closeness centrality, or betweenness centrality. Degree centrality is measured by totaling the number of direct ties with other individual's in the network (Carpenter et al., 2012). Degree centrality is also measured as in-degree and/or out-degree. In-degree is the number and strength of ties from other actors directed to an actor and out-degree is the number and strength of ties that an actor directs towards others. An actor's in-degree centrality and out-degree centrality value may differ (that is, an actor may perceive a stronger/ weaker relationship than his/her counterpart in the dyad).

Closeness and betweenness centrality are similar to degree centrality in that they capture the number and strength of ties to others in the network, but differ in how they are each conceptualized and measured. Closeness centrality takes into account the ties an actor has *and* other indirect ties (Wasserman & Faust, 2004). While degree centrality focuses on the amount and strength of ties an actor has, closeness centrality takes the position of the actor's ties into consideration. For example, suppose actor A has strong ties to actor B and actor C in a network. Degree centrality would capture the value of those two relationships. Closeness centrality instead considers that actor B and actor C have strong relational ties to actor's D and E, which in turn increases the closeness centrality of actor A. Betweenness centrality considers the extent to which an actor is between other pairs of actors in a network (Wasserman & Faust, 2004). That is, the number of pairs that rely on a given actor to make the connection. Given the same example above, actor's B and C would have high betweenness centrality in that they are relied on to connect actor A with actor's D and E.

Figure 2.1. Network Centrality



Individuals with high network centrality have many advantages. Central actors tend to have greater access to and control over important resources, such as information (Brass, 1984). Network centrality has also been linked with increased job satisfaction (Dean and Brass, 1985; Rice & Mitchell, 1973; Roberts and O-Reilly, 1979), perceptions of ability to take risks (Cancian, 1967), and feelings of belonging or acceptance (Miller, 1980). These individuals also tend to increase their knowledge sharing with colleagues (Anderson, 2008; Sparrowe et al., 2001), perhaps due to having access to more information and/or because others view employees in highly central positions as attractive knowledge-sharing partners (Sparrowe et al., 2001; Tsai, 2000). Centrality has been shown to be especially important for leaders, in that a leader's network position is related to economic performance of the group as well as the leader's personal reputation (Mehra, Dixon, Brass & Robertson, 2003).

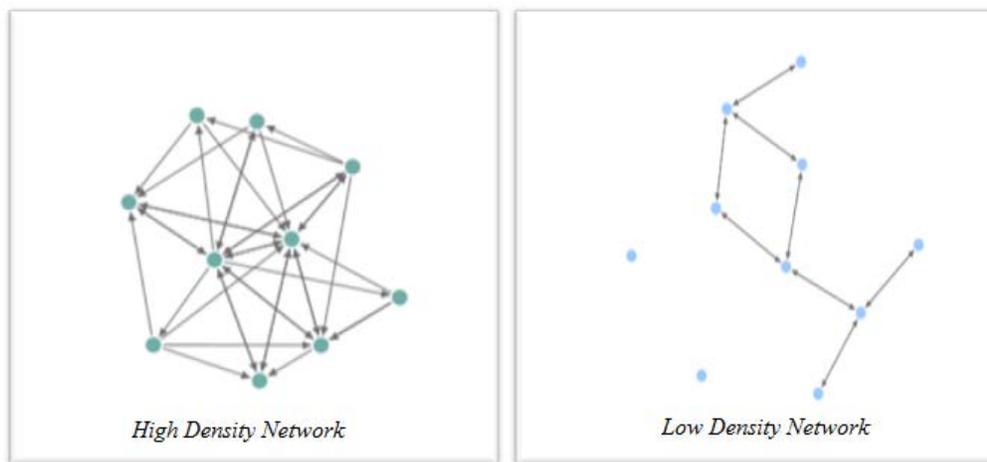
Strong ties with central actors can be valuable (Higgins & Kram, 2001). For example, Kilduff and Krackhardt (1994) found that the perception of a relational link to a prominent person in an organization tended to boost an individual's performance reputation. Further, Brass (1984, 1985a) found that having a link to the dominant coalition, or the group of individuals

within a network with many strong relational ties, were related to promotions for both men and women. Similarly, research has shown that an employee's success is a function of the quality and quantity of resources controlled by whom the employee is associated with, or has ties to (Anand & Khanna, 2000; Koka & Prescott, 2008). This research indicates that an employee does not necessarily need to be in a position of high network centrality to have access to important resources, such as information. Instead, an employee only needs to have a strong relational tie, or be in close proximity, with the employee(s) high in network centrality.

In terms of network structure, social network researchers are often concerned with network density. Density can be described and measured as the actual number of ties in the network divided by the maximum number of ties possible (Kilduff & Brass, 2010) (see figure 2.2). In this case, network density is considered zero for networks in which actors have no ties and maximized for networks in which all actors are connected (Burt et al., 2013). A deeper knowledge of network density is found when considering tie strength. Tie strength is a function of time, intimacy, emotional intensity and reciprocity (Granovetter, 1973, 1983). For example, tie strength may increase because of increased information exchange and/or increased affect.

Research has shown many advantages for networks with high density and strong ties (Baker & Iyer, 1992; Burt & Coletto, 1992; Balkundi & Harrison, 2006; Hansen, 1999). This may be due to highly dense networks with many strong ties having higher levels of information sharing and more collaboration between actors. Conversely, networks with low density are characterized by having actors that are unable or unwilling to exchange information or knowledge (Hansen, 1999). As such, high network density is generally associated with increased group performance (Balkundi & Harrison, 2006) and is a better agent for successful change initiatives (Daly & Finnigan, 2010).

Figure 2.2. Network Density



Social network researchers are also concerned with changes in relational ties over time (Carpenter et al., 2012; Dahlander & McFarland, 2013; Harrison, Price, & Bell, 1998). For instance, changes in relational ties are expected throughout the beginning stages of group formation. When individuals are first brought together, several tasks must be accomplished in terms of socialization (Morrison, 2002). This socialization process includes acquiring new information in regards to organizational issues, norms, how to perform work tasks and role expectations (Bauer et al., 1996; Chao, O’Leary-Kelly, Wolf & Klein, 1994; Ostroff & Kozlowski, 1992; Saks & Ashforth, 1997). At this stage, there is typically an absence of many ties and relationships tend to be weak, which suggests low density and tie strength (Morrison, 2002). Over time, different clusters of individuals tend to emerge in the group. This process is a result of established preferences for interaction with similar others, through recruitment of friends and family or through encouragement of management (Burt & Ronchi, 1990; Dorogovtsev & Mendes, 2003; Mehra et al., 1998). As such, the density and tie strength of the network tends to increase.

Similarly, several studies have examined changes in network centrality over time. In a study on child developmental psychology, Betts and Stiller (2014) found social behavior played a role in changing centrality in the best friend network of boys and girls 9-11 years old. Specifically, they found that children whom display higher levels of conflict receive fewer friend nominations over time, weakening their centrality. Also related to relational tie changes, Dahlander & McFarland (2013) examined the persistence of ties over time. They examined collaborations among faculty at a university and found that existing ties, especially strong ties, are generally sustained once formed. They also found that actors that did not have many ties attempted to increase their connections by seeking relationships with members in highly central positions, however their attempts were not always received as central members had a lower need for developing relationships. This study may have important implications when applied to a sustained position of power within the network, or persistence in network centrality. If formed relational ties tend to persist, especially strong relational ties, then individuals central to the network will likely remain central over time. Further, central actors tend to be attractive for group member's seeking new relationships, which has the potential to increase the central actor's network position over time. Conversely, this research implies that those individuals less central to the network, or newcomers, will have a difficult time establishing ties and thus they may tend to remain in a position of low network centrality (Dahlander & McFarland, 2013).

Social Network Analysis & Misperception of Peers' Preferences to Utilize Family-friendly Benefits

To examine the effects of a social network on pluralistic ignorance of preferences to utilize family-friendly benefits, I must first decide the type of network to analyze. The relational

ties that exist between two actors can vary (i.e. actors can be friends and/ or have offices next to each other). The type of relational ties examined defines the network being examined (Borgatti et al, 2003). Though the varying types of relational ties are not mutually exclusive and can overlap, (i.e., two actors can be friends and have offices next to each other) (Borgatti & Foster, 2003), the results of my analysis will vary depending upon the network I choose. The two more prominent types of networks studied in the management literature are the interaction network and the friendship network. In an interaction network, relational ties measure the physical interaction between actors (i.e. two actors being in the same place at the same time). Relational ties in an interaction network would measure the frequency that actors attended the same meeting, exchanged documents, attended the same Christmas party, etc. In a friendship network, relational ties are measures of positive or negative affect of one person for another. Relational ties in the friendship network provide access to information and can be the basis for forming alliances (Hutt et. al., 2000). More importantly, these interpersonal interactions tend to involve social, non-work related issues (Brass, 1984). Being that the point of interest is preferences for family-friendly benefit utilization, a benefit that involves an actor's non-work life, analyzing the effects of a friendship network on pluralistic ignorance of family-friendly benefits makes sense. For the purposes of a thorough investigation, an interaction network and friendship network (which includes various forms of advice relevant to one's personal life) will be examined.

The first research question is aimed at examining changes in pluralistic ignorance of preferences for family-friendly benefit utilization given an actor's network position. The concept of centrality concerns an actor's network position. Specifically, centrality is defined as the degree to which an actor is in the center of a network and reflects the power an actor has in the network (Kilduff & Tsia, 2004; Brass, 1984). Central actors tend to have many strong relational

ties. These interpersonal relationships formed provide the central employee with information (both formal and informal); including others' preferences for family-friendly benefit utilization. Further, the central actor's network position should persist over time, or increase, given the finding that strong relational ties tend to persist and other's in the network seek friendships with central actors (Dahlander & McFarland, 2013). This will lead to a sustained or decreased pluralistic ignorance of preferences of family-friendly benefit utilization for employees high in network centrality within a given interpersonal relationship network.

Conversely, actors with low network centrality are characterized as having few relational ties. This would limit the information they have on other's preferences for utilization of family-friendly benefits, increasing their misperception. Further, actors low in centrality tend to remain in that position over time (Dahlander & McFarland, 2013). Actors low in centrality tend to seek relationships with actor's high in centrality, but such relationships do not always form. Reason being, highly central actors rely less on additional relationships for maintaining their network position (Dahlander & McFarland, 2013). This will lead to a sustained degree of pluralistic ignorance of preferences of family-friendly utilization for employees low in network centrality within a given interpersonal relationship network.

Hypothesis 1: Network centrality is negatively associated with misperception of peers' preferences for family-friendly benefit utilization.

Hypothesis 2: There are different trajectories of network centrality and misperception of peers' preferences for family-friendly benefit utilization that differ in terms of mean levels and changes in mean levels over time. Among employees relatively high in network

centrality and low levels of misperception, misperception will decrease over time. Among employees relatively low in network centrality and high levels of misperception, misperception will remain stable.

The proximity to, of distance from, central actors is another relationship of interest when examining pluralistic ignorance of preferences for family-friendly benefit utilization. This relationship is dyadic, in that other relational ties are not taken into consideration. A strong tie to a central actor should increase the amount of information an individual has regarding other's attitudes and preferences. This is because central employees tend towards knowledge sharing with close ties (Baker & Iyer, 1992; Burt & Coletto, 1992; Balkundi & Harrison, 2006; Hansen, 1999). That is, individuals that are close friends with central actors may not need to have any other relationship ties to reduce their misperceptions of other's preferences for family-friendly benefit utilization. Further, due to the persistence of ties among actors, this relationship should remain stable over time. However, the central actor's position may become increasingly central, due to others attempting to form a relationship with them. If the central actor's position remains stable or increases in terms of the number and strength of ties, actors in close proximity will also benefit from having additional information or insight. As such, actors close to the most central actor will have low levels of pluralistic ignorance in preferences for family-friendly benefit utilization.

Hypothesis 3: Close proximity to the most central employee will be negatively associated with misperception of peers' preferences to utilize family-friendly benefits.

Hypothesis 4: There are different trajectories of close proximity to the most central employee and misperception of peers' preferences to utilize family-friendly benefits that differ in terms of mean levels and changes in mean levels over time. Among employees who are relatively close to the most central employee and have low levels of misperception, misperception will decrease over time. Among employees relatively who are distance from the most central employee and have high levels of misperception, misperception will remain stable.

The second research question is aimed at understanding how the preferences of the most central employee influence other group members' pluralistic ignorance of preferences for family-friendly benefit utilization over time. The vocal minority hypothesis suggests that when an individual in the minority opinion expresses his/her opinion, the more likely PI will exist among the other group members (Halbesleben et al., 2007; Miller & Prentice, 1994). This is because others in the work group may confuse the vocal member as sharing a similar opinion with the majority of other's in the work group. It has also been found that when an important member of the group holds a minority opinion, group members may mistake the important member's opinion as reflective of others in the group (Halbesleben et al., 2007; Schanck, 1932). Central employees hold an important position in various interpersonal relationship networks. High network centrality is linked to information exchanges, meaning an employee high in centrality will receive important information and disseminate information. Due to having an extensive amount of strong relational ties, the information they disseminate will reach more individuals within the network. Taken together, when the most central employee holds a minority position on preferences to utilize family-friendly benefits, it is likely for others in the network to mistake

the central employee's preference for that of the majority of the group, leading to higher pluralistic ignorance of preferences to utilize family-friendly benefits. Conversely, when the most central employee holds a majority opinion on preferences to utilize family-friendly benefits, it is likely for others in the network to believe the central employee to mirror group preferences (in this situation these actors would be accurate). As such, when the most central member holds a majority opinion, pluralistic ignorance for preferences to utilize family-friendly benefits will be low.

