Peer Influence on Undermining Behaviors in the Workplace:
A Social Network Perspective

A DISSERTATION
SUBMITTED TO THE FACULTY OF THE GRADUATE SCHOOL
OF THE UNIVERSITY OF MINNESOTA
BY

Ruolian Fang

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

Michelle K. Duffy

May 2010

Acknowledgements

In the journey of my life, developing and finishing my dissertation is definitely an important milestone. Many people helped me with this dissertation. I owe my deepest gratitude to my advisor Professor Michelle Duffy. Her tremendous support, care, nurturing, and encouragement have accompanied me all the way throughout my graduate study. This dissertation would not have been possible without her guidance. I am so fortunate to have her as an incredible mentor, friend, and role model in my life and academic career. From her, I learned to have a faith in myself. The engaging scholarship and research spirits that I inherited from her will continue to impact the rest of my academic life.

I am also deeply grateful to Professor Jason Shaw, who has always been there, providing me guidance and encouragement. His continuous support, care, and nurturing have given me strength to face the challenges in my graduate study. Professor Theresa Glomb, Professor Pri Shah, and Professor David Knoke, I would like to thank them for their insightful and constructive comments and feedbacks for this dissertation.

My deep gratitude also goes to my best friend Xun Li. Although we live far from each other, she has always been available over the phone when I was happy and when I was frustrated. My life has been more wonderful because of her—a heart-to-heart friend who has been building me up with her never-ending inspiration and recognition.

Additional thanks to my fellow Ph.D. students of the Human Resources and Industrial Relations program at the University of Minnesota, especially Tae-Youn Park,

Jing Zhu, Robert Vellella, Yingchun (Irene) Wang, Ki Yeong Lee, Zhen Zhang, and Alex Lefter for being wonderful friends and colleagues.

Finally, and most importantly, I would like to thank my parents, elder brother, sister-in-law, and adorable niece Beibei. Their unwavering love and faith in me has been the fountain of my courage and strength to move forward and become a better me. Every night, my mum's comfort and love delivered over the phone has been enabling me to sleep tight through the night.

Abstract

In organizations, social networks (e.g., friendship and communication) not only facilitate individual communication in an organizational landscape but also are salient arenas where individuals influence one another when they determine work-related attitudes and behaviors. In this thesis, I argue that organizational friendship and communication networks can function in unwanted ways that foster (rather than inhibit) social influence among organizational members to engage in social undermining behaviors. I integrate the network theory of social influence into extant work on social influence of undermining behaviors in the workplace and propose that (1) network peers influence individuals' social undermining such that level of network peer undermining is positively related to individual undermining and (2) contextual characteristics (behavioral and structural characteristics of social networks) and personality traits (self-monitoring and core self-evaluation) further condition the network peer influence. In addition, I articulate three network-based proximity influence mechanisms—direct contact, group cohesion, and structural equivalence—whereby network peers influence individuals' undermining behaviors. I did not find support for the relationship between level of network peer undermining and individual undermining; but the relationship is found to be contingent on the contextual characteristics and personality traits. I also found that the three influence mechanisms contribute to similarity on undermining among organizational members. I discuss the implications as well as limitations and future directions of this thesis.

Table of Contents

List of Tables

List of Figures

Chapter One: Introduction

Social networks—informal structures of social relationships that organizational members form through patterned, repeated social interactions (Brass & Burkhardt, 1993)—act like the human body's central nervous system, driving collective thought processes, actions, and reactions across an entire organization (Krackhardt & Hanson, 1993). Major companies such as Toyota, recognizing that social networks are fundamental to organizational success, actively foster informal ties among employeess to vitalize formal horizontal and vertical communication channels. For example, Toyota reports that through the use of social networks, it aims to transmit information swiftly across the entire organization and thus help "everybody to know everything" (Takeuchi, Osono, & Shimizu, 2008, p. 99). Indeed, much research has indicated that social networks facilitating individual communication in an organizational landscape not only contribute to organizational success, but also are salient arenas where peers influence employees to have desirable work-related attitudes (e.g., job satisfaction; Rice & Aydin, 1991) and behaviors (e.g., use of new technology; Burkhardt, 1994).

Despite these benefits, social networks (e.g., friendship and communication) also have dark sides of hindering the success of organizations and their members (Brass, Butterfield, & Skaggs, 1998; Gargiulo & Benassi, 2000). One dark side is that social networks may function in ways that encourage (rather than constrain) undesirable behaviors in organizations (e.g., unethical behavior; Brass et al., 1998). Given that social networks are prominent in facilitating open communication and social influence among organizational members, surprisingly little attention has been devoted to understanding

1

the negative aspect of social networks in facilitating undesirable behaviors in the workplace. I address this gap by focusing on a particularly relevant undesirable workplace behavior—*social undermining*—defined as behaviors intended to hinder a targeted person's ability to establish and maintain positive interpersonal relationships, achieve work-related success, and maintain a favorable reputation (Duffy, Ganster, & Pagon, 2002). Undermining behaviors (e.g., belittling comments, giving someone the silent treatment, etc.) are subtle but quite prevalent in the workplace. I propose that social networks may foster social influence among organizational members to engage in undermining behaviors. In other words, employees' social undermining may be driven, in part, by social influence of network peers.

Understanding the dark side of social networks in fostering social undermining is particularly important given that social undermining and social networks both play critical roles in affecting employees' organizational lives and organizations' functioning. One, social undermining reflects negative workplace interactions and can cause employees to have various negative responses—affective, cognitive, and behavioral (Duffy et al., 2002). Grant and Parker (2009) define social undermining as a fundamental social characteristic of work design; they highlight that social undermining affects whether work designs of social support can function effectively to influence employees to carry out their work. That is, social undermining "challenges work design researchers to recognize that social support can have negative as well as positive effects", depending on whether the source of social support is different from that of social undermining (Grant & Parker, 2009, p. 16). Two, although organizations want social networks to function in

2

ways that positively affect organizational success and employees' desirable work-related attitudes and behaviors, such networks may simultaneously drive employees to influence one another to engage in unwanted behaviors such as undermining. Clearly, this is an *unintended* consequence for organizations such as Toyota, which encourage their employees to build organization-wide social networks intended for open and effective communications across the entire organization.

I argue that social networks are salient arenas where network peers can influence individuals' undermining behaviors. Researchers have suggested that social interactions that naturally occur within social networks (e.g., friendship and communication) are basic channels or conduits through which social influence occurs (Ibarra & Andrews, 1993; Rice & Aydin, 1991). Social networks provide individuals ample opportunities for social interactions, giving them access to or exposing them to others' information, influence, and behavior (Rice, 1993). Furthermore, social relationships with peers in social networks are important in providing individuals social resources (e.g., social support and information) critical for their organizational lives (e.g., career success; Burt, 1992; Podolny & Baron, 1997). Accordingly, I suggest that individuals are particularly susceptible to social influence from peers in social networks (henceforth, this influence will be called *network peer influence*). I further argue that this network peer influence can drive individuals to engage in undermining behaviors.