Hypothesis 5: The discrepancy in preferences to utilize family-friendly benefits between the most central employee and the average of the group will be negatively associated with misperceptions of preferences to utilize family-friendly benefits.

Lastly, social network analysis involves examination of the network structure, which addresses the third research question: How does network structure influence individual pluralistic ignorance of preferences to utilize family-friendly benefits? Network density, when considering tie strength, can be described and measured as the actual number and strength of ties in the network divided by the maximum number of ties possible including maximum strength of all ties possible (Kilduff & Brass, 2010). Network density is considered zero for networks in which actors have no ties and maximized for networks in which all actors are strongly connected (Burt et al., 2013). Given an interpersonal relationships network, density would increase when relational ties have increased affect or if new relationships are formed. Highly dense networks tend to have high levels of information sharing and more collaboration between actors (Hansen, 1999). Thus, high density should be negatively related to PI for preferences to utilize family-

friendly benefits, such that more dense networks should have lower misperceptions of group member preferences. Further, a highly dense network should weaken the relationship between network centrality and PI. If all actors in the group are close friends, central members have less influence or power when it comes to important information, such as other group member preferences. A highly dense network should weaken the relationship between close proximity to the most central employee and PI for similar reasons. If all actors in the group are close friends, the most central member will have similar information to all referent others in the group.

Hypothesis 6: Network density will moderate the relationship between network centrality and misperception of peers' preferences to utilize family-friendly benefits, such that, the relationship between network centrality and misperception will be weaker in a highly dense interpersonal relationship network.

Hypothesis 7: Network density will moderate the relationship between close proximity to the most central employee and misperception of peers' preferences to utilize family-friendly benefits, such that, the relationship between close proximity and misperception will be weaker in a highly dense interpersonal relationship network.

CHAPTER 3

METHODOLOGY

Sample Description and Procedure

Participants in this study were recruited from a mid-sized company specializing in optometry based in the Southeastern United States. At Time 1, the company had 101 full-time employees (doctors, managers, sales employees and support staff), each dedicated to one of 17 specific offices. The number of employees that worked at each office ranged from 3 – 20. The family-friendly benefits offered to all full-employees were the same, except for the number of days offered for paid time off (managers and doctors received five additional days per year).

Survey data is commonly used for social network studies (Wasserman & Faust, 1994). To collect network data, I used the roster method, which lists all the individuals in a given network. As opposed to the free recall method (which asks participants to list the names of the individuals they have a relationship with), the roster method reduces the likelihood that participants forget or leave out important relational ties (Wasserman & Faust, 1994). Employee names and affiliated locations were provided by the CFO. Employees were listed on the survey by first name only and by office location. That is, participants that work in location #1 were only listed on the location #1 survey. This was done for two reasons. First, in conversations with the executives at the company it became apparent that employees mostly interacted with only the employees within their location. Since the purpose of this study is to understand the relationships formed within a

given network, location was selected as the boundary for defining a network. Second, by restricting the network boundary to location, I was able to reduce the number of employees listed on each survey. This reduces rater fatigue as participants only need to respond to questions about their direct coworkers. I asked participants to provide valued ratings, where strength of relational ties is indicated on a scale. While ratings can be dichotomous (ties are present or absent) (e.g. Krackhardt & Stern, 1988), an employee can have multiple ties of the same strength (e.g. an employee can interact with two employees to a large degree); thus, valued ratings were more appropriate.

Each employee was asked to complete three surveys with two months separating each data collection. This time lag was necessary to see changes in relational ties and misperceptions of peers' preferences to utilize family-friendly benefits. Each survey took approximately 20 minutes to complete. I visited each office location at a date and time specified by the CFO (dates and times were chosen on the expectation that customer interaction would be low). I provided and collected each survey personally from each participant to protect confidentiality. Prior to each visit, the CFO and/or I sent an email to location managers explaining the nature of the study, when to expect a visit, an explanation of leadership support for the project, and an explanation that responses are confidential (only the researcher will have access to survey responses). To examine changes over time, as is the purpose of this study, it was important to retain as many participants as possible. Further, retention was also critical for the analysis of social network data (Wasserman & Faust, 1994). For this reason, a group level incentive, a catered lunch, was provided to locations with full participation at Time 2 and Time 3.

At all three times, information related to the interpersonal relationship network, preferences for family-friendly benefit utilization and perceived preferences for family-friendly

benefit utilization of others were collected. Demographic information was collected at Time 1. Prior to each data collection, I verified with the location manager that employees at each location are still employed and still affiliated with their respected location. Further, I asked if there were any new employees. At the beginning of each survey, participants were told their participation is voluntary (they can withdraw at any time). Since surveys were completed on paper, participants had the option of completing a portion or the full survey. Upon collection of the surveys, participants first names were changed to a unique identifier (e.g., first four letters of the location and a number). This was done to further ensure confidentiality of participant responses.

Response Rate and Participant Demographics

Response rate was calculated overall and by location. Overall, of the 101 employees in the company, 74.2% of employees completed the Time 1 survey. However, locations that did not reach 70% participation were removed from the analysis (recommendation by Wasserman & Faust, 1994). This is because network structure could not be properly analyzed as a result of the missing employee relationships. Thus, five locations (along with the employees within the five locations) were removed from the analysis, leaving 64 employees (638 relationships), with an average location response rate of 82%. At Time 2, twelve employees left the study (either didn't complete a survey or left the company), which resulted in a retention rate of 81.25%. Two additional locations were then removed from the study due to a lower than 70% response rate by location. However, there was an additional eight employees that completed the Time 2 survey that did not complete the Time 1 survey. These employees were either new to the company or decided to participate in the study starting at Time 2. At Time 3, eight additional participants left the study (either didn't complete a survey or left the company), which resulted in a retention rate of 86.67% retention rate. Further, there were an additional four employees that completed only

the Time 3 survey. These employees were either new to the company or decided to participate starting at Time 3. In summary, 64 employees (638 relationships) and 12 locations were analyzed at Time 1, 60 employees and 10 locations were analyzed at Time 2, and 56 employees and the 10 locations were analyzed at Time 3. Further, the 10 locations retained at Time 2 and Time 3 ranged from 4 – 20 employees, with 6 employees being the mode. While this may not seem like a large group size, a group size of 6 contains 15 possible relationships (30 relationships when considering that the relationship between A-B is distinct from the relationship B-A). To examine attrition and nonresponse bias (Goodman & Blum, 1996, Halbesleben & Whitman, 2013), I compared demographics between those who responded to only the Time 1 survey and those who responded to all three surveys and found no significant differences between those who responded to the first and those that completed all three surveys.

Roughly 64.6% of the participants were female with a mean age of 34.05 (SD=9.952). The majority of the participants were Caucasian, 78.8% (9.75% African American; 3.6% Hispanic; 3.6% Asian/ Pacific Islander). They had worked for the company for a mean for 4.409 years (SD=4.7304) and worked an average of 40.65 hours per week (SD=8.385). 50% were currently married, 41.4% single, never married, 6.1% divorced, and 2 employees were widowed. 51.2% of the participants had at least one child living at home. Most of the participants were college educated with 9.75% completing a high school degree, 34.1% completing some college, 26.82% completing a bachelor's degree, 26.8% completing a master's degree or higher.

Measures

Interpersonal Relationship Network. The interpersonal relationship network was measured with four questions. Each hypothesis was tested using each question to determine in-

degree centrality, proximity to the most central employee, and density. That is, each question yielded information for a different type of network. The network questions were as follows: 1) Interaction Network: “How often do you interact with the listed team members?” 2) Work-Family Balance Advice Network: “How often do the listed employees advise you on subjects that are related to work/family balance?” 3) Non-work related advice Network: “Of the team members listed below, to what extent do you consult or get help on personal issues?” and 4) Work related Advice Network: “Of the team members listed below, to what extent do you consult or get help on work-related issues?”. Participants were asked to evaluate each employee at their location using a scale from zero (none) to five (a great deal). These questions provided the values for network centrality and proximity to the most central employee for each employee in each of the four networks analyzed. This question also provided a density value for each location in each of the four network analyzed. For information on how these values are calculated, see the section on ‘Data Analysis’.

Misperception of peers’ preferences to utilize family-friendly benefits. Participants were provided a list of six family-friendly benefits from a more comprehensive list provide by Hammer et al., (2005). Only six family-friendly benefits were listed because these were the only ones identified as being offered by the company to all full-time employees. Participants were asked to respond to the following question for each of the six family-friendly benefits: “For each of the following, please indicate the extent to which you would *prefer* to use it compared to how much you currently use it.” Participants were also asked the same question about their perceptions of peers’ *preferences* for utilization of each benefit (preferences of others at their location). This was measured on a scale from 1 (much less) to 5 (much more) where 3 indicated that they are using it as much as they want to. Of the six family-friendly benefits listed, PTO was

the only one that was analyzed. While six benefits were offered, participants only seemed to be aware that they were offered PTO as shown by low response rate for all other benefits listed (less than 50%). This is not surprising given the data on benefit awareness. According to the Department of Labor, only 62% of employees have heard of FMLA, one of the more popular benefits provided to employees, in 2012 (Klerman et al., 2013). Misperception was measured as the difference between an individual's perception of peer preferences and actual peer preferences for each benefit listed (aggregated measure).

Control Variables. Control variables are an important part of any study because they account for possible variance in the dependent variable (Becker, 2005). For this study, I controlled for tenure, marital status, number of children living at home, and gender (collected at Time 1). Tenure was controlled because it is likely to affect the number of relational ties a group member has established. Marital status, number of children living at home, and gender were controlled because they are likely to affect an individual's preferences toward family-friendly benefit utilization.

Data Analysis

Overview

The data analysis was a two-step process. In step 1, I analyzed the four different types of social networks (interaction, work-family balance advice, non-work related advice, and work related advice) to obtain the values for centrality, proximity to the most central employee, and network density. Following, those values were used to test each hypothesis via cross-level moderation and latent growth modeling.

Social Network Analysis

Each office location served as a social network and the interpersonal relationship networks were analyzed separately at each time period. To obtain the values for centrality, proximity to the most central employee, and network density, the program UCInet6 was used. To input the data, sociomatrices for each network were created in Microsoft Excel (for example, see Figure 3.1). Sociomatrices are a way to present relational data, where all actors in a network are listed by row and column. Each row and column of the sociometrics were identical, as they both identically display the group members' unique identifiers in the same order. This format captures all relational pairs that exist in the network, and treats the relationship between two members as two different pairs, where (n_i, n_j) is distinct from (n_j, n_i) . Each sociomatrix was valued, in that each entry, x_{ij} , represented the strength of the relational tie as indicated by respondent n_i . Sociometrics may not be symmetric, meaning participants may value the relational tie differently. Instead, x_{ij} may have a different value than x_{ji} . This difference in values is generally described as in-degree or out-degree. In-degree is the value directed to an actor and out-degree is the value that an actor directs towards others.

Figure 3.1 Example of Sociomatrix

	X				
	n1	n2	n3	n4	n5
n1	0	3	5	5	5
n2	3	0	3	5	3
n3	4	3	0	3	3
n4	3	2	2	0	3
n5	2	2	1	3	0

The goal of this research is to understand the impact of interpersonal relationships networks on misperception over time. Degree centrality captures the number of ties directly involving an individual (Brass, 1995) and as such was selected as the appropriate measure for centrality for this study. As described, degree centrality can be calculated as in-degree (relational tie as measured towards an actor) or out-degree (relational tie as measured by the actor). It is common in social network analysis to select in-degree or out-degree as a basis for measuring the degree centrality (Burkhardt & Brass, 1990; Mossholder et al., 2005; Sparrowe et al., 2001; Sarker et al., 2011). This is referred to as a directed graph. However, in this study centrality needs to be bi-directional in that both in-degree and out-degree measures are important for understanding the information flow between pairs of actors. Specifically, in-degree centrality is important for capturing misperceptions of others' preferences (Hypotheses 1 & 2). Conversely, the value for proximity to the most central employee was represented by the out-degree values from the most central employee. The most central employee was selected as the actor with the highest in-degree centrality. This is because in-degree centrality is used to capture the actor with information regarding others preferences for family-friendly benefit utilization, while the out-degree centrality measure will capture whom the central actor shares information with. In situations where more than one individual is considered central to the network, the average of the out-degree values from the central employees represented the proximity scores. Further, the most central employee(s) received the maximum value (5) as their proximity score. Meaning, the lower the proximity score, the more distant the actor from the central employee.

Finally, density was computed as the sum of the actual responses divided by the total possible sum of responses (for an example of this technique see Sparrowe et al., 2001). While most social network analysis measures density as the proportion of actual nominations among

the total possible number of nominations (Wasserman & Faust, 1994), I was able to provide more information due to having valued data (relationships are measured on a scale). This measure was normalized to account for differences in size between locations.

Multilevel Modeling and Latent Growth Modeling

The data represent employees nested in 12 locations (at Time 1), within an organization. As such, I investigated whether there was a need to utilize multilevel modeling, as hypothesized. First, I calculated the intraclass correlation coefficient (ICC(1)) to examine the percent of the total variance in the dependent variable that could potentially be attributable to the location of the employees. My ICC(1) value for location in the relationship between in-degree centrality in the interaction network, the work-family balance advice network, the non-work related advice, and the work related advice network and misperception of peers' preferences toward utilizing PTO was .21, .18, .17, and .19 respectively. These ICC(1) values indicate there is a between-location heterogeneity in the relationship between my independent and dependent variable (Hayes, 2006). Further, my ICC(1) values for location in the relationship between proximity to the most central employee in the interaction network, the work-family balance network, the non-work related advice network, and the work related advice network and misperception of peers' preferences toward utilizing PTO was .13, .04, .08, and .09 respectively. Not accounting for location would increase the type-1 error rate and biased confidence intervals, thus warranting examination.