Building on recent works on social undermining and related behaviors (e.g., antisocial behavior and interpersonal aggression) in group settings (Duffy, Shaw, Scott, & Tepper, 2006; Ferguson & Barry, 2008; Glomb & Liao, 2003; Robinson & O'Leary-

Kelly, 1998), this thesis aims to understand social influence of undermining behaviors in the workplace, that is, how social undermining of network peers affect their colleagues' undermining. Specifically, organizational researchers have recently begun to investigate social undermining and related behaviors as group-level phenomena, and have consistently found a positive association between the aggregate level of social undermining within a workgroup and the level of undermining behaviors of individual group members (e.g., Duffy, et al., 2006; Glomb & Liao, 2003; Robinson & O'Leary-Kelly, 1998). This finding yields insights into the impact that social (i.e., group) influence has on shaping or determining group members' undermining behaviors. While insightful, these group-based studies fail to elucidate (1) social influence from peers other than group members and (2) the specific mechanisms at work in the processes of social influence (e.g., Duffy et al., 2006).

First, the group-based studies have focused exclusively on the workgroup context and excluded the potential that, beyond formal group members' influence, other peers may exert great influence on individual undermining. Organizational members do not operate solely in the social vacuum of formal organizational workgroups, but instead interact regularly and repeatedly with a broader range of peers in informal networks (e.g., friendship and communication). Network peers, including group and non-group members, are relevant and visible sources of influence on individual undermining. Second, the specific influence *mechanisms* whereby peer influence occurs have yet to be conceptually and empirically explicated. For example, studies referring generally to "other group members" tell us little about *how* organizational members integrate

4

influences from different group members, given that a workgroup is often composed of undermining and non-undermining members. Indeed, researchers have realized this limitation and called for both conceptual and empirical disentangling of the assumptions and mechanisms underlying the link between group and individual social undermining (e.g., Duffy et al., 2006).

Therefore, in this thesis, I investigate social influence of undermining behaviors that occurs in a larger organizational landscape of social networks beyond the workgroup boundary. I also explicate specific influence mechanisms delineating how network peers influence their colleagues' social undermining. In doing so, this thesis not only contributes to our understanding about how individual undermining is shaped through network peer influence but also provides valuable insights into the dark side of social networks in hindering the success of organizations and their members. First, examining the occurrence of social influence in a larger organizational landscape of social networks *unveil* the nuanced details about interpersonal communications and interactions that extend well beyond the workgroup boundary yet fundamentally underlie how organizational members influence one another's undermining behaviors. Further, explicating specific influence mechanisms can capture how organizational members integrate differential influences from network peers in their undermining engagement. Second, investigating social networks as salient arenas where social influence of individual undermining occurs highlights that more attention is needed to understand how social networks may function in unwanted ways. Given that organizations may indeed spend a great deal of time, effort, and even money actively fostering social networks

5

intended for open and effective communications, a comprehensive understanding of how social networks functions is particularly important to those organizations that want to reap beneficial effects yet curb untended consequences of social networks.

Objectives of this Thesis

I aim to achieve two objectives through this thesis. First, I propose to examine how network peer influence pulls one toward (or away from) undermining engagement. As I describe below, I conceptualize network peer influence as the general *level* of social undermining that peers exhibit in individuals' personal networks, and propose that level of network peer undermining is positively related to individual undermining. I further explore contextual and personal factors that condition the network peer influence. Second, I articulate *how* social influence of social undermining occurs, that is, the specific influence *mechanisms* underlying network peer influence on individual undermining.

Justifications for this Thesis

Theory. The network theory of social influence describes the structural bases or foundations for social influence, and suggests that social networks provide structural opportunities for (or constraints on) social influence to occur among organizational members who are embedded in the networks (Burt, 1987; Erickson, 1988; Friedkin, 1998; Leenders, 2002; Marsden & Friedkin, 1994). That is, when individuals determine their attitudes and behaviors, they respond to social cues regarding attitudes and behaviors displayed by network peers in accordance with the opportunities (or constraints) that social networks impose. Furthermore, the network theory of social

6

influence articulates the specific influence mechanisms whereby individuals embedded in the networks influence one another's attitudes, perceptions, or behaviors (Burt, 1987; Rice & Aydin, 1991; Rice, 1993). Specifically, individuals develop shared attitudes, perceptions, or behaviors with structurally proximal peers in social networks (Wellman, 1983); these peers influence individuals through the *network-based proximity mechanisms*—direct contact, group cohesion, and structural equivalence (Rice & Aydin, 1991; Rice, 1993).

I argue that the network theory of social influence is uniquely suited for understanding social influence of undermining behaviors in an organizational landscape of social networks. In this thesis, I integrate this theory into extant work on social influence of undermining in the workplace and elucidate the *occurrence* of and *mechanisms* underlying the network peer influence on individual undermining. First, within *organizational* networks where social influence of undermining is believed to operate, each individual is directly or indirectly connected with a unique set of peers in his or her *personal* networks. I propose that the general level of social undermining that peers exhibit in the individual's personal networks, referring to here as *network peer undermining*, will be positively related to his or her undermining behaviors. I further argue that the contextual characteristics of social networks (both organizational and personal) and personal forces may condition the network peer influence. I propose that (1) inconsistency of network peer undermining, (2) network density of personal networks, (3) network positions in organizational networks (network popularity and

closeness centrality), and (4) personality traits (self-monitoring and core self-evaluation) will strengthen or weaken the influence of network peers on individual undermining.

Second, I articulate specific influence mechanisms whereby individuals integrate social influences from peers in organizational networks when they engage in social undermining. Following previous studies on network influence (e.g., Marsden & Friedkin, 1994; Meyer, 1994), I elucidate the substantive processes underlying the structural effects on social undermining of individuals who are embedded in organizational networks; given these processes, I further define interpersonal proximity in the networks. Specifically, I draw on the three network-based proximity mechanisms—direct contact, group cohesion, and structural equivalence (Rice, 1993)— to conceptually unlock the influence processes—direct contagion, normative influence, and adaption—implicit in social influence of undermining behaviors in the workplace.

Methods. I use the methodological tools—measurement and estimation— provided by the network theory of social influence to address the two objectives of the thesis. First, I measure actual social relationships—friendship and communication— among organizational members to map the organizational landscapes of social networks. Within each organizational network, I further identify each individual's *personal* network composed of a unique set of peers. In this thesis, I follow Friedkin's (1998, p. 57) description of "immediate network environment" appropriate for capturing social (or interpersonal) influence, and define the unique set of peers in an individual's personal network as those whom the individual is directly or indirectly connected with through one intermediary.