Each hypothesis was tested using MPlus version 6 (Muthen & Muthen, 1998). To test hypotheses 2 and 4, I used latent growth modeling. Latent growth modeling (LGM) is a statistical technique used in SEM that estimates the changes in observed variables over time (Duncan & Duncan, 2004). LGM can assess a trajectory of change in misperception over time

and any changes in slope based on intercept at time one (McArdle, 2009) and can assess within person change as a function of time. Further, by adding time-variant covariates (TVC's), or predictor variables, I was able to determine variability in starting point (intercept) and rate of change in misperception based on the intercept of my predictor variables at time one, as hypothesized. This captured between person changes based on my covariates over time. This technique enabled me to determine if the intercept of my predictor variables at time one changed the slope of misperception over time.

To test the remaining hypotheses, I used cross-level moderation modeling, controlling for marital status, organizational tenure, number of children living at home, and gender. This is a two level model by which the lower level is the relationship between in-degree centrality and misperception, and the higher level are the density values specific for each location. Predictor variables, in-degree centrality and density, were grand-mean centered. This is a random intercepts model in which the intercepts are allowed to vary across groups (i.e. locations).

CHAPTER 4

RESULTS

Initial Observations & Analyses

Table 4.1 displays the descriptive statistics, including means, standard deviations, and correlations for all study variables. The observations from the correlation table do not appear to support my hypotheses. Though some relationships between my variables of interest were significant, these were in the opposite direction hypothesized and only at Time 1. Misperception of peers' preferences towards utilizing PTO was positively correlated with in-degree centrality in the interaction network and non-work related advice network, which suggests that the more central employees in these specific networks held a greater degree of misperception regarding their peers' preferences towards utilizing PTO. However, this relationship was not present for the other networks studies, namely the networks related to work-family balance advice and work related advice. Further, these relationships were not significantly correlated at Time 2 or Time 3.

Further, misperception of peers' preferences toward utilizing PTO was significantly and positively correlated to proximity measures in all networks, however only in Time 1. Again, this relationship is in the opposite direction hypothesized. This correlation suggests that individuals that hold a close relationship with the central employee(s) holds a greater degree of misperceptions regarding their peers' preferences toward utilizing PTO.

Density of the non-work related advice network was significantly and positively related to misperception of peers' preferences towards utilizing PTO, however only in Time 1. This

relationship suggests that many close relationships among employees within a group, in regards to seeking advice on non-work related issues, leads to greater individual misperceptions of peers' preferences toward utilizing PTO. This relationship was not significant for the other network studies, namely the networks related to interaction, work-family balance advice, and work-related advice.

Lastly, I observed no significant correlations between misperception variables at each time period. This may suggest that misperception fluctuates over time. The variables for all measures of centrality in each of the four networks did positively correlate at each time period. While this may suggest centrality remains relatively stable, I wanted to analyze if the most central employee remained stable over time, as this position is used in calculating some of my variables of interest.

Table 4.2 displays the central employee (participant number) for each location at each time period and for each type of network. It is important to note that although twelve locations were analyzed at Time 1, only ten were retained at all three time periods, thus only ten locations are shown. First, I observed several instances in which there are more than one employee with the highest centrality score. Degree centrality scores were normalized and calculated by summing of the number of valued ties directed towards (in-degree) an individual. This calculation makes it possible for more than one individual to have the same centrality score, thus it is possible for more than one person to be considered the most central.

Second, I observed only two instances in which the central employee(s) at Time 1 remained the central employee throughout the study. This was participant 11 at location 3 for the work related advice network and participant 65 at location 15 for the work-family balance network. This suggests that centrality position doesn't remain consistent over time and that the

most central employee at Time 1 does not necessarily maintain his/her centrality score nor increase his/her centrality score. This is inconsistent with findings in previous studies (Dahlander & McFarland, 2013). For example, Dahlander & McFarland (2013) found that the central actor's in a research collaboration network tended to persist, and in some cases increase, over time. This was due to others in the network seeking to collaborate on research with these central actors (Dahlander & McFarland, 2013). The findings in my study suggest that when it comes to interaction, work-family balance advice, non-work related advice, and work related advice, relationships between individuals at work display non-linear changes over time.

Third, I observed that the central actor(s) change depending upon the network examined. For example, at location 5 at Time 1, participant 30 is most central in the interaction network, participants 28 and 33 are most central in the work-family balance network, participant 21 is most central in the non-work related advice network, and participant 29 is most central in the work related advice network. This suggests that in a given work group, the person (people) peers interact with the most may not be the person peers go to for work-family balance advice, non-work related advice, nor work-related advice.

Lastly, it is important to explore if the changes in most central employee position was a function of attrition. I found three instances in which a central employee left the study. Participant 48 at location 9 was not retained in the study at Time 2. This individual was the central employee in the work related advice network at Time 1. All other central employees were retained at Time 2. Further, participants 29 and 31 at location 5 were not retained at Time 3. Participant 29 was the most central employee in the work related advice network at Time 1 but not Time 2. Participant 21 was the most central employee in the non-work related advice network at Time 1 but not Time 2. Given the observation stated above that relationships in the

network studied appear to be non-linear, the low frequency of turnover should not significantly impact any longitudinal observations in my LGM analyses.

Table 4.1

Descriptive statistics and correlations among variables.

	M	SD	1	2	3	4	5	6	7	8
1. Gender	1.35	.48	1							
2. Organization Tenure	4.41	4.73	.05	1						
3. Marital Status	2.35	1.44	.08	-.31**	1					
4. # of Children	.91	1.11	-.20	.13	-.30**	1				
5. T1 Centrality Interaction	.84	.11	-.09	-.04	-.07	-.17	1			
6. T1 Centrality WF Bal Advice	.56	.24	-.09	.16	-.10	-.09	.10	1		
7. T1 Centrality Non-work Advice	.53	.18	-.12	.20	.03	-.22	.35**	.55**	1	
8. T1 Centrality Work Advice	.64	.18	-.11	.10	-.16	-.18	.55**	.46**	.50**	1
9. T1 Proximity Frequency	4.32	.75	.07	-.08	-.05	-.14	.61**	.21	.20	.27*
10. T1 Proximity WF Bal Advice	2.5	1.51	-.10	-.04	-.02	.06	.30*	.41**	.44**	.49**
11. T1 Proximity Non-work Advice	2.5	1.46	-.10	.21	-.06	-.12	.44**	.37**	.66**	.53**
12. T1 Proximity Work Advice	3.25	1.54	-.17	.16	-.05	-.18	.35**	.45**	.42**	.76**

13. T1 Density Interaction	.84	.08	-.27*	-.22	.03	-.13	.70**	.06	.24	.58**
14. T1 Density WF Bal Advice	.42	.15	-.37**	-.15	-.04	.08	.51**	.20	.25	.56**
15. T1 Density Non-work Advice	.4	.10	-.34**	-.19	.07	-.03	.55**	.20	.39**	.58**
16. T1 Density Work Advice	.64	.15	-.30*	-.16	.11	-.17	.58**	.29*	.33**	.76**
17. T1 Misperception	.71	.73	-.02	-.01	.19	-.14	.33*	.20	.30*	.17
18. T1 Diff Interaction	.7	.50	.18	.01	-.08	-.02	-.22	-.08	-.36**	-.27*
19. T1 Diff WF Balance Advice	.57	.69	-.21	.03	-.12	.03	.05	.07	-.01	.37**
20. T1 Diff Non-work Advice	.58	.61	-.17	-.02	-.05	.07	.07	.43**	.15	.39**
21. T1 Diff Work Advice	.8	.81	-.13	.03	-.06	-.02	.07	.36**	.07	.50**
22. T2 Centrality Interaction	.85	.14	-.34**	-.17	-.03	-.01	.64**	.58**	.57**	.36*
23. T2 Centrality WF Bal Advice	.49	.19	-.30*	-.17	-.08	.05	.36*	.50**	.60**	.66**
24. T2 Centrality Non-work Advice	.47	.15	-.34**	-.03	-.19	.04	.50**	.42**	.78**	.58**
25. T2 Centrality Work Advice	.68	.16	-.20	.06	-.32*	.12	.60**	.48**	.63**	.67**

26. T2 Proximity Interaction	4.42	.8	-.02	-.11	.06	-.06	.11	.08	.04	-.23
27. T2 Proximity WF Bal Advice	2.32	1.78	-.23	-.12	-.13	.24	.07	.29	.21	.56**
28. T2 Proximity Non-work Advice	2.23	1.49	-.23	.08	-.21	.15	.34*	.37*	.50**	.69**
29. T2 Proximity Work Advice	3.55	1.25	.04	-.01	-.15	.10	.02	.25	.15	.40**
30. T2 Density Interaction	.86	.10	-.30*	-.15	-.03	-.13	.60**	.67**	.64**	.57**
31. T2 Density WF Bal Advice	.43	.12	-.31*	-.18	-.03	.04	.38*	.49**	.40**	.58**
32. T2 Density Non-work Advice	.41	.08	-.27*	.01	-.14	.02	.45**	.58**	.32*	.44**
33. T2 Density Work Advice	.68	.10	-.37**	-.12	-.08	-.01	.55**	.63**	.61**	.70**
34. T2 Misperception	.77	.6	-.12	.07	-.06	.17	-.09	-.14	-.12	-.13
35. T3 Centrality Interaction	.85	.13	-.31*	-.15	-.01	-.16	.71**	.40*	.61**	.50**
36. T3 Centrality WF Bal Advice	.51	.19	-.37**	-.15	-.05	.06	.29	.48**	.58**	.59**
37. T3 Centrality Non-work Advice	.49	.15	-.33*	-.09	-.13	.11	.20	.53**	.71**	.49**

38. T3 Centrality Work Advice	.66	.18	-.22	-.03	-.16	-.03	.49**	.37*	.58**	.61**
39. T3 Proximity Interaction	4.16	.86	.11	.28*	-.04	.25	.11	-.03	-.10	-.25
40. T3 Proximity WF Bal Advice	2.61	.17	-.27*	-.03	-.12	.10	-.13	.42**	.24	.36*
41. T3 Proximity Non- work Advice	2.35	1.50	-.33*	-.05	-.19	.17	-.01	.40*	.37*	.43**
42. T3 Proximity Work Advice	3.34	1.41	-.08	-.01	-.18	-.01	.36*	.44**	.44**	.58**
43. T3 Density Interaction	.84	.09	-.18	-.31*	.17	-.18	.51**	.34*	.59**	.59**
44. T3 Density WF Bal Advice	.45	.11	-.20	-.14	.08	.02	.47**	.65**	.53**	.73**
45. T3 Density Non-work Advice	.4	.09	-.19	-.12	.12	-.02	.53**	.72**	.59**	.66**
46. T3 Density Work Advice	.63	.14	-.12	-.25	.17	-.08	.23	.24	.38*	.39*
47. T3 Misperception	.69	.55	-.16	.16	.01	-.06	-.04	.14	.08	.14

Table 1. Continued.

	9	10	11	12	13	14	15	16	17	18
9. T1 Proximity Frequency	1									

10. T1 Proximity WF Bal Advice	.24	1								
11. T1 Proximity Non-work Advice	.27*	.56**	1							
12. T1 Proximity Work Advice	.33**	.41**	.47**	1						
13. T1 Density Interaction	.14	.35**	.28*	.30*	1					
14. T1 Density WF Bal Advice	.06	.47**	.35**	.47**	.74**	1				
15. T1 Density Non-work Advice	.12	.54**	.42**	.50**	.80**	.85**	1			
16. T1 Density Work Advice	.16	.49**	.42**	.62**	.84**	.76**	.80**	1		
17. T1 Misperception	.36**	.38**	.49**	.37**	.14	.23	.32*	0.18	1	
18. T1 Diff Interaction	.09	-.27*	-.23	-.24	-.33**	-.35**	-.60**	-.35**	-.02	1
19. T1 Diff WF Balance Advice	.02	.26*	.23	.51**	.08	.41**	.19	.45**	.11	.23
20. T1 Diff Non-work Advice	.21	.41**	.28*	.53**	.12	.59**	.38**	.43**	.22	.14
21. T1 Diff Work Advice	.18	.40**	.30*	.59**	.13	.44**	.27*	.56**	.11	.07
22. T2 Centrality Interaction	.37*	.44**	.38**	.30*	.51**	.47**	.57**	.55**	.27	-.43**

23. T2 Centrality WF Bal Advice	.03	.45**	.34*	.45**	.54**	.56**	.55**	.75**	-.01	-.51**
24. T2 Centrality Non- work Advice	.13	.30*	.42**	.43**	.46**	.48**	.47**	.57**	.13	-.36*
25. T2 Centrality Work Advice	.27	.48**	.50**	.56**	.47**	.57**	.58**	.66**	.15	-.55**
26. T2 Proximity Interaction	.41**	.19	.03	-.20	.01	-.16	-.01	-.09	.12	.19
27. T2 Proximity WF Bal Advice	.03	.59**	.27	.57**	.29*	.55**	.53**	.63**	.03	-.41**
28. T2 Proximity Non- work Advice	.08	.44**	.44**	.54**	.48**	.64**	.61**	.67**	.01	-.57**
29. T2 Proximity Work Advice	.25	.42**	.26	.44**	.04	.27	.28	.33*	-.06	-.17
30. T2 Density Interaction	.30*	.41**	.42**	.48**	.61**	.57**	.69**	.68**	0.19	-.52**
31. T2 Density WF Bal Advice	.07	.46**	.44**	.52**	.43**	.66**	.71**	.69**	0.19	-.50**
32. T2 Density Non-work Advice	.24	.28	.26	.43**	.36*	.57**	.59**	.35*	.27	-.22
33. T2 Density Work Advice	.31*	.56**	.52**	.74**	.56**	.81**	.86**	.79**	.36*	-.57**
34. T2 Misperception	.01	.03	-.11	.04	-.17	-.05	-.06	-.12	.19	.03

35. T3 Centrality Interaction	.17	.35*	.39*	.33*	.67**	.58**	.63**	.69**	.39*	-.44**
36. T3 Centrality WF Bal Advice	-.11	.40*	.21	.47**	.45**	.53**	.52**	.66**	.04	-.48**
37. T3 Centrality Non- work Advice	-.13	.40*	.27	.37*	.28	.32*	.35*	.46**	.07	-.30
38. T3 Centrality Work Advice	.20	.44**	.46**	.64**	.43**	.53**	.59**	.67**	.37*	-.47**
39. T3 Proximity Interaction	-.13	.08	.19	-.28	.01	.13	.08	-.20	.22	-.17
40. T3 Proximity WF Bal Advice	-.13	.57**	.24	.47**	.03	.37*	.34*	.43**	.07	-.24
41. T3 Proximity Non- work Advice	-.19	.57**	.32*	.42**	.17	.43**	.39*	.47**	-.03	-.32*
42. T3 Proximity Work Advice	.17	.42**	.50**	.66**	.32*	.53**	.55**	.56**	.23	-.46**
43. T3 Density Interaction	.33*	.44**	.357*	.60**	.58**	.54**	.65**	.75**	.39*	-.28
44. T3 Density WF Bal Advice	.26	.56**	.50**	.79**	.46**	.75**	.79**	.78**	.31	-.53**
45. T3 Density Non-work Advice	.27	.57**	.55**	.71**	.46**	.76**	.76**	.65**	.43**	-.34*
46. T3 Density Work Advice	.39*	.55**	.38*	.60**	.24	.42**	.56**	.53**	.53**	-.10

47. T3 Misperception	-0.06	.06	-0.02	.10	-0.02	.07	.05	.01	-0.09	-0.17
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Table 1. Continued.

	19	20	21	22	23	24	25	26	27	28
19. T1 Diff WF Balance Advice	1									
20. T1 Diff Non- work Advice	.65**	1								
21. T1 Diff Work Advice	.77**	.84**	1							
22. T2 Centrality Interaction	-.01	.27	.09	1						
23. T2 Centrality WF Bal Advice	.30*	.30*	.33*	.53**	1					
24. T2 Centrality Non- work Advice	.35*	.18	.14	.54**	.78**	1				
25. T2 Centrality Work Advice	.33*	.39**	.38**	.59**	.64**	.70**	1			
26. T2 Proximity Interaction	-.23	.05	-.11	.53**	-.10	-.10	-.01	1		
27. T2 Proximity WF Bal Advice	.69**	.72**	.74**	.18	.61**	.40**	.44**	-.10	1	

28. T2 Proximity Non-work Advice	.49**	.60**	.56**	.37**	.58**	.64**	.57**	-.01	.69**	1
29. T2 Proximity Work Advice	.43**	.61**	.62**	.22	.24	.16	.52**	.18	.44**	.37**
30. T2 Density Interaction	-.02	.36*	.14	.80**	.58**	.47**	.54**	.29*	.22	.36**
31. T2 Density WF Bal Advice	.43**	.53**	.40**	.55**	.68**	.47**	.48**	.05	.48**	.35**
32. T2 Density Non-work Advice	.19	.52**	.18	.47**	.19	.25	.25	.17	.21	.30*
33. T2 Density Work Advice	.52**	.67**	.48**	.67**	.60**	.57**	.63**	.06	.46**	.49**
34. T2 Misperception	.24	.03	.03	-.06	-.02	.12	.04	-.14	.01	.05
35. T3 Centrality Interaction	.10	.19	.12	.89**	.59**	.72**	.66**	.40**	.12	.39**
36. T3 Centrality WF Bal Advice	.37*	.31*	.29	.68**	.90**	.83**	.66**	.08	.52**	.55**
37. T3 Centrality Non-work Advice	.25	.22	.17	.65**	.72**	.80**	.64**	.17	.40**	.53**
38. T3 Centrality Work Advice	.36*	.36*	.36*	.54**	.60**	.62**	.85**	.08	.33*	.342*
39. T3 Proximity Interaction	-.13	-.16	-.24	.03	-.40**	-.18	-.06	.08	-.25	-.03

40. T3 Proximity WF Bal Advice	.61**	.65**	.69**	.30*	.41**	.25	.36*	.07	.69**	.43**
41. T3 Proximity Non- work Advice	.53**	.48**	.52**	.37*	.43**	.42**	.46**	.10	.55**	.49**
42. T3 Proximity Work Advice	.39*	.54**	.51**	.35*	.28	.32*	.64**	.05	.30*	.38**
43. T3 Density Interaction	.31*	.42**	.34*	.63**	.66**	.62**	.55**	.20	.30*	.35*
44. T3 Density WF Bal Advice	.53**	.83**	.65**	.64**	.63**	.49**	.54**	.13	.58**	.54**
45. T3 Density Non-work Advice	.47**	.76**	.55**	.55**	.51**	.45**	.48**	.04	.42**	.41**
46. T3 Density Work Advice	.57**	.68**	.54**	.42**	.34*	.31*	.41**	.21	.41**	.25
47. T3 Misperception	.03	.08	.06	.09	.13	.15	.20	-.02	-.03	.27

Table 1. Continued.

	29	30	31	32	33	34	35	36	37	38
29. T2 Proximity Work Advice	1									
30. T2 Density Interaction	.22	1								
31. T2 Density WF Bal Advice	.36**	.66**	1							

32. T2 Density Non-work Advice	0.25	.58**	.64**	1						
33. T2 Density Work Advice	.37**	.80**	.79**	.72**	1					
34. T2 Misperception	-.06	-.18	-.04	-.03	.01	1				
35. T3 Centrality Interaction	.23	.70**	.52**	.38**	.64**	.06	1			
36. T3 Centrality WF Bal Advice	.33*	.67**	.71**	.39**	.69**	.03	.66**	1		
37. T3 Centrality Non- work Advice	.32*	.60**	.51**	.29*	.54**	-.04	.56**	.84**	1	
38. T3 Centrality Work Advice	.56**	.57**	.51**	.20	.65**	.07	.62**	.62**	.60**	1
39. T3 Proximity Interaction	-.12	-.27	-.27	.01	-.13	.17	.10	-.26	-.25	-.15
40. T3 Proximity WF Bal Advice	.50**	.23	.44**	.22	.44**	.05	.24	.57**	.52**	.39**
41. T3 Proximity Non- work Advice	.45**	.29*	.39**	.21	.45**	-.12	.35**	.58**	.71**	.47**
42. T3 Proximity Work Advice	.58**	.43**	.31*	.25	.54**	.15	.30*	.34*	.36**	.71**
43. T3 Density Interaction	.35*	.77**	.60**	.37**	.79**	-.01	.65**	.64**	.55**	.70**

44. T3 Density WF Bal Advice	.53**	.78**	.87**	.75**	.93**	.01	.52**	.68**	.49**	.50**
45. T3 Density Non-work Advice	.46**	.67**	.77**	.84**	.91**	.02	.46**	.51**	.39**	.42**
46. T3 Density Work Advice	.48**	.52**	.52**	.37*	.72**	.06	.38**	.42**	.39**	.67**
47. T3 Misperception	.06	.04	.08	.11	.06	.45**	.03	.10	.04	-.07

Table 1. Continued.

	39	40	41	42	43	44	45	46	47
39. T3 Proximity Interaction	1								
40 T3 Proximity WF Bal Advice	-.10	1							
41. T3 Proximity Non- work Advice	-.05	.83**	1						
42. T3 Proximity Work Advice	-.06	.40**	.39**	1					
43. T3 Density Interaction	-.42**	.22	.29*	.44**	1				
44. T3 Density WF Bal Advice	-.20	.51**	.41**	.49**	.68**	1			

45. T3 Density Non-work Advice	-.02	.43**	.38**	.46**	.59**	.89**	1		
46. T3 Density Work Advice	-.29*	.40**	.34**	.51**	.81**	.65**	.59**	1	
47. T3 Misperception	.11	-.01	-.07	.02	-.11	.03	.04	-.13	1

*. Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

N = 82 (Total participation accounting for new participants at T2 and T3). Female=1. Married=1, Divorced=2, Widowed=3, Single, Never Married=4.

Table 4.2.

In-degree central employees (participant number) at each time by type of network.

(Note: only 10 locations retained at all three time periods due to participation rate)

Location	Interaction Network			Work-Family Balance Advice Network			Non-work Related Advice Network			Work Related Advice Network		
	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3
1	2	2	1, 2, 4, 76	5	5	5	1, 4, 5	1, 4, 5	5	1, 5	1, 5	1
2	7	68, 69	69	6, 7, 8, 9, 10	70	69	7, 10	70	7, 69, 70	10	7	69
3	12, 13	13	13	12, 13	71	13	11, 13	71	13	11	11	11
4	30	30, 31	72	28, 33	72	72	21	72	72	29	72	72
5	35	37	36	37	38	35, 37	35	35, 37	37	35	37	38
6	40, 41	39, 40, 41, 42	39, 40, 41, 42	41	39	39	41	39	39, 42	40	39, 42	42
7	45, 46	45, 46, 73	45, 46	46	73	47	45, 46	73	47	48	73	46
8	49, 50, 52, 54	74	54	49	54	54	49	49, 54	54	54	54	49
9	59, 60, 61	59, 60, 61	59, 60, 61, 77	60, 61	59, 60	77	60	59, 60	77	60	60	59, 60
10	66	65, 66, 67	65, 66, 67, 75	65	65	65	66	66, 75	66, 75	66	75	75

Hypotheses Testing

I tested hypotheses 1, 3, 5, 6, and 7 with Time 1 variables only (as opposed to a time lag design) as a way to increase the sample size being analyzed. Hypothesis 1 stated that in-degree centrality would be negatively related to misperception of peers' preferences towards utilizing PTO. A simple linear regression was calculated to predict misperception of peers' preferences towards utilizing PTO based on the four measures of in-degree centrality (by network type). After controlling for gender, marital status, number of children in the household, and organizational tenure, the relationship between in-degree centrality in the interaction network and misperception of peers' preferences towards utilizing PTO was not significant ($F(5,53)=1.91$, ns) with an R^2 of .15. Further, I found that in-degree centrality in the work-family balance advice network, non-work related advice network, and work-related advice network was not a significant predictor of misperception of peers' preferences towards utilizing PTO (Work-family balance advice: ($F(5,54)=.93$, ns) with an R^2 of .08; Non-work related advice: ($F(5,54)=1.46$, ns) with an R^2 of .12; Work-related advice: ($F(5,54)=.78$, ns) with an R^2 of .07). Though the correlation between in-degree centrality (interaction and non-work related advice networks) and misperception of peers' preference to utilize PTO was significant, the control variables in the regression model removed variance explained in the dependent variable, providing a not significant result. Overall, these findings did not support Hypothesis 1.

Hypothesis 3 stated that proximity to the most central employee (calculated by out-degree central value toward each actor in a given location provided by the central employee) would be negatively related to misperception of peers' preferences towards utilizing PTO. A simple linear regression was calculated to predict misperception of peers' preferences towards utilizing PTO based on the four measures of proximity to the central employee (by network type). After

controlling for gender, marital status, number of children in the household, and organizational tenure, the relationship between proximity to the most central employee in the interaction network, the work-family balance advice network, and the work related advice network and misperception of peers' preferences towards utilizing PTO was not significant (Interaction network: $F(5,53)=2.32$, ns) with an R^2 of .18. Work-family balance advice network: ($F(5,54)=2.38$, ns) with an R^2 of .18; Work-related advice: ($F(5,54)=2.20$, ns) with an R^2 of .17). However, the relationship between proximity to the most central employee in the non-work related advice network and misperception of peers' preferences to utilize PTO was significant, though in the opposite direction hypothesized ($\beta = .25$, $p < .001$; $F(5,54)=4.01$, $p < .01$) with an R^2 of .27. This finding suggests that the closer an employee is to the central employee in the non-work related advice network, the more s/he will misperceive his/her peers' preferences toward utilizing PTO. Though the correlation between proximity to the central employee in the interaction network, the work-family balance network, and the work related advice network and misperception of peers' preference to utilize PTO was significant, the control variables in the regression model removed variance explained in the dependent variable, providing a not significant result. Overall, these findings did not support Hypothesis 3.

Hypothesis 5 stated that the discrepancy in preferences to utilize PTO between the most central employee and the average of the group will be negatively associated with misperception of peers' preferences to utilize PTO. A simple linear regression was calculated to predict misperception of peers' preferences towards utilizing PTO based on these discrepancies in each of the four network types. After controlling for gender, marital status, number of children in the household, and organizational tenure, the relationship between these discrepancies in all four networks and misperception of peers' preferences towards utilizing PTO was not significant

(Interaction network: $F(5,55)=.48$, ns) with an R^2 of .04; Work-family balance advice network: ($F(5,55)=.59$, ns) with an R^2 of .05; Non-work related advice network: ($F(5,55)=1.05$, ns) with an R^2 of .09; Work-related advice: ($F(5,55)=.73$, ns) with an R^2 of .05). Overall, these findings did not support Hypothesis 5.

Hypothesis 6 stated that network density will moderate the relationship between in-degree centrality and misperception of peers' preferences toward utilizing PTO, such that the relationship between in-degree centrality and misperception will weaker in a highly dense network. This hypothesis was tested using the density and in-degree centrality values within the same network. For example, the interaction network density was only used to moderate the relationship between in-degree centrality in the interaction network and misperception of peers' preferences toward utilizing PTO. I analyzed the data by testing a multilevel moderated model using random coefficient modeling in Mplus6. Predictor variables were grand mean centered. Regarding the interaction between in-degree centrality and density in the interaction network, the interaction was not significant. Regarding the interaction between in-degree centrality and density in the work-family balance advice network, the interaction was not significant. Regarding the interaction between in-degree centrality and density in the non-work related advice network, the interaction was not significant. Lastly, the interaction between in-degree centrality and density in the work related advice, the interaction was not significant. See Table 4.3 for results. Overall, these findings do not support Hypothesis 6.