Second, I apply the estimation method of Quadratic Assignment Procedure (QAP) multiple regressions to assess the three network-based proximity influence mechanisms—direct contact, group cohesion, and structural equivalence—whereby individual undermining is influenced by peer undermining in organizational networks. The QAP approach corresponds to the dyadic homogeneity approach that network researchers have typically taken to infer social influence effect by relating measures of structural similarity between two network members to a measure of their similarity on a dependent variable of interest (e.g., Burkhardt, 1994; Meyer, 1994). Thus, the QAP approach is appropriate for estimating how these three influence mechanisms contribute to similarity on undermining among organizational members.

Sample. In testing the hypotheses in this thesis, I use two samples of subjects from two organizations—one employee sample from two business units of a stock and exchange corporation in the People's Republic of China and one student sample from two student cohorts of a master's program at the University of Minnesota in the United States. This within-an-organization sample captures the influence phenomenon in a whole organizational landscape. Importantly, it helps exclude potential confounding effects that organizational-level factors may exert on individual undermining. For example, organizations may apply different managerial practices or policies to prevent or constrain undesirable workplace behaviors like social undermining. This sample characteristic also suggests that studies, such as those on group influence of aggressive behaviors, may be difficult, if not impossible, to picture workplace social influences comprehensively with

the use of a sample of individuals or workgroups from different organizations (e.g., Ferguson & Barry, 2008; Robinson & O'Leary-Kelly, 1998).

Figure 1 provides a summary of my research model. Building on the network theory of social influence, I investigate social influence of undermining behaviors in an organizational landscape of social networks: (1) the occurrence and (2) the specific mechanisms of the influence. In particular, this thesis shifts focus from that of several recent works that have examined dyadic (dis)similarity in network positions as relational antecedents to social undermining and related behaviors (e.g., interpersonal harming) targeted at other actors at dyads (see Aquino & Lamertz, 2004; Duffy, Shaw, Fang, & Johnson, 2007; Venkataramani & Dalal, 2007).

……………………………….
Insert Figure 1 about Here
……………………………….

In the sections below, I first examine network peer undermining that affects individuals' social undermining. Second, I investigate the contextual and personal factors that condition the network peer influence: (1) inconsistency of network peer undermining, (2) structural characteristics of social networks—network density, network popularity, and information embeddedness, and (3) personality traits—self-monitoring and core self-evaluation. Third, I articulate the three network-based proximity mechanisms—direct contact, group cohesion, and structural equivalence—that explicate the implicit social influence processes underlying the occurrence of network peer influence. Fourth, I describe the sample, measures, and analysis approaches appropriate

for testing the hypotheses in this thesis. Fifth, I report the findings. Sixth, I discuss the findings, implications, as well as limitations and future directions in this thesis.

Chapter Two: Theoretical Framework

Network Peer Influence on Social Undermining

Social networks are salient arenas in which social influence occurs among individuals who are embedded in the networks (e.g., Erickson, 1988; Marsden & Friedkin, 1994; Rice, 1993). Social networks, such as friendship and communication, have been well examined in organizational studies that investigate how organizational members influence one another's work-related attitudes (e.g., job satisfaction; Ibarra & Andrews, 1993; Meyer, 1994) and behaviors (e.g., use of new technology; Burkhardt, 1994). Following these studies, I focus on organizational friendship and communication networks to understand how undermining and/or non-undermining peers enmeshed in the networks influence individual undermining. As described above, within organizational networks where social influence of undermining behaviors is believed to operate, each individual is directly or indirectly connected with a unique set of peers who comprise the individual's personal networks and further exert interpersonal influence on his or her undermining behaviors.

In this thesis, I argue that the *behavioral* characteristics of an individual's personal networks will relate to the individual's social undermining. Specifically, I conceptualize the behavioral characteristics as the *level* and *inconsistency* of network peer undermining—that is, social undermining that peers display in an individual's personal networks (see Chan, 1998). I define the level characteristic as the general

11

tendency those peers engage in undermining and propose that level of network peer undermining, referring to here as network peer influence, will be positively related to individual undermining. I define the inconsistency characteristic as the extent to which those peers homogeneously engage in undermining and, as I will illustrate below, I assert that the inconsistency characteristic moderates the effect that the level characteristic has on individual undermining (see Robinson & O'Leary-Kelly, 1998).

I propose that organizational social networks (friendship and communication) provide the fundamental yet critical structural bases for the three implicit social influence processes—*direct contagion*, *normative influence*, and *adaption*—to function effectively in pulling one toward (or away from) undermining engagement in the workplace.

First, structural proximity, which indicates direct connections between people in social networks, makes possible the *direct contagion* of peer behaviors like social undermining. Organizational researchers have suggested that employees acquire aggressive behaviors by watching and modeling others acting aggressively in the workplace (O'Leary-Kelly, Griffin, & Glew, 1996), and that direct observation and modeling facilitate the contagion or spillover of negative behaviors among peers (e.g., group members within a workgroup; Dunlop & Lee, 2004; Felps, Mitchell, & Byington, 2006). In social networks where employees socially interact with structurally proximal peers, they have ample opportunity to observe and model peers' undermining behaviors—thus, the direct contagion or spillover of the behaviors. For example, one who interacts frequently with friends may watch and model how one's friends gossip about others. Furthermore, given that even a single aggressive member may initiate and

mobilize the contagion process throughout a whole group (i.e., one bad apple spoils a whole barrel; Felps, et al., 2006), I argue that a person's direct modeling of peer undermining and thus direct behavioral contagion will strengthen when peers in his or her personal networks demonstrate a high level of undermining engagement.

Second, social embeddedness in social networks (e.g., common membership in a cohesive network subgroup) may exert additional network peer influence—*normative influence*—beyond direct contagion. For embedded individuals who want to maintain their network relationships, the networks can generate trust, establish expectations for appropriate behaviors, and reinforce behavior norms (Granovetter, 1985). Therefore, network peers (e.g., schoolchild's friends; Haynie, 2001) may press people to conform to or comply with the network norms on behaviors. In other words, social networks exert normative influences that effectively direct and constrain individuals to behave in accordance with the network behaviors, undermining or non-undermining. Organizational researchers suggest individual members whose aggressive behaviors fit a similarly aggressive workgroup are more likely to remain in the group, while those who do not fit into the aggressive environment are more likely to leave (Glomb & Liao, 2003; Robinson & O'Leary-Kelly, 1998). Here, I argue that if employees value embedded connections with network peers and wants to avoid peer rejections, they must behave in tune with those peers (e.g., joining friends in belittling others); such normative influence will be correspondingly strengthened when peers in the employees' personal networks generally demonstrate a high level of social undermining.

Third, interaction channels through third-party peers facilitate individuals'

adaption to social information or cues on peer undermining transmitting in social

networks. Even when individuals do not observe peers' undermining engagement in

undermining behaviors (e.g., spreading rumors about others), they may still be aware of

the behaviors through interactions and communications with other third-party peers who

observe the behavior (e.g., being direct recipients of the rumors). Individuals, as adaptive

organisms, use informational cues from their social environments to adapt attitudes,

behaviors, and beliefs to their immediate social environment (Salancik & Pfeffer, 1978).

Accordingly, I argue that individuals adapt to social information on peer undermining in

terms of being pulled toward undermining engagement. Organizational researchers have

suggested that people working in a shared workgroup context receive similar

informational cues on aggressive behaviors and perceive that the behaviors are acceptable

adaptations to the shared working conditions (Robinson & O'Leary-Kelly, 1998).

Because employees are more aware of aggressive behavior when it prevails in the

workplace (Ferguson & Barry, 2008), I argue that a high level of network peer

undermining will increase individuals' exposure to informational cues on the behavior,

even if they do not directly observe the behavior. Accordingly, they are more likely to

practice undermining behaviors as a result of adaptation to such cues.

In summary, these three structural characteristics of social networks—structural

proximity, social embeddedness, and interaction channels through third-party peers—

facilitate network peers to influence individual undermining. Therefore, it is reasonable

14

to expect a positive relationship between level of network peer undermining and

individual undermining (see also Haynie, 2001). As a result, I hypothesize:

Hypothesis 1: Level of network peer undermining is positively related to individual
        undermining.

Moderators to Network Peer Influence

As argued above, network peers influence individuals' social undermining when

the individuals directly observe the behaviors and/or are exposed to informational cues on

the behaviors. Social influence theories, such as social information processing, emphasize

situational opportunities for (or constraints on) the occurrence of social influence

(Salancik & Pfeffer, 1978). At the same time, people differ in their sensitivity and

susceptibility to social information and influence (Burkhardt, 1994; Degoey, 2000).

Building on these arguments, I propose that *contextual* and *personal* forces that facilitate

(or inhibit) individuals to observe peer undermining or access informational cues on the

behaviors should strengthen (or weaken) the influence of network peers on the individual

undermining.

On one hand, contextual characteristics convey strength of social information and

norms on peer undermining; they also facilitate (or constrain) communications and

interactions among individuals. I argue that such characteristics impose *external*

opportunities for (or constraints on) network peers to affect individual undermining. In

this thesis, social networks are main social contexts in which organizational members

influence one another's undermining engagement. As I illustrate below, I suggest the

conditioning roles of characteristics of social networks: (1) the behavioral characteristic

of personal networks (i.e., inconsistency of network peer undermining) and (2) the

15

structural characteristics—network density of personal networks and network positions in organizational networks (i.e., network popularity and information embeddedness). On the other hand, people respond idiosyncratically and diversely to social information and influence in their immediate social environment (Burkhardt, 1994; Degoey, 2000). I propose that the personality traits of self-monitoring and core self-evaluation that capture individual sensitivity and susceptibility to social information and influence condition the network peer influence on individual undermining.

Inconsistency of Network Peer Undermining

Inconsistency of network peer undermining indicates how homogeneously that peers in an individual's personal networks engage in social undermining. This behavioral characteristic signals the strength of social cues or norms on peer undermining that is available in the networks. I propose that the inconsistency of network peer undermining will moderate the relationship between level of network peer undermining and individual undermining. Specifically, when peers exhibit lower inconsistency in practicing undermining behaviors, a person's networks signal potent informational cues on peer undermining, feature the appropriateness of the behavior, and stand out consistent role models that the person can easily identify, compare, and model. That is, lower inconsistency of network peer undermining indicates that personal networks strongly endorses individuals to perform similar behaviors as peers. Therefore, lower inconsistency of network peer undermining should strengthen the impact that level of network peer undermining has on individual undermining.

16

In contrast, higher inconsistency of network peer undermining means that peers in

an individual's personal networks collide with one another regarding the appropriateness

of undermining others. Correspondingly, the individual is subjected to conflicting cues on

peer undermining and receives mixed signals on network behavioral norms or on whom

he or she should follow: should it be undermining peers or non-undermining peers (see

also Ehrhart & Naumann, 2004; Robinson & O'Leary-Kelly, 1998). In other words, the

individual's personal networks fail to endorse the practice of undermining behaviors in a

consistent manner. Thus, high inconsistency of network peer undermining should weaken

the relationship between level of network peer undermining and individual undermining.

Recall the implicit influence processes of normative influence and adaption underlying

the network peer influence. I argue here because lower inconsistency of network peer

undermining more effectively mobilizes these social influence processes than higher

inconsistency does, network peer influence is stronger when inconsistency of network

peer undermining is lower. Thus, I hypothesize that:

Hypothesis 2a: Inconsistency of network peer undermining moderates the relationship
between level of network peer undermining and individual undermining such that
the relationship will be stronger when inconsistency of network peer undermining
is lower.

Structural Characteristics of Social Networks

The structural characteristics of social networks—network density and network

positions (e.g., network popularity and information embeddedness)—describe different

patterns of social interactions and relationships among network members (Scott, 2000;

Wasserman & Faust, 1994). I argue that because these structural characteristics create

structural opportunities for or constraints on individuals' exposure to peer undermining,

they are particularly relevant to the flows of social information and influence in social networks. Specifically, network density describes the overall pattern of direct connections among network members, that is, how cohesively members are integrated within the networks (Marsden, 1990). I focus on the network density of individuals' personal networks in which the individuals cohesively or sparsely connected with a unique set of peers. Network popularity and information embeddedness, properties of "actor location" in a social network, reveal that actors have different prominences in the network: individuals are considered to be prominent in the network when they are recipients of direct ties (e.g., friendship) named by many other network members and thus have prestige and popularity among network members (i.e., network popularity; Wasserman & Faust, 1994), or when they are involved or embedded in all paths of connections with many (if not all) other network members, regardless of whether they are recipients or sources of the ties (i.e., information embeddedness; Stephenson & Zelen, 1989; Wasserman & Faust, 1994). Here, I focus on individuals' network popularity and information embeddedness in organizational networks.