Hypothesis 7 stated that network density will moderate the relationship between proximity to the most central employee and misperception of peers' preferences toward utilizing PTO, such that the relationship between proximity to the most central employee and misperception will weaker in a highly dense network. This hypothesis was tested using the

density and proximity values within the same network. For example, the interaction network density was only used to moderate the relationship between proximity to the most central employee in the interaction network and misperception of peers' preferences toward utilizing PTO. I analyzed the data by testing a multilevel moderated model using random coefficient modeling in Mplus6. Predictor variables were grand mean centered. Regarding the interaction between proximity to the most central employee and density in the interaction network, the interaction was not significant. Regarding the interaction between proximity to the most central employee and density in the work-family balance advice network, the interaction was significant, however in the opposite direction hypothesized. These findings suggest that being in close proximity to the most central employee in a dense network increases misperception of peers' preferences toward utilizing PTO. This interaction is shown in Figure 4.1. Regarding the interaction between in-degree centrality and density in the non-work related advice network, the interaction was not significant. Lastly, the interaction between in-degree centrality and density in the work related advice, the interaction was not significant. See Table 4.4 for results. Overall, these findings do not support Hypothesis 7.

I tested Hypotheses 2 and 4 using variables at Time 1, 2, and 3 via Latent Growth Modeling (LGM) in Mplus version 6. Hypothesis 2 stated that the employees with high in-degree centrality and low levels of misperception, misperception will decrease over time. Further that among employees relatively low in-degree centrality and high levels of misperception, misperception will remain stable. I tested this relationship using the in-degree centrality measures for all four types of networks. The fit of the initial model for misperception of peers' preferences to utilize PTO and in-degree centrality in the interaction network was poor, CFI = .76; TLI = .49; RMSEA = .42; and $\chi^2 = 202.73$, $df = 15$. The results showed, first, that the

initial level of misperception of peers' preferences to utilize PTO did significantly relate to in-degree centrality in the interaction network ($\beta=.48$, $p<.001$). Second, that the intercept for misperception of peers' preference to utilize PTO was not significantly related to the slope of misperception of peers' preference to utilize PTO ($\beta =-.05$, ns). This suggests that there were not significant changes in misperception over time based on the intercept. Finally, the intercept for in-degree centrality in the interaction network was not significantly related to the slope of in-degree centrality in the interaction network ($\beta = -.07$, ns). This suggests that there were not significant changes in in-degree centrality over time based on the intercept.

The model fit indices for misperception of peers' preferences to utilize PTO and in-degree centrality in the work-family balance advice network was poor, CFI =.93; TLI = .85; RMSEA = .14; and $\chi^2 = 79.59$, $df = 15$. The results showed, first, that the initial level of misperception of peers' preferences to utilize PTO did significantly relate to in-degree centrality in the work-family balance advice network ($\beta =.09$, ns). Second, that the intercept for misperception of peers' preference to utilize PTO was not significantly related to the slope of misperception of peers' preference to utilize PTO ($\beta = -.010$, ns). This suggests that there were not significant changes in misperception over time based on the intercept. Finally, the intercept for in-degree centrality in the work-family balance advice network was not significantly related to the slope of in-degree centrality in the work-family balance advice network ($\beta = .018$, ns). This suggests that there were not significant changes in in-degree centrality over time based on the intercept.

The model fit indices for misperception of peers' preferences to utilize PTO and in-degree centrality in the non-work related advice network were poor, CFI =.91; TLI = .81; RMSEA = .18; and $\chi^2 = 111.99$, $df = 15$. The results showed, first, that the initial level of

misperception of peers' preferences to utilize PTO did not significantly relate to in-degree centrality in the non-work related advice network ($\beta = .01$, ns). Second, that the intercept for misperception of peers' preference to utilize PTO was not significantly related to the slope of misperception of peers' preference to utilize PTO ($\beta = -.037$, ns). This suggests that there were not significant changes in misperception over time based on the intercept. Finally, the intercept for in-degree centrality in the non-work related advice network was not significantly related to the slope of in-degree centrality in the non-work related advice network ($\beta = -.01$, ns). This suggests that there were not significant changes in in-degree centrality over time based on the intercept.

The model fit indices for misperception of peers' preferences to utilize PTO and in-degree centrality in the work related advice network was poor, CFI = .96; TLI = .92; RMSEA = .12; and $\chi^2 = 104.49$, $df = 15$. The results showed, first, that the initial level of misperception of peers' preferences to utilize PTO did not significantly relate to in-degree centrality in the work related advice network ($\beta = .01$, ns). Second, that the intercept for misperception of peers' preference to utilize PTO was not significantly related to the slope of misperception of peers' preference to utilize PTO ($\beta = -.062$, ns). This suggests that there were not significant changes in misperception over time based on the intercept. Finally, the intercept for in-degree centrality in the work related advice network was not significantly related to the slope of in-degree centrality in the work related advice network ($\beta = -.007$, ns). This suggests that there were not significant changes in in-degree centrality over time based on the intercept. These results taken together suggest lack of support for Hypothesis 2.

Hypothesis 4 stated that the employees with close proximity to the most central employee and low levels of misperception, misperception will decrease over time. Further that among

employees relatively distant in proximity to the most central employee and high levels of misperception, misperception will remain stable. I tested this relationship using the proximity measures for all four types of networks. The fit of the initial model for misperception of peers' preferences to utilize PTO and proximity in the interaction network was adequate, CFI = .99; TLI = .99; RMSEA = .06; and $\chi^2 = 128.54$, $df = 15$, $p < .001$. The results showed, first, that the initial level of misperception of peers' preferences to utilize PTO did not significantly relate to proximity in the interaction network ($\beta = -.003$, ns). Second, that the intercept for misperception of peers' preference to utilize PTO was not significantly related to the slope of misperception of peers' preference to utilize PTO ($\beta = .09$, ns). This suggests that there were not significant changes in misperception over time based on the intercept. Finally, the intercept for proximity in the interaction network was not significantly related to the slope of proximity in the interaction network ($\beta = .003$, ns). This suggests that there were not significant changes in proximity over time based on the intercept.

The model fit indices for misperception of peers' preferences to utilize PTO and proximity to the most central employee in the work-family balance advice network was poor, CFI = .97; TLI = .92; RMSEA = .12; and $\chi^2 = 120.26$, $df = 15$. The results showed, first, that the initial level of misperception of peers' preferences to utilize PTO did significantly relate to proximity in the work-family balance advice network ($\beta = .015$, $p < .05$). Second, that the intercept for misperception of peers' preference to utilize PTO was not significantly related to the slope of misperception of peers' preference to utilize PTO ($\beta = -.032$, ns). This suggests that there were not significant changes in misperception over time based on the intercept. Finally, the intercept for proximity in the work-family balance advice network was not significantly related to the

slope of proximity in the work-family balance advice network ($\beta = -.002$, ns). This suggests that there were not significant changes in proximity over time based on the intercept.

The model fit indices for misperception of peers' preferences to utilize PTO and proximity to the most central employee in the non-work related advice network were poor, CFI = .87; TLI = .72; RMSEA = .23; and $\chi^2 = 123.93$, $df = 15$. The results showed, first, that the initial level of misperception of peers' preferences to utilize PTO did not significantly relate to in-degree centrality in the non-work related advice network ($\beta = .022$, ns). Second, that the intercept for misperception of peers' preference to utilize PTO was not significantly related to the slope of misperception of peers' preference to utilize PTO ($\beta = -.02$, ns). This suggests that there were not significant changes in misperception over time based on the intercept. Finally, the intercept for proximity in the non-work related advice network was not significantly related to the slope of proximity in the non-work related advice network ($\beta = -.01$, ns). This suggests that there were not significant changes in proximity over time based on the intercept.

The model fit indices for misperception of peers' preferences to utilize PTO and in-degree centrality in the work related advice network were poor, CFI = .88; TLI = .75; RMSEA = .17; and $\chi^2 = 79.97$, $df = 15$. The results showed, first, that the initial level of misperception of peers' preferences to utilize PTO did not significantly relate to in-degree centrality in the work related advice network ($\beta = -.02$, ns). Second, that the intercept for misperception of peers' preference to utilize PTO was not significantly related to the slope of misperception of peers' preference to utilize PTO ($\beta = -.04$, $p > .05$). This suggests that there were not significant changes in misperception over time based on the intercept. Finally, the intercept for proximity in the work related advice network was not significantly related to the slope of proximity in the work related advice network ($\beta = -.27$, $p > .05$). This suggests that there were not significant changes in

proximity over time based on the intercept. These results taken together suggest lack of support for Hypothesis 4.

Table 4.3
Cross-level moderation results for misperception of peers' preferences towards utilizing PTO given in-degree centrality.

	Interaction Network	Work-family Balance Advice Network	Non-work Related Advice Network	Work Related Advice Network
1. Gender	-.03 (.20)	.01 (.97)	-.03 (.14)	-.05 (.21)
2. Marital Status	.12 (.08)	.11 (3.03)	.08 (.05)	.10 (.08)
3. # of Kids	-.01 (.09)	-.04 (.65)	-.01 (.04)	-.03 (.01)
4. Organizational Tenure	.01 (.02)	.01 (.53)	.01 (.01)	.01 (.02)
5. In-degree Centrality X Density	.95 (9.56)	3.56 (58.35)	3.47 (10.39)	-4.39 (4.46)

N = 64 employees (level 1) in 12 locations (level 2). Unstandardized estimates are reported, with standard errors in parentheses. All variables reported at Time 1.

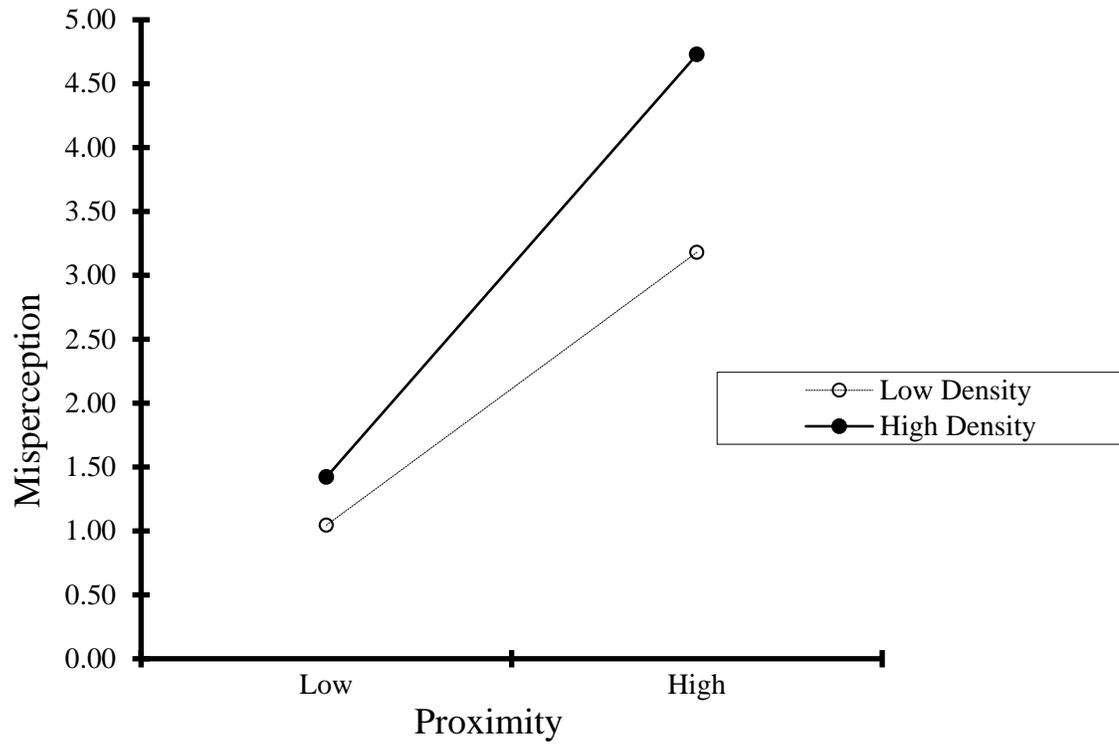
Table 4.4
Cross-level moderation results for misperception of peers' preferences towards utilizing PTO given proximity to the most central employee.

	Interaction Network	Work-family Balance Advice Network	Non-work Related Advice Network	Work Related Advice Network
1. Gender	-.13 (.20)	-.14 (.14)	-.05 (.12)	.05 (.20)
2. Marital Status	.12 (.07)	.12 (.06)	.08 (.05)	.10 (.07)
3. # of Kids	-.02 (.09)	-.04 (.04)	-.01 (.03)	.01 (.09)
4. Organizational Tenure	.01 (.02)	.02 (.01)	-.01 (.02)	-.01 (.02)
7. Proximity X Density	.54 (2.25)	1.39** (.47)	.94 (.79)	-.41 (.86)

N = 64 employees (level 1) in 12 locations (level 2). Unstandardized estimates are reported, with standard errors in parentheses. All variables reported at Time 1.

Figure 4.1

Interaction between proximity to the most central employee and density (Work-family balance advice network) on misperception of peers' preferences to utilize PTO.