Network density. When individuals' personal networks are dense, they are connected with a unique set of peers who are cohesively connected in the networks. That is, all members within the personal networks are likely to socially interact and frequently communicate with one another. I argue that for individuals with dense rather than sparse personal networks, level of network peer undermining will have a stronger effect, mainly for three reasons. First, dense networks enable one to frequently interact and communicate with peers. This gives one more opportunities to directly observe peer

18

undermining or to access the informational cues even without direct observation. Second, dense networks often suggest social closure (Granovetter, 1973); that is, one with dense personal networks has limited interactions and communications outside the personal networks (Haynie, 2001). Thus, one may not be exposed to external pressures that might discourage social undermining. Third, dense networks establish expectations and reinforce norms on various network behaviors including social undermining, which intensify the visibility of peers' undermining behaviors or the availability of informational cues on such behaviors in the networks. In other words, social embeddedness and sense of social identity that characterize dense networks (Coleman, 1990) can effectively direct members to behave consistently with network norms. Depending on the networks, those norms may endorse or prohibit undermining behaviors. I argue here that dense personal networks, compared to sparse ones, mobilize more effectively the three implicit influence processes (i.e., direct contagion, normative influence, and adaptation) that underlie the network peer influence.

This line of reasoning lends support to my proposition that network density affects the influence of network peers on individual undermining (see also Haynie, 2000). I hypothesize:

Hypothesis 2b: Network density moderates the relationship between level of network peer undermining and individual undermining such that the relationship will be stronger when network density is higher.

Network popularity. Individuals who are recipients or objects of extensive direct ties from many other network members are regarded as being popular or prestigious in organizational networks (Wasserman & Faust, 1994). That is, network popularity gauges

an individual's prominence within a social network in terms of whether many others will name the individual in social relationships (e.g., friendship), but not necessarily when the person initiates the ties (Wasserman & Faust, 1994). Network popularity defines network position in terms of direct ties only, so I argue that high network popularity gives popular organizational members ample opportunities to interact with peers; to directly observe, model, and compare peer undermining; and to easily access social information on peer undermining even without direct observation. In other words, high network popularity enables the influence processes of direct contagion and adaption to function effectively. Thus, popular organizational members, compared with less popular ones, are more likely to experience the peer influence.

An alternative reasoning exists to explain the conditioning role of network popularity: popular organizational members are more alert or sensitive to peers' behaviors such as social undermining because they feel pressured to conform to the behaviors if they value and want to maintain their informal power in a social network. Specifically, popular individuals gain informal social power by having many direct alternatives to social information and network resources (Brass & Burkhardt, 1993). Despite the apparent benefits, popular individuals feel more constrained and pressured to conform to network behaviors and thus are more alert to the behaviors, whether undermining or non-undermining. For example, ethnographic research (Eder, 1985) found that the most popular junior high school girls felt highly stressed about maintaining their popular, elite positions within the school hierarchy, so they devoted considerable effort to ensure that they behaved as what was expected from their elite position.

Although it is likely that popular organizational members are less susceptible to social influence of others or even set the behavioral norms to others, the source of network popularity—being recipients of extensive direct ties (e.g., friendship) from others—that I define in this thesis make prominent conformity pressures that impose on popular members to behave as what others expect, whether undermining or non-undermining.

These two alternative explanations suggest that network popularity moderates network peer influence on individual undermining (see also Haynie, 2001). Thus, I hypothesize:

Hypothesis 2c: Network popularity moderates the relationship between level of network peer undermining and individual undermining such that the relationship is stronger when network popularity is higher.

Information embeddedness. Information embeddedness describes how prominent one is in a social network in terms of how involved one is with many (if not all) other network members (Stephenson & Zelen, 1989). Individuals who have high information embeddedness are so involved or embedded in social networks that when social information passes throughout the networks, it must go through them (Baldwin, et al., 1997; Stephenson & Zelen, 1989). In other words, information-embedded organizational members gain maximal accessibility to social information flowing throughout the networks. Here, I argue that social information on peer undermining that passes by information-embedded individuals is so salient that the individuals make strong sense of the behavior. Beyond information saliency, organizational members who have high information embeddedness can also easily *validate* the information on peer undermining flowing throughout the networks. Information-embedded individuals are, by

21

definition, relatively close to many (if not all) other network members and thus can avoid noise introduced into the information flow (Baldwin et al., 1997). Accordingly, these individuals are more able to validate peers' undermining engagement. Thus, information embeddedness, through information saliency and validation, conditions network peer influence.

An alternative explanation for the conditioning role of information embeddedness is that individuals gain informal social power from being information-embedded in organizational networks. But contrary to the argument on behavioral conformity pressure that underlies network popularity, I argue that information-embedded individuals have more exposure to peer undermining because they are more likely to become targets of peers who want to challenge their informal social power. Specifically, individuals with high information embeddedness have informal social power that comes from having great control over and access to valued information and resources in social networks (Brass & Burkhardt, 1993; Ibarra & Andrews, 1993; Krackhardt, 1990). Despite these benefits, information-embedded individuals are also likely to become target of envy, jealousy, and hostility (Farmer, 2000), because people often react invidiously toward those in power and those who receive advantages at their expense (e.g., promotion; Schaubroeck & Lam, 2004). Furthermore, antisocial behaviors such as social undermining have been seen as proactive or instrumental forms of aggression (e.g., Dodge, 1991), attempts to get "what one wants by being aggressive" (Salmivalli, 2001, p. 386). Network peers may be interested in "challenging the social power" of information-embedded individuals by using social undermining (Duffy, et al., 2007). Being the targets of peers' undermining

behaviors gains those individuals more exposure to the behaviors, which, in turn,

provokes them to practice undermining behaviors so as to retaliate against the

perpetrators. Importantly, information-embedded individuals are able to use this weapon

successfully and protect their social power from being further undermined. That is, they

are able to apply their considerable social capital to undermining engagement, which

helps them maintain or increase their power bases (Aquino & Lamertz, 2004).

Building on these two explanations, I hypothesize that information embeddedness

conditions the influence of network peers on individual undermining.

Hypothesis 2d: Information embeddedness moderates the relationship between level of
network peer undermining and individual undermining such that the relationship
is stronger when information embeddedness is higher.

Personality Traits

Beyond the external forces that originate from the contextual characteristics—

behavioral and structural characteristics of social networks, I argue that personal forces

condition the effect of network peer undermining on individual undermining as well.

People have different sensitivity and susceptibility to social information and influence

(Burkhardt, 1994; Degoey, 2000). Furthermore, the social network's behavior does not

affect all members in exactly the same way (e.g., friendship networks; Agnew, 1991). For

example, not everyone who is exposed to social undermining within a workgroup

engages in undermining (Duffy et al., 2006). Here, I propose that the personality traits of

self-monitoring and core self-evaluation that capture one's internal responses to peer

undermining will conditions network peer influence. I focus on these two traits because

they are particularly relevant to the social influence processes—their constitutive

definitions as well as prior theoretical and empirical works suggest that individuals high in these traits are more *situationally* aware and more likely to *act* on social information and cues available in social situations (Burkhardt, 1994; Fang & Shaw, 2009; Judge & Hurst, 2007; Mehra, Kilduff, & Brass, 2001).

Self-monitoring. Self-monitoring refers to the extent to which individuals discern and understand social situations and then control and adjust their expressive behavior in response to social information and cues (Snyder, 1987). Individuals high in self-monitoring (i.e., high self-monitors) are sensitive to social information and cues, have high levels of expressive control to act on the information and cues, and manage their behaviors effectively in terms of situational appropriateness (Gangestad & Snyder, 2000; Snyder & Gangestad, 1986). In contrast, individuals low in self-monitoring (i.e., low self-monitors) are inattentive to social comparison information and behave in ways that express their inner attitudes and beliefs about various situations (Gangestad & Snyder, 2000; Snyder & Gangestad, 1986). In the workplace, peer undermining conveys critical social information and cues about interactions and interpersonal relationships. It is reasonable, then, to expect that individuals respond more or less intensely to such situational cues depending on their levels of self-monitoring (Fang & Shaw, 2009). I argue that high self-monitors, compared with low self-monitors, are more susceptible to network peer influence because they are more likely to sense and act on peer undermining.

First, in social networks, high self-monitors have skills and characteristics in social interactions and communications that facilitate them to directly observe peers'

undermining behaviors or to learn about the behaviors from other peers who observe and report them. One, high self-monitors are sociable and skilled in social interactions, are attuned to subtleties of others' attitudes and behaviors (Furnham & Capon, 1983), notice and remember information concerning others (Berscheid, Graziano, Monson, & Dermer, 1976), and have large social networks (e.g., workflow; Mehra et al., 2001) in which they interact and communicate with many others. These characteristics suggest that high self-monitors are more likely to directly observe and model peer undermining. Two, high self-monitors are skilled at effectively extracting useful information from others (Ickes, Reidhead, & Patterson, 1985). Thus, high self-monitors, even without direct observation of peer undermining, are still able to gain social information about peers' behaviors by interacting and communicating with other peers who observe the behaviors (Burkhardt, 1994). The arguments above also indicate that the characteristics of high self-monitors facilitate the effective functioning of direct contagion and adaption underlying the network peer influence.

Second, having social information about peers' undermining behaviors may trigger individuals to evaluate such behaviors in terms of acceptableness (e.g., Ferguson & Barry, 2008). I argue that such evaluative responses are particularly salient among high self-monitors. Recall that high self-monitors are not just sensitive to social information; they also have high levels of expressive control to *act* on the information and manage their behaviors effectively according to situational appropriateness (Gangestad & Snyder, 2000; Snyder & Gangestad, 1986). In other words, high self-monitors tend to use social information and cues to adjust their behaviors to be similar to others' in the social

25

environment (Burkhardt, 1994; Gangestad & Snyder, 2000). Here, this behavioral

adjustment applies equally to social undermining: high self-monitors will act on social

information on peer undermining and behave as their peers do.

Third and in contrast, low self-monitors are poor at discerning social information

on peer undermining or at understanding expectations or norms on this behavior. Even if

low self-monitors are exposed to such information because social undermining prevails in

the workplace, they may still lack expressive control to act on the information. That is,

low self-monitors are unwilling to adjust their behavior to meet expectations and norms

that are inconsistent with their inner beliefs and attitudes. Additionally, the few studies on

the moderating role of self-monitoring have found that high self-monitors are more

susceptible to social influence than low self-monitors when they construct their work-

related attitudes and beliefs (Burkhardt, 1994; Pollock, Whitbred, & Contractor, 2000).

Therefore, I hypothesize:

Hypothesis 3a: Self-monitoring moderates the relationship between level of network peer
undermining and individual undermining such that the relationship is stronger
among high self-monitors.

Core self-evaluation. Core self-evaluation (CSE), or positive self-concept, refers

to the fundamental premises that individuals hold about themselves and their functioning

in the world (Judge, Erez, & Bono, 1998). Researchers have noted that, "individuals with

positive core self-evaluation appraise themselves in a consistently positive manner across

situations; such individuals see themselves as capable, worthy, and in control of their

lives" (Judge, Van Vianen, & De Pater, 2004, p. 326). Although little, if any, research

examines the role of CSE in social influence processes, the constitutive definition of CSE

26

indicates that CSE is particularly relevant to appraisals that individuals make about themselves and situations around them and further to responses to the appraisals. As argued previously, peer undermining conveys critical social information and cues about interactions and interpersonal relationships in the workplace. Furthermore, Duffy and colleagues (2006) argue that peer undermining represents what Brockner (1988) called an esteem-threatening situation—external cues that warn individuals might be targeted and thus threaten their positive self-image. Even if individuals are not the target of undermining, environmental conditions characterized by high level of peer undermining still create uncertainty or trigger social comparisons in a way that the individuals adjust behavior (e.g., engage in social undermining) to protect their positive self-image (Duffy et al., 2006). Therefore, given that peer undermining represents not only critical social cues on interactions and interpersonal relationships but also esteem-threatening situations, I propose that individuals should appraise and respond differently to peer undermining depending on their levels of CSE.

First, individuals who have high CSE, compared with those with low CSE, will be more likely to *appraise* network peer undermining as a threat. CSE plays an important role in influencing appraisal of situations. For example, Judge and Hurst (2007) examined how CSE moderates individual abilities to capitalize on circumstances offering career advantages; they found that high-CSE individuals are better than low-CSE individuals at capitalizing early advantages to achieve later economic success. I argue that implicit in this moderating effect is the premise that high-CSE individuals, compared to their counterparts, are more aware of or more sensitive to social cues on positive events or

27

characteristics in advantageous circumstances. Simply, awareness proceeds capitalization. The negative asymmetry argument (Taylor, 1991) suggests that people tend to focus more heavily on negative stimuli as a threat than on positive stimuli as a benefit. Given that social undermining that damages job-related attitudes and diminishes well-being (Duffy, et al., 2002) indeed conveys negative events or characteristics in the working environment, I argue that individuals, especially those with high CSE, should be aware of or sensitive to network peer undermining as a threat. Booth et al (2007) found that, other conditions being equal, high-CSE individuals are more likely than low-CSE individuals to *appraise* social undermining by supervisors as harmful and threatening (Booth, Glomb, & Duffy, 2007). Similarly, it is reasonable to expect that high-CSE individuals are more likely to appraise peer undermining as a threat.