Post-Hoc Analysis

Though my hypotheses weren't supported, the correlations between some variables of interest were significant. For this reason, I ran several post-hoc analyses. First, I ran Hypotheses 1 and 3 after removing my control variables. My control variables were not significantly related to misperception of peers' preferences for using PTO and there are no prior studies that show these variables are related to misperception. Hypothesis 1 stated that in-degree centrality would be negatively related to misperception of peers' preferences towards utilizing PTO. A simple linear regression was calculated to predict misperception of peers' preferences towards utilizing PTO based on the four measures of in-degree centrality (by network type). The relationship between in-degree centrality in the interaction network and the non-work advice network, and misperception of peers' preferences towards utilizing PTO was significant (Interaction network: $\beta = 2.13, p < .05$; $F(1,59) = 7.05, p < .05$) with an R^2 of .11; Non-work related advice network: $\beta = 1.21, p < .05$; $F(1,59) = 5.99, p < .05$) with an R^2 of .09). However, I found that in-degree centrality in the work-family balance advice network and the work-related advice network was not a significant predictor of misperception of peers' preferences towards utilizing PTO (Work-family balance advice network: $F(1, 59) = .93, ns$) with an R^2 of .08; Work-related advice: ($F(5, 59) = 1.730, ns$) with an R^2 of .03). This is consistent with the findings in the correlation table. Though these relationships were significant, they were in the opposite direction hypothesized.

Hypothesis 3 stated that proximity to the most central employee (calculated by out-degree central value toward each actor in a given location provided by the central employee) would be negatively related to misperception of peers' preferences towards utilizing PTO. A simple linear regression was calculated to predict misperception of peers' preferences towards utilizing PTO based on the four measures of proximity to the central employee (by network type), all controls

removed. The relationship between proximity to the most central employee in the interaction network, the work-family balance advice network, and the work related advice network and misperception of peers' preferences towards utilizing PTO was significant (Interaction network: $\beta = .35, p < .01$; $F(1, 59)=8.56, p<.01$ with an R^2 of .13; Work-family balance advice network: $\beta = .18, p < .01$; $F(1, 59)= 9.99, p<.01$ with an R^2 of .13; Non-work related advice: $\beta = .24, p<.001$; $F(1, 59)= 18.26, p<.001$ with an R^2 of .22; Work-related advice: $\beta = .18, p<.01$; $F(1, 59)= 9.58, p<.01$ with an R^2 of .13). These findings suggest that the closer an employee is to the central employee in all four networks, the more s/he will misperceive his/her peers' preferences toward utilizing PTO. Again, these relationships were in the opposite direction hypothesized.

Second, I ran a simple linear regression for Hypotheses 1 and 3 with a cross-lag design. Cross-lag models capture the relationship between two variables at two points in time (i.e. relationship between X at Time 1 and Y at Time 2), and provide more insight on causality between variables than models with variables captured at only one point in time (Kenny, 2005). While this is the preferred method, I choose to not run this model originally because of the importance of capturing individual misperception given the current state of the social network. In my study, I contend that individual perceptions and social networks are fluid. Further, that perceptions are based on the current state of the social network, not the social network that occurred at some period of time in the past. Further, I choose to test Hypotheses 1 and 3 using only Time 1 to retain a higher number of participants. Listwise deletion in simple linear regression removes participants with missing values. The participants that left the study at Time 2 had missing values for the Time 2 variables, and thus would be removed from the analyses.

Using the cross-lag design, I ran simple linear regression with in-degree centrality (for each type of network) Time 1 as my independent variables and misperception of peers'

preferences to utilize PTO at Time 2 as my dependent variable, with no control variables. These relationships were not significant. I ran simple linear regression with proximity to the most central employees at Time 1 as my independent variables and misperception of peers' preferences to utilize PTO at Time 2 as my dependent variable, no control variables. These relationships were not significant. I ran simple linear regression with in-degree centrality at Time 2 as my independent variables and misperception of peers' preferences to utilize PTO at Time 3 as my dependent variables. These relationships were not significant. I ran a simple linear regression with proximity to the most central employees at Time 2 as my independent variables and misperception of peers' preferences to utilize PTO at Time 3 as my dependent variable. These relationships were not significant.

For my third additional analyses, I considered that there may be a curvilinear effect related to Hypotheses 1 and 3. Just as stress and job performance have an inverted-U relationships (also known as the Yerkes-Dodson Law), I considered that one reason for my insignificant results may be that individuals with moderate in-degree centrality may have more or less misperception of their peers' preferences to utilize PTO than individuals with high or low in-degree centrality. To test this, I squared my predictor variable and used it as my independent variable in the models. I tested the curvilinear models for Hypotheses 1 and 3 in all four networks in Time 1. These relationships were not significant.

Lastly, I considered multiplexity. Multiplex relationships are those characterized by multiple bases for interaction and are typically stronger than one-dimensional relationships (Brass, 1992; Dutton & Heaphy, 2003; Ibarra, 1993). At work, these types of relationships include information-sharing related to tasks, as well as emotional support, mutual confiding, and reciprocal services (Granovetter, 1973; Ibarra, 1993; Kram & Isabella, 1985; Lazega & Pattison,

1999; Rawlins, 1992; Sias, 2005; Sias & Cahill, 1998). Multiplex relationships are wide-spread in organizations (Ingram & Zou, 2008) as most employees lean on particular individuals for work-related support, work and non-work advice, and information exchanges (Kram & Isabella, 1985; Rawlins, 1992; Sias, 2005; Sias & Cahill, 1998; Winstead, Derlega, Montgomery, & Pilkington, 1995). Recent studies have explored the double edged sword related to employees having multiplex friendships with co-workers. While employees with multiplex relationships report higher levels of productivity, retention, and job satisfaction (Rath, 2006), these types of interaction can deplete energy resources that are needed to maintain them (Methot et al., 2016).

Employees with many multiplex relationships at work would be privy to information exchanges that encompass work and non-work related aspects, perhaps including preferences towards utilizing PTO. For this reason, I consider that those employees with high in-degree centrality in all four network types would have lower misperceptions of their peers' preferences towards utilizing PTO. To test this, I averaged the four in-degree centrality scores for each employee to obtain a multiplexity score. I ran a simple linear regression using the multiplexity as my independent variables and misperception of peers' preferences toward utilizing PTO as my dependent variable, with no control variables. This relationship was significant ($\beta = 1.672$, $p < .05$; $F(1, 59)=6.464$, $p<.01$ with an R^2 of .10), however in the opposite direction hypothesized. This suggests that employees with many relational ties of various forms, including work and non-work relationship, have a greater degree of misperception of their peers' preferences than their co-workers.

CHAPTER 5

DISCUSSION AND CONCLUSION

While family-friendly benefits, such as paid time off, are offered to help employees alleviate their work-family conflict, studies consistently find that these benefits are underutilized (Blair-Loy & Wharton, 2002; Edwards & Rothbard, 2000; Kreiner, 2006; Lobel, 1999; Osterman, 1995; Parasuraman & Greenhaus, 2002; Rice et al., 1992). Research has shown that though employees may want to utilize these benefits, they instead resist utilizing them due to a perception that their peers' prefer to not use them, and further, this perception is sometimes inaccurate (Mandeville et al, 2016). This study was aimed at investigating one potential source for reducing misperception of peers' preferences toward utilizing family-friendly benefits, interpersonal relationships. Considering that relationships are conduits for information exchanges, I tested the effects of employees' interpersonal relationships on the degree to which such misperceptions may exist. Specifically, I examined employees' positions within four social networks: interaction network, work-family balance advice network, non-work related advice network, and work related advice network. I wanted to understand how network position would influence individual misperception. I also was interested in understanding how central employees' preferences would influence other employees' misperceptions of group level preferences. Further, I wanted to investigate the relationship between network position and misperception of peers' preferences over time.

Among my hypotheses, I expected an inverse relationship between in-degree centrality and misperceptions of peers' preferences toward utilizing family-friendly benefits. Central employees have more ties and stronger ties than others in their social network, and are shown to be privy to information regarding others in the network (Sparrowe et al., 2001; Tsai, 2000). While the results of my analysis did not support this notion, findings from my post hoc analyses provided partial support for a positive relationship between in-degree centrality and misperceptions of peers' preferences toward utilizing one type of family-friendly benefit, PTO. Regarding the interaction networks and non-work related advice networks in my study, the more central employees seemed to have a greater degree of misperception than their counterparts. Further, the more central employees in the multiplex network (average in-degree score in all four networks) seemed to have a greater degree of misperception than their counterparts. This positive relationship also held true for those employees in close proximity to the central employees in all four networks. These findings suggest that employees with many ties (and with presumably more information about their co-workers work and non-work related issues), knew less about their co-workers' preferences.

Previous studies suggest that misperceptions of group preferences increase due to a vocal minority. The vocal minority hypothesis explains that when an individual in the minority opinion (one that holds an opinion different from most others in the group) expresses his/ her opinion, others in the work group confuse the vocal members as sharing a similar opinion with the majority of others (Halbesleben et al., 2007; Miller & Prentice, 1994). Thus, misperceptions of group preferences will be high when preferences of one vocal member are extrapolated to that of the group. I aimed to test this notion by examining the effects of the most central members' preferences on individual misperceptions of the peers' preferences. I hypothesized that a larger

discrepancy between the central members' preferences and the average group preferences, the greater the degree of individual misperception. Thus, a larger discrepancy would demonstrate a minority opinion, which starts to test the vocal minority hypothesis. My findings did not support this notion. This indicates that the central employee's preferences don't influence group levels of PI. However, this hypothesis assumes that the central employee is the vocal minority, which could very well not be the case. There is no research to support the network position of a vocal minority. So while the central employee may have many close interpersonal relationships, s/he may not publicly voice a preference for family-friendly benefit utilization.

I also tested the moderating effects of network density on the relationship between in-degree centrality and misperception of peers' preferences toward family-friendly benefit utilization, as well its effect on the relationship between proximity to the most central employee and misperception of peers' preferences towards family-friendly benefit utilization. The ICC(1) statistics demonstrated an existence of variance explained by a group level phenomenon, though network density was not it. One plausible cause is the collective boundary management preferences of the group. Boundary management preferences are individual psychological and behavioral boundaries constructed to organize an individual's work and family domains (Nippert-Eng, 1996). Each employee is said to have a preference, along a continuum, to integrate or segment those two domains of life (Ashforth et al, 2000; Matthews & Barnes-Farrell, 2010; Matthews et al, 2010, 2014; Nippert-Eng, 1996; Winkel & Clayton, 2010). For example, an employee who frequently discusses family life with co-workers would presumably have a preference for integration. Should the group hold an aggregate preference for integration, group members would frequently discuss family life, attend to non-work duties in the work domain, or perhaps even bring their family into the work domain (e.g. wife and kids frequently visit the

office). Thus, an average group level preference for integration would signal that group members may have more information about each other to better gauge family-friendly benefit utilization preferences. Group level effects such as this should be considered in future research.

Lastly, I examined changes in the relationship between in-degree centrality and misperceptions of peers' preference to utilize family-friendly benefits over time. I also examined the changes in the relationship between proximity to the most central employees and misperceptions of peers' preferences to utilize family-friendly benefits over time. I expected that central employees would increase their central scores over time, supported by previous research (Dahlander & McFarland, 2013), and thus have decreasing misperceptions of the peers' preferences over time. These hypotheses were not supported. Instead, when examining the most central employees in all four networks at each time period, I found the most central employee changes in a non-linear fashion. Further, that the most central employee in one network is not necessarily the most central employee in another network (e.g. the most central employee in the interaction network is frequently not the most central employee in the work-family balance advice network). This finding suggests that we seek advice from different co-workers for different issues, and the ones we seek advice from are not always the co-workers we interact with the most. Further, the co-workers we seek advice from on work and non-work related issues today may not be the same co-workers we seek advice from on work and non-work related issues in the months to come. This highlights the complexities of studying and understanding interpersonal relationships. Though this was not examined, the changing nature of interpersonal relationships alone may make it difficult for an individual to gauge peers' preferences over time, which could lead to greater misperceptions.

Together, these findings highlight the prevalent issue of pluralistic ignorance regarding family-friendly benefit utilization by explaining more factors that could potential lead to greater misperceptions of peers' preferences. In addition to the vocal minority hypothesis, this study provides partial support for the notion that even when employees form many close relationships at work, misperceptions of peers' preferences exist. Though counter intuitive, these findings are similar to that in a study on perceptions of friends' political attitudes (Goel, Mason, Watts, 2010). Goel and colleagues conducted a study using Facebook to examine if individuals could accurately gauge their Facebook friends' political views. They found that Facebook friends are typically unaware of each other's views, and instead infer opinions by relying on stereotypes. This was true even for friendship dyads that claim to discuss politics. Stereotypes exist as a mechanism for individuals to simplify information about others. Therefore, it's possible that individuals with information about their co-workers work and non-work related issues could extrapolate that limited information to form an opinion about their co-workers' preferences to use PTO. For example, it may be possible for an employee to inaccurately infer that a co-worker doesn't want to use all of his/her PTO if they know that co-worker is committed to his/her job and wants to perform well at his/her job due to having young kids at home.

Limitations & Future Research

Though this study advances the literature on pluralistic ignorance concerning what may lead to increased misperceptions of peers' preferences towards utilizing family-friendly benefits, this study is subject to several limitations. First, the ability to generalize these findings (or lack thereof) may be limited to organizations that provide similar health services with the same form of task dependency. My sample consisted of a mix of doctors, managers, sales associates, and

support staff, each with unique roles in the customer/patient experience. At this organization, the customer/patient experience consists of an interaction with a front desk support employee, followed by a doctor who provides an exam and prescribes a pair of lens, and lastly an interaction with a sales associate for an eyeglass selection and fitting. This requires limited interaction and more task dependency between employees with different roles, which may lead to a different social network than, for example, a group of professors assigned a project on campus space utilization that need to work together and occupy similar, non-dependent roles. Studies demonstrate that when there is symmetric task dependency in a relationship, there is usually some consistency in the interaction, thus individuals often base their judgements of each other on pre-existing stereotypes and expectancies (Erber & Fiske, 1984; Jones & Davis, 1965; Neuberg & Fiske, 1987; Ruscher & Fiske, 1990). Instead, when an interaction provides an inconsistency of information, more often individuals attribute behavior to individuating personality (Jones & Davis, 1965). Therefore, future studies should provide several samples with varying role dependencies between employees to help support these findings or tease out possible differences between types of employee groups.