Second, high-CSE individuals will be more likely to *respond* to the esteem-threatening situation of peer undermining by engaging in the behavior. Kammeyer-Mueller et al. (2009) examined the role of CSE in the stress-coping process and argued that, compared with low-CSE individuals, high-CSE individuals are more likely to adopt problem-solving coping strategies to eliminate sources of strain by directly reducing the stressors. High-CSE individuals believe that they are capable, worthwhile, and in control of their lives, and thus are confident that they can actively cope with stressors; that is, "they can successfully respond to challenging situations" (Kammeyer-Mueller, Judge, & Scott, 2009, p. 8). Peer undermining as an esteem-threatening situation indeed represents a source of strain for individuals who are likely to be targeted. Therefore, it is reasonable that high-CSE individuals are more likely to use problem-solving coping strategies: here,

they are likely to engage in undermining as a proactive or instrumental form of aggression (e.g., Dodge, 1991) to ward off threats to their status or to deter potential perpetrators. Thus, I hypothesize:

Hypothesis 3b: Core self-evaluation (CSE) moderates the relationship between level of network peer undermining and individual undermining such that the relationship is stronger among high-CSE individuals.

Network-based Proximity Mechanisms

The second objective of this thesis is to show how social influence of undermining behaviors occurs in organizational social networks, that is, to articulate specific influence mechanisms whereby peers influence individuals' undermining behaviors in organizational social networks. Specifically, I apply the three network-based proximity mechanisms—direct contact, group cohesion, and structural equivalence (Rice, 1993)—to explicate the functioning of three implicit influence processes (direct contagion, normative influence, and adaption) that underlie social influence of network peers.

Social influence typically occurs within social interactions; different interaction structures are associated with different influence mechanisms (Erickson, 1988; Rice, 1993). Thus, to explicate how social influence occurs, we must describe and measure the structural arrangements and their corresponding influence mechanisms. Social influence theories (e.g., social information processing) implicitly rely on some conceptualization of the amount and type of interpersonal proximity to describe the extent to which one is exposed to others' social or interpersonal influence in a given social system (e.g., Moscovi, 1976; Salancik & Pfeffer, 1978). Accordingly, the network theory of social

influence argues that people develop shared attitudes, norms, or behaviors through

exposure to others to whom they are structurally proximate in social networks (Wellman,

1983). Using this basic argument to show how social influence occurs, network

researchers have explicitly specified different models of structural (or interpersonal)

proximity as well as the influence mechanisms—network-based proximity mechanisms—

that correspond to the different models of structural proximity (Rice & Aydin, 1991;

Rice, 1993).

Corresponding to the structural arrangements of relational and positional

proximity, the network-based proximity mechanisms for social influence have been

conceptualized as relational and positional models of social influence, respectively (Burt,

1987; Erickson, 1988; Rice & Aydin, 1993; Rice, 1993). Specifically, the relational

model of social influence postulates that one influences and is influenced by others who

are relationally proximal (Burt, 1987; Erickson, 1988). In this model, direct contact and

group cohesion are considered to be key influence mechanisms. That is, one is influenced

by others directly connected at dyads and directly or indirectly connected within a

cohesive network subgroup (Meyer, 1994; Rice, 1993). Instead, the positional model

describes social influence processes differently; it suggests that one is influenced by those

others with positional proximity, which depicts that network members who have the same

patterns of relationships with common third-parties, even if they do not interact directly

(Burkhardt, 1994; Burt, 1987; Meyer, 1994). In this model, structural equivalence is

considered to be a key influence mechanism whereby members who are structurally

equivalent in social networks develop similar attitudes, perceptions, and behaviors that

are seen as appropriate for their social position (Burkhardt, 1994; Burt, 1987; Meyer, 1994).

Network researchers have examined one or more of these three network-based proximity mechanisms—direct contact, group cohesion, and structural equivalence—to describe the influence processes whereby peers influence organizational members' work-related attitudes and behaviors (e.g., Burkhardt, 1994; Hartman & Johnson, 1989; Johanson, 2000; Meyer, 1994; Rice & Aydin, 1991). Building on these works, I apply the network-based proximity mechanisms to articulate *how* social influence of undermining behaviors occurs in organizational networks. As I illustrate below (see also Figure 2), these three mechanisms—direct contact, group cohesion, and structural equivalence— capture one or more of the implicit social influence processes—direct contagion, normative influence, and adaptation—that underlie network peer influence on individual undermining.

<div align="center">
……………………………….
Insert Figure 2 about Here
……………………………….
</div>

Direct Contact Mechanism

In the relational model of social influence, the direct contact mechanism takes an inherently *dyadic* perspective and assumes nothing more about social relationships between two network members other than they interact directly with each other (Erickson, 1988; Meyer, 1994). Premised on the structural basis of direct contacts, the minimal condition for social influence to occur, the direct contact mechanism seems to be consistent with the implicit assumption underlying traditional laboratory social influence

studies—the existence of direct interaction is necessary if influence is to be transmitted (e.g., Weiss & Shaw, 1979). In social networks, actors with direct contacts generally interact frequently and have strong relationships; thus they develop similar attitudes and perceptions (Erickson, 1988). Accordingly, social undermining is contagious among those who are in direct contact. For two reasons, I argue that the direct contact mechanism should function in the network peer influence on an individual's undermining. One, frequent interactions with direct-contact network peers provide the individual ample opportunity to directly observe and model how peers undermine others. Two, strong relationships enable the individual to justify peer undermining (e.g., as an appropriate self-defense), which further strengthens his or her direct modeling. Thus, I argue that the direct contact mechanism captures the implicit influence process of *direct contagion* whereby social undermining is transmitted among those who are in direct contact in organizational networks (see also Figure 2).

Network researchers have drawn on the direct contact mechanism to understand the social influence effect on individuals' work-related attitudes and behaviors (e.g., Burkhardt, 1994; Ibarra & Andrews, 1993; Johanson, 2000; Meyer, 1994; Rice & Aydin, 1991). For example, employees with direct contacts in communication networks are more similar in judgment on job-related phenomenon (e.g., technology-analysis dimension; Meyer, 1994). An employee's organizational commitment is determined by that of others with whom the individual directly interacts in communication networks (Johnson, 2000). Thus, I hypothesize:

Hypothesis 4a: Direct-contact peers in organizational networks will exert influence on individuals' social undermining.