Another limitation of this study is that the findings are limited to misperceptions of preferences to utilize one particular family-friendly benefit: Paid Time Off (PTO). Though I sought to understand misperception of peers' preferences to utilize a host of family-friendly benefits offered by the organization (based on a list provided by an executive at the company), I found that the employees at this company were not aware of most of the benefits offered to them. This is not surprising given the statistics on employees' awareness of some of the more popular family-friendly benefits. According to the Department of Labor, in 2012, only 62% of employees have heard of the Family Medical Leave Act (FMLA), a family-friendly benefit required by

federal law that provides job-protected unpaid leave to qualified employees for qualified medical and family reasons (Klerman et al., 2013). Research has shown that there are several factors that can lead to employees not being aware of their family-friendly benefits, including a family-friendly culture and family contexts, though gender is the greatest predictor (Baird & Reynolds, 2004). Future studies aimed at collecting data on family-friendly benefit utilization should also ensure that participants are aware of the benefits offered to them and perhaps control for that awareness. By not controlling for awareness, findings on utilization may be deflated, such that employees may have used or preferred to use a benefit had they been aware of its existence.

Further, my study was limited to quantitative data regarding the types of interpersonal relationships formed, which provides only limited information on the nature of the interactions between employees. Interpersonal relationships between co-workers with highly scripted transactions (similar tone and content of information exchanges) may be prone to knowing less about each other. When individuals have previous exposure to information about another individual, it can decrease analytic processing of individuating information regarding that target person (Smith, Miller, Maitner, Crump, Garcia-Marques, Mackie, 2006). For example, two co-workers may discuss their kids' weekend soccer game every Monday, but these interactions, though frequent, generally consist of the same information (i.e., they have kids, their kids play soccer, perhaps some level of sentiment towards soccer, and the team won/ lost). When information is highly scripted, there is a decrease in analytic processing when it comes to judgements about that individual. Instead, the repeated exposure would increase the reliance on a previously formed stereotype of that person, sometimes referred to as a heuristic (Fiske, 1998; Smith et al., 2006). In this study, participants were only asked about the frequency of the interaction and the frequency of advice sought, not the content of that interaction and/ or advice.

Thus, it is possible that a co-worker may be frequently interacting in the same manner and/ or providing advice about the same issues to many co-workers, increasing his/her centrality, while still heavily relying on stereotypes to infer preferences on issues such as family-friendly benefit utilization. Future research should adopt a mixed methods approach that includes qualitative data regarding the information exchanges between co-workers and how that may play a role in the misperception of peers' preferences towards utilizing family-friendly benefits.

In this study I relied on in-degree centrality scores, though centrality is conceptualized and measured in a variety of ways. For example, closeness centrality takes into account the ties an actor has *and* other indirect ties (Wasserman & Faust, 2004). While degree centrality focuses on the amount and strength of ties an actor has, closeness centrality takes the position of the actor's ties into consideration. The four network questions in this study were asked to understand information flowing through the central employee. Three of the four questions pertained to advice. When an employee asks another employee for advice, there is an assumption that s/he wouldn't discuss advice given by other employees in the network. For this reason, degree centrality was originally selected. By removing this assumption, it is possible for the central employee to obtain additional information about the group's preferences, should s/he gather information about the other employee attitudes while providing advice. Future studies should consider other types of centrality measures, including closeness centrality, when examining the relationship between network position and misperceptions of peers' preferences.

Lastly, participant retention and added participants at each time period could have impacted some of my results. An assumption I made when analyzing these data longitudinally is that the addition or subtraction of a group member isn't contributing to the change in the interpersonal relationships of the group. Group-level normative expectations, shared perceptions,

and compatible knowledge are generated by and emerge from individual interactions (Kozlowski & Bell, 2003). Much of the research on group entrants focuses on how a new member is socialized into the group (Anderson & Thomas, 1996; Moreland & Levine, 2001); however, there isn't much research on how the relationships between existing group members change as a result of the new member. There is much to consider here, as an employees' advice ego-network may shift dramatically should a relied on source of advice leave the group, or if a new group member elicits ambiguity thus increasing the need to receive advice. If a new member is added to the group, it is possible that they expectations, perceptions, knowledge, and subsequent interactions within the group and between group members change as well. Future research should incorporate new member changes into longitudinal models that examine the relationship between centrality and misperceptions of peers' preferences over time or adopt methods to reduce the likelihood of change, such as reducing the time between data collections.

Conclusion

Utilizing family-friendly benefits has been linked to positive outcomes such as decreased work-family conflict, greater organizational commitment, lower intentions to quit, less absenteeism, and greater job satisfaction (Allen, 2001; Baltes, Briggs, Huff, Wright, & Neuman, 1999; Thompson et al., 1999). However, previous studies have suggested that perceptions regarding coworker support for such benefits play an important role in utilization, and individuals often misperceive their coworkers opinions (Mandeville et al., 2016). This study sought to explain conditions by which misperceptions may be exacerbated or reduced by using social network analysis as a lens to understand how interpersonal relationships between individuals within a work group influence misperception of peers' preferences. Departing from

expectation, my findings suggest that individuals with many strong interpersonal relationships within their work group tend to have higher misperceptions of the peers' preferences towards family-friendly benefit utilization. It appears that in some cases, having access to information about our peers' does not necessarily equate knowledge of their attitudes regarding benefits. These findings highlight the prevalence of Pluralistic Ignorance regarding peers' preferences toward family-friendly benefit utilization, which calls for an urgent need for more research.

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Appendix A

Survey Items

Time 1 Survey.

Demographics.

Please tell us more about yourself.

1. How long have you worked for your current company? _____
2. How long have you worked in your current job? _____
3. Approximately how many hours per week do you work? _____
4. Which location do you work regularly? _____ (all locations listed)
5. Which of the following best describes your position in your organization?
 Executive
 Manager
 Sales Associate
 Doctor
 Support
 Other
6. Please indicate your highest level of education received.
 Some high school
 High school degree or equivalent
 Some College
 Bachelor's degree
 Professional degree (MD, JD, etc.)
 Doctorate (PhD, EdD, etc.)
7. What is your race?
 White/Caucasian
 African American
 Hispanic
 Asian
 Native American

_____ Pacific Islander
 _____ Other

8. What is your age? _____
9. What is your Marital status?
 ___ Married or Living with a Partner
 ___ Divorced
 ___ Widowed
 ___ Single, Never married
10. If you have a spouse or partner, about how many hours per week do they work for pay?
 _____ hours/week
11. How many children do you have? _____
12. How many children live with you? _____

Social Network. (List first names of employees by location for each question)

1. How often do you interact with the listed team members? (Interaction network - based on Reinholt, Pedersen & Foss, 2011). (Scale from 0 (never) to 5 (a great deal)).
2. How often do the listed team members advise you on subjects that are related to balancing work and family (Friendship network – based on Zohar & Tenne-Gazit, 2008) (Scale from 0 (never) to 5 (a great deal)).
3. Of the team members listed below, to what extent do you consult or get help on personal issues? (Friendship network – based on Zohar & Tenne-Gazit, 2008) (Scale from 0 (never) to 5 (a great deal))
4. Of the team members listed below, to what extent do you consult or get help on work issues? (Friendship network – based on Zohar & Tenne-Gazit, 2008) (Scale from 0 (never) to 5 (a great deal))

Utilization of Family – Friendly Benefits.

Do you use the following benefits?

Benefit Name	Use? (yes/no)
Unpaid Leave	
Paid Time Off	
Family Health Insurance	
Pretax dollars for Child Care	
Pretax dollars for Elder Care	

Resource/ Referral Child Care	
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Preferences to Utilize Family – Friendly Benefits.

For each of the following benefits, please indicate the extent to which you would prefer to use it compared to how much you currently use it.

(1 =using it much less than I would prefer, 2=using it less than I would prefer, 3= using it as much as I would like to use it, 4= using it slightly more than I would like to use it, 5 = using it much more than I would like to use it.)

Benefit Name
Unpaid Leave
Paid Time Off
Family Health Insurance
Pretax dollars for Child Care
Pretax dollars for Elder Care
Resource/ Referral Child Care

Perceptions of Peer Utilization.

Based on your perception, what percentage of the people at your location utilize the following benefits?

Benefit Name	Use? (0-100%)
Unpaid Leave	
Paid Time Off	
Family Health Insurance	
Pretax dollars for Child Care	
Pretax dollars for Elder Care	
Resource/ Referral Child Care	

Perceptions of Peer Preferences to Utilize Family – Friendly Benefits.

Please indicate the extent to which you believe the people *at your location would prefer* to use each benefit compared to how much they currently use it. (1 =using it much less than they would prefer, 2=using it less than they would prefer, 3= using it as much as they would like to use it, 4= using it slightly more than they would like to use it, 5 = using it much more than they would like to use it.)

Benefit Name
Unpaid Leave
Paid Time Off
Family Health Insurance
Pretax dollars for Child Care
Pretax dollars for Elder Care
Resource/ Referral Child Care

Work-Family Conflict. (Matthews, Kath & Barnes-Farrell, 2010)

Please indicate the extent to which you agree with each statement. (1=Strongly disagree, 2 = Disagree, 3 = Neither disagree nor agree, 4 = Agree, 5 = Strongly agree)

1. I have to miss family activities due to the amount of time I must spend on work responsibilities.
2. I am often so emotionally drained when I get home from work that it prevents me from contributing to my family.
3. The behaviors I perform that make me effective at work do not help me to be a better parent or spouse.
4. I have to miss work activities due to the amount of time I must spend on family responsibilities.
5. Because I am often stressed from family responsibilities, I have a hard time concentrating on my work.
6. Behavior that is effective and necessary for me at home would be counterproductive at work.

Exhaustion scale of Oldenburg Burnout Inventory (Demerouti et al., 2003; Halbesleben & Demerouti, 2005)

Please indicate the extent to which you agree with the following statements. (1=Strongly disagree, 2 = Disagree, 3 = Neither disagree nor agree, 4 = Agree, 5 = Strongly agree)

1. There are days when I feel tired before I arrive at work
2. After work, I tend to need more time than in the past in order to relax and feel better
3. I can tolerate the pressure of my work very well
4. During my work, I often feel emotionally drained
5. After working, I have enough energy for my leisure activities
6. After my work, I usually feel worn out and weary
7. Usually, I can manage the amount of work well
8. When I work, I usually feel energized

Boundary Management Preferences for Segmentation. (Kreiner. 2006)

Items 1 – 8: Preference for Segmentation

Items 9 – 12: Segmentation Supplies

Please indicate the extent to which you agree with the following statements. (1=Strongly disagree, 2 = Disagree, 3 = Neither disagree nor agree, 4 = Agree, 5 = Strongly agree)

1. I don't like to have to think about work while I'm at home.
2. I prefer to keep work life at work.
3. I don't like work issues creeping into my home life.
4. I like to be able to leave work behind when I go home.
5. I don't like to have to think about family issues while I'm at work.
6. I prefer to keep family life at home (not at work).
7. I don't like family issues creeping into my work life.
8. I like to be able to leave family issues behind when I go into work.
9. My workplace lets people forget about work when they're at home.
10. Where I work, people can keep work matters at work.
11. At my workplace, people are able to prevent work issues from creeping into their home life.
12. When I work, people can mentally leave work behind when they go home.

Perceptions of Peers Boundary Management Preferences.(Modified Kreiner, 2006)

Please indicate the extent to which you believe the majority of the employees at your location agree with the following statements. (1=Strongly disagree, 2 = Disagree, 3 = Neither disagree nor agree, 4 = Agree, 5 = Strongly agree)

1. I don't like to have to think about work while I'm at home.
2. I prefer to keep work life at work.
3. I don't like work issues creeping into my home life.
4. I like to be able to leave work behind when I go home.
5. I don't like to have to think about family issues while I'm at work.

6. I prefer to keep family life at home (not at work).
7. I don't like family issues creeping into my work life.
8. I like to be able to leave family issues behind when I go into work.
9. I don't like to have to think about family issues while I'm at work.
10. I prefer to keep family life at home (not at work).
11. I don't like family issues creeping into my work life.
12. I like to be able to leave family issues behind when I go into work.

Work/ Family Identity.

Please indicate the extent to which you agree with the following statements. (1=Strongly disagree, 2 = Disagree, 3 = Neither disagree nor agree, 4 = Agree, 5 = Strongly agree)

1. A major source of satisfaction in my life is my career.
2. Most of the important things that happen to me involve my career.
3. I am very much involved personally in my career.
4. Most of my interests are centered around my career.
5. A major source of satisfaction in my life is my family.
6. Most of the important things that happen to me involve my family.
7. I am very much involved personally in my family.
8. Most of my interests are centered around my family.

Time 2 Survey

Social Network. (List first names of employees by location for each question)

1. How often do you interact with the listed team members? (Interaction network - based on Reinholt, Pedersen & Foss, 2011). (Scale from 0 (never) to 5 (a great deal)).
2. How often do the listed team members advise you on subjects that are related to balancing work and family (Friendship network – based on Zohar & Tenne-Gazit, 2008) (Scale from 0 (never) to 5 (a great deal)).
3. Of the team members listed below, to what extent do you consult or get help on personal issues? (Friendship network – based on Zohar & Tenne-Gazit, 2008) (Scale from 0 (never) to 5 (a great deal))
4. Of the team members listed below, to what extent do you consult or get help on work issues? (Friendship network – based on Zohar & Tenne-Gazit, 2008) (Scale from 0 (never) to 5 (a great deal))

Utilization of Family – Friendly Benefits.

Do you use the following benefits?

Benefit Name	Use? (yes/no)
Unpaid Leave	
Paid Time Off	
Family Health Insurance	
Pretax dollars for Child Care	
Pretax dollars for Elder Care	
Resource/ Referral Child Care	

Preferences to Utilize Family – Friendly Benefits.

For each of the following benefits, please indicate the extent to which you would prefer to use it compared to how much you currently use it.

(1 =using it much less than I would prefer, 2=using it less than I would prefer, 3= using it as much as I would like to use it, 4= using it slightly more than I would like to use it, 5 = using it much more than I would like to use it.)

Benefit Name
Unpaid Leave
Paid Time Off
Family Health Insurance
Pretax dollars for Child Care

Pretax dollars for Elder Care
Resource/ Referral Child Care

Perceptions of Peer Utilization.

Based on your perception, what percentage of the people at your location utilize the following benefits?

Benefit Name	Use? (0-100%)
Unpaid Leave	
Paid Time Off	
Family Health Insurance	
Pretax dollars for Child Care	
Pretax dollars for Elder Care	
Resource/ Referral Child Care	

Perceptions of Peer Preferences to Utilize Family – Friendly Benefits.

Please indicate the extent to which you believe the people at your location would prefer to use each benefit compared to how much they currently use it. (1 =using it much less than they would prefer, 2=using it less than they would prefer, 3= using it as much as they would like to use it, 4= using it slightly more than they would like to use it, 5 = using it much more than they would like to use it.)

Benefit Name
Unpaid Leave
Paid Time Off
Family Health Insurance
Pretax dollars for Child Care
Pretax dollars for Elder Care
Resource/ Referral Child Care

Work-Family Conflict. (Matthews, Kath & Barnes-Farrell, 2010)

Please indicate the extent to which you agree with each statement. (1=Strongly disagree, 2 = Disagree, 3 = Neither disagree nor agree, 4 = Agree, 5 = Strongly agree)

1. I have to miss family activities due to the amount of time I must spend on work responsibilities.
2. I am often so emotionally drained when I get home from work that it prevents me from contributing to my family.
3. The behaviors I perform that make me effective at work do not help me to be a better parent or spouse.
4. I have to miss work activities due to the amount of time I must spend on family responsibilities.
5. Because I am often stressed from family responsibilities, I have a hard time concentrating on my work.
6. Behavior that is effective and necessary for me at home would be counterproductive at work.

Exhaustion scale of Oldenburg Burnout Inventory (Demerouti et al., 2003; Halbesleben & Demerouti, 2005)

Please indicate the extent to which you agree with the following statements. (1=Strongly disagree, 2 = Disagree, 3 = Neither disagree nor agree, 4 = Agree, 5 = Strongly agree)

1. There are days when I feel tired before I arrive at work
2. After work, I tend to need more time than in the past in order to relax and feel better
3. I can tolerate the pressure of my work very well
4. During my work, I often feel emotionally drained
5. After working, I have enough energy for my leisure activities
6. After my work, I usually feel worn out and weary
7. Usually, I can manage the amount of work well
8. When I work, I usually feel energized

Boundary Management Preferences for Segmentation. (Kreiner. 2006)

Items 1 – 8: Preference for Segmentation

Items 9 – 12: Segmentation Supplies

Please indicate the extent to which you agree with the following statements. (1=Strongly disagree, 2 = Disagree, 3 = Neither disagree nor agree, 4 = Agree, 5 = Strongly agree)

1. I don't like to have to think about work while I'm at home.
2. I prefer to keep work life at work.
3. I don't like work issues creeping into my home life.
4. I like to be able to leave work behind when I go home.
5. I don't like to have to think about family issues while I'm at work.
6. I prefer to keep family life at home (not at work).

7. I don't like family issues creeping into my work life.
8. I like to be able to leave family issues behind when I go into work.
9. My workplace lets people forget about work when they're at home.
10. Where I work, people can keep work matters at work.
11. At my workplace, people are able to prevent work issues from creeping into their home life.
12. When I work, people can mentally leave work behind when they go home.

Perceptions of Peers Boundary Management Preferences.(Modified Kreiner, 2006)

Please indicate the extent to which you believe the majority of the employees at your location agree with the following statements. (1=Strongly disagree, 2 = Disagree, 3 = Neither disagree nor agree, 4 = Agree, 5 = Strongly agree)

1. I don't like to have to think about work while I'm at home.
2. I prefer to keep work life at work.
3. I don't like work issues creeping into my home life.
4. I like to be able to leave work behind when I go home.
5. I don't like to have to think about family issues while I'm at work.
6. I prefer to keep family life at home (not at work).
7. I don't like family issues creeping into my work life.
8. I like to be able to leave family issues behind when I go into work.
9. I don't like to have to think about family issues while I'm at work.
10. I prefer to keep family life at home (not at work).
11. I don't like family issues creeping into my work life.
12. I like to be able to leave family issues behind when I go into work.

Work/ Family Identity.

Please indicate the extent to which you agree with the following statements. (1=Strongly disagree, 2 = Disagree, 3 = Neither disagree nor agree, 4 = Agree, 5 = Strongly agree)

1. A major source of satisfaction in my life is my career.
2. Most of the important things that happen to me involve my career.
3. I am very much involved personally in my career.
4. Most of my interests are centered around my career.
5. A major source of satisfaction in my life is my family.
6. Most of the important things that happen to me involve my family.
7. I am very much involved personally in my family.
8. Most of my interests are centered around my family.

Time 3 Survey

Social Network. (List first names of employees by location for each question)

1. How often do you interact with the listed team members? (Interaction network - based on Reinholt, Pedersen & Foss, 2011). (Scale from 0 (never) to 5 (a great deal)).
2. How often do the listed team members advise you on subjects that are related to balancing work and family (Friendship network – based on Zohar & Tenne-Gazit, 2008) (Scale from 0 (never) to 5 (a great deal)).
3. Of the team members listed below, to what extent do you consult or get help on personal issues? (Friendship network – based on Zohar & Tenne-Gazit, 2008) (Scale from 0 (never) to 5 (a great deal))
4. Of the team members listed below, to what extent do you consult or get help on work issues? (Friendship network – based on Zohar & Tenne-Gazit, 2008) (Scale from 0 (never) to 5 (a great deal))

Utilization of Family – Friendly Benefits.

Do you use the following benefits?

Benefit Name	Use? (yes/no)
Unpaid Leave	
Paid Time Off	
Family Health Insurance	
Pretax dollars for Child Care	
Pretax dollars for Elder Care	
Resource/ Referral Child Care	

Preferences to Utilize Family – Friendly Benefits.

For each of the following benefits, please indicate the extent to which you would prefer to use it compared to how much you currently use it.

(1 =using it much less than I would prefer, 2=using it less than I would prefer, 3= using it as much as I would like to use it, 4= using it slightly more than I would like to use it, 5 = using it much more than I would like to use it.)

Benefit Name
Unpaid Leave
Paid Time Off
Family Health Insurance
Pretax dollars for Child Care

Pretax dollars for Elder Care
Resource/ Referral Child Care

Perceptions of Peer Utilization.

Based on your perception, what percentage of the people at your location utilize the following benefits?

Benefit Name	Use? (0-100%)
Unpaid Leave	
Paid Time Off	
Family Health Insurance	
Pretax dollars for Child Care	
Pretax dollars for Elder Care	
Resource/ Referral Child Care	

Perceptions of Peer Preferences to Utilize Family – Friendly Benefits.

Please indicate the extent to which you believe the people at your location would prefer to use each benefit compared to how much they currently use it. (1 =using it much less than they would prefer, 2=using it less than they would prefer, 3= using it as much as they would like to use it, 4= using it slightly more than they would like to use it, 5 = using it much more than they would like to use it.)

Benefit Name
Unpaid Leave
Paid Time Off
Family Health Insurance
Pretax dollars for Child Care
Pretax dollars for Elder Care
Resource/ Referral Child Care

Work-Family Conflict. (Matthews, Kath & Barnes-Farrell, 2010)

Please indicate the extent to which you agree with each statement. (1=Strongly disagree, 2 = Disagree, 3 = Neither disagree nor agree, 4 = Agree, 5 = Strongly agree)

1. I have to miss family activities due to the amount of time I must spend on work responsibilities.
2. I am often so emotionally drained when I get home from work that it prevents me from contributing to my family.
3. The behaviors I perform that make me effective at work do not help me to be a better parent or spouse.
4. I have to miss work activities due to the amount of time I must spend on family responsibilities.
5. Because I am often stressed from family responsibilities, I have a hard time concentrating on my work.
6. Behavior that is effective and necessary for me at home would be counterproductive at work.

Exhaustion scale of Oldenburg Burnout Inventory (Demerouti et al., 2003; Halbesleben & Demerouti, 2005)

Please indicate the extent to which you agree with the following statements. (1=Strongly disagree, 2 = Disagree, 3 = Neither disagree nor agree, 4 = Agree, 5 = Strongly agree)

1. There are days when I feel tired before I arrive at work
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8. When I work, I usually feel energized

Boundary Management Preferences for Segmentation. (Kreiner. 2006)

Items 1 – 8: Preference for Segmentation

Items 9 – 12: Segmentation Supplies

Please indicate the extent to which you agree with the following statements. (1=Strongly disagree, 2 = Disagree, 3 = Neither disagree nor agree, 4 = Agree, 5 = Strongly agree)

1. I don't like to have to think about work while I'm at home.
2. I prefer to keep work life at work.
3. I don't like work issues creeping into my home life.
4. I like to be able to leave work behind when I go home.

5. I don't like to have to think about family issues while I'm at work.
6. I prefer to keep family life at home (not at work).
7. I don't like family issues creeping into my work life.
8. I like to be able to leave family issues behind when I go into work.
9. My workplace lets people forget about work when they're at home.
10. Where I work, people can keep work matters at work.
11. At my workplace, people are able to prevent work issues from creeping into their home life.
12. When I work, people can mentally leave work behind when they go home.

Perceptions of Peers Boundary Management Preferences.(Modified Kreiner, 2006)

Please indicate the extent to which you believe the majority of the employees at your location agree with the following statements. (1=Strongly disagree, 2 = Disagree, 3 = Neither disagree nor agree, 4 = Agree, 5 = Strongly agree)

1. I don't like to have to think about work while I'm at home.
2. I prefer to keep work life at work.
3. I don't like work issues creeping into my home life.
4. I like to be able to leave work behind when I go home.
5. I don't like to have to think about family issues while I'm at work.
6. I prefer to keep family life at home (not at work).
7. I don't like family issues creeping into my work life.
8. I like to be able to leave family issues behind when I go into work.
9. I don't like to have to think about family issues while I'm at work.
10. I prefer to keep family life at home (not at work).
11. I don't like family issues creeping into my work life.
12. I like to be able to leave family issues behind when I go into work.

Work/ Family Identity.

Please indicate the extent to which you agree with the following statements. (1=Strongly disagree, 2 = Disagree, 3 = Neither disagree nor agree, 4 = Agree, 5 = Strongly agree)

1. A major source of satisfaction in my life is my career.
2. Most of the important things that happen to me involve my career.
3. I am very much involved personally in my career.
4. Most of my interests are centered around my career.
5. A major source of satisfaction in my life is my family.
6. Most of the important things that happen to me involve my family.
7. I am very much involved personally in my family.

8. Most of my interests are centered around my family.

Appendix B

The following documents are the IRB approvals. The first document is the initial IRB approval and the second document is the approval to extend the study.

Office for Research
Institutional Review Board for the
Protection of Human Subjects



January 25, 2016

Ashley Mandeville
Department of Management & Marketing
College of Commerce & Business Administration
The University of Alabama
Box 870225

Re: IRB # 15-OR-360 "Social Networks and Work Family Balance"

Dear Ms. Mandeville:

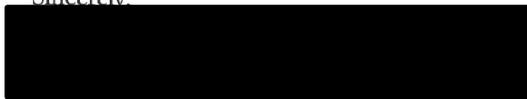
The University of Alabama Institutional Review Board has reviewed the revision to your previously approved expedited protocol. The board has approved the change in your protocol.

Please remember that your approval period expires one year from the date of your original approval, November 15, 2015, not the date of this revision approval.

Should you need to submit any further correspondence regarding this proposal, please include the assigned IRB application number. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants.

Good luck with your research.

Sincerely,


Carpantato T. Myles, MSM, CIM, CIP
Director & Research Compliance Officer
Office for Research Compliance



358 Rose Administration Building
Box 870127
Tuscaloosa, Alabama 35487-0127
(205) 348-8461
FAX (205) 348-7189
TOLL FREE (877) 820-3066

September 23, 2016

Ashley Mandeville
Department of Management & Marketing
College of Commerce & Business Administration
The University of Alabama
Box 870225

Re: IRB # 15-OR-360-R1 "Social Networks and Work Family Balance"

Dear Ms. Mandeville:

The University of Alabama Institutional Review Board has granted approval for your renewal application. Your renewal application has been given expedited approval according to 45 CFR part 46. Approval has been given under expedited review category 7 as outlined below:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Your application will expire on September 22, 2017. If your research will continue beyond this date, complete the relevant portions of the IRB Renewal Application. If you wish to modify the application, complete the Modification of an Approved Protocol Form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, complete the appropriate portions of the IRB Study Closure Form.

Should you need to submit any further correspondence regarding this proposal, please include the above application number.

Good luck with your research.

Sincerely,


Stuart Usdan, Ph.D.
Chair, Non-Medical Institutional Review Board
The University of Alabama