Group Cohesion Mechanism

In a social network, individuals not only have simple direct contacts with others at dyads, but are also linked directly or indirectly with others within the structural subunits of cohesive subgroups: "subsets of actors among whom there are relatively strong, direct, intense, frequent, or positive ties" (Wasserman & Faust, 1994, p. 249). Social psychologists on group influence have emphasized group cohesion (O'Reilly & Caldwell, 1985) and social conformity pressures (White & Mitchell, 1979), positing the necessity of social control for normative compliance (Barley & Knight, 1991). Correspondingly, network researchers have argued that the structural models of cohesive subgroups provide a larger structural basis for normative influence to regulate network members' beliefs, attitudes, and behaviors. For example, Friedkin (1984) noted that conformity pressures toward subgroup uniformity occur within cohesive network subgroups when two members have a positively valued interaction; such pressures may be "transmitted" through *intermediaries* even when the two members are not in direct contact (see also Wasserman & Faust, 1994, p. 251). Erickson (1988) also suggested that density and attractiveness, two characteristics of cohesive network subgroups, increase members' use of persuasion and rejection in the search for greater subgroup unanimity; conformity pressures are thus enhanced within the subgroups. I recognize that direct-contact peers at dyads can influence individuals through direct contagion. But beyond direct contagion, I argue that cohesive peers within network subgroups will also exert normative influence on individuals' undermining.

Given that cohesive subgroups pressure individuals to conform, the relational model of social influence has specified the group cohesion mechanism, which goes beyond the direct contact mechanism emphasizing dyadic interactions. That is, the group cohesion mechanism indicates that if individuals want to avoid possible negative sanctions from their cohesive network subgroups, they will conform to the normative influence (Erickson, 1988; Meyer, 1994). Furthermore, members in a cohesive subgroup have high levels of direct connections with many (if not all) others. This means that the group cohesion mechanism simultaneously indicates that direct contagion occurs among network members who have direct connections at dyads within a cohesive network subgroup (Johanson, 2000). Therefore, I propose that the group cohesion mechanism captures both direct contagion and normative influence—the implicit influence processes whereby cohesive network members influence individuals' social undermining (see also Figure 2).

Similarly, network researchers have examined the role of the group cohesion mechanism in predicting the effect of social influence on organizational members' work-related attitudes and behaviors (e.g., Burkhardt, 1994; Ibarra & Andrews, 1993; Johanson, 2000; Meyer, 1994; Rice & Aydin, 1991). For example, Meyer (1994) found that organizational members who share membership in a cohesive subgroup are more similar in their perceptions and judgments regarding job- and organization-level phenomena. Johanson (2000) found that an individual's opinion about organizational democracy in decision making is determined by that of cohesive peers in network subgroups. Thus, I hypothesize:

Hypothesis 4b: Cohesive peers in organizational networks will exert influence on individuals' social undermining.

Structural Equivalence Mechanism

The degree to which two individuals interact with the same others in a social network indicates the extent to which they are structurally equivalent, or, they occupy similar position in the network (Burt, 1980). The structural model of positional proximity suggests the *structural equivalence* mechanism, an alternative mechanism whereby members who are structurally equivalent in a social network experience social influence from each other (Burt, 1980; Erickson, 1988; Meyer, 1994). That is, this mechanism suggests that two individuals may have similar attitudes, perceptions, and behaviors, not necessarily because they are linked with each other or cohesively connected within a network subgroup (i.e., relational proximity) but because they are linked to similar others with whom they develop similar responses and experience similar socialization (Burt, 1980; Meyer, 1994; Rice & Adyin, 1991). The emphasis on "similar others" is consistent with the rhetoric from social influence researchers who have been concerned with the credibility of the sources of social influence as similar to the targets of social influence (e.g., Miller & Monge, 1985; Weiss & Nowicki, 1985; Weiss & Shaw, 1979). Also, the similar socialization that structurally equivalent actors experience reflects how they adapt to similar or common social demands and expectations associated with their position, causing them to have similar attitudes and perceptions (Burt, 1980; Johanson, 2000). Researchers have suggested that the structural equivalence mechanism captures the social influence process of adaption (Johanson, 2000). Here, I argue that individuals look to

35

structurally equivalent peers in organizational networks for informational cues on

undermining behaviors, and adapt their behaviors to the cues.

In addition, Burt (1980, 1987) suggested that peer effect is associated more

generally with structural equivalence than with cohesion because the structural model of

structural equivalence overlaps, restricts, and extends that of cohesion. In particular, these

two structural models are said to overlap or become equal when they capture the same

patterns of social interaction so that two structurally equivalent individuals

simultaneously have direct connections in a social network (Burt, 1987). Building on this

work and for the reasons below, I argue that structural equivalence also capture the

influence processes of direct contagion and normative influence beyond adaption. On one

hand, although structural equivalence does not assume that individuals must interact

directly for social influence to occur, as in direct contact and group cohesion (Burt,

1987), it does not completely exclude that structurally equivalent individuals may be

directly connected, which is the simple yet critical structural basis for direct contagion.

On the other hand, because structurally equivalent individuals are connected with similar

others, they are all subject to same pressures to conform (Johanson, 2000). Hartman and

Johnson (1989) pointed out that

> "structurally equivalent individuals may be the focus of similar information,
> requests and demands from members of their role set, creating an information
> field in which they are embedded, which, when internalized, creates even more
> powerful pressures to conform than discussions with similar alters [i.e., others]"
> (p. 525).

That is, the structural equivalence mechanism conveys normative influence that stems

from pressures to conform. Thus, I argue that the structural equivalence mechanism

captures the three implicit influence processes—direct contagion, normative influence, and adaption—whereby structurally equivalent peers influence an individual's social undermining (see also Figure 2).

Network researchers have also applied the structural equivalence mechanism to describe the effect of social influence on employees' work-related attitudes and behaviors (e.g., Burkhardt, 1994; Ibarra & Andrews, 1993; Johanson, 2000; Meyer, 1994; Rice & Aydin, 1991). For example, employees who are structurally equivalent are more similar in computer self-efficacy (Burkhardt, 1994), adoption of new technology (Burkhardt & Brass, 1990), adoption of a new drug (Burt, 1987), and turnover (Feeley & Barnett, 1997; Feeley, Hwang, & Barnett, 2008; Krackhardt & Porter, 1986). An individual's job satisfaction is shaped by that of structurally equivalent peers in communication networks (Johanson, 2000). Thus, I hypothesize:

Hypothesis 4c: Structurally equivalent peers in organizational networks will exert influence on individuals' social undermining.

Relative Effects of Network-based Proximity Mechanisms

The above hypotheses suggest that each of the three network-based proximity mechanisms—direct contact, group cohesion, and structural equivalence—predicts network peer influence on individuals' social undermining. Even further, I investigate which mechanism best predicts social influence of social undermining in organizational networks. Extant research suggests that the network-based proximity mechanisms such as group cohesion and structural equivalence, while all important, play different roles in predicting dyadic similarity on work-related attitudes, perceptions, and behaviors (e.g., Burkhardt, 1994; Burt, 1987; Feeley & Barnett, 1997; Feeley, et al., 2008; Hartman &

37

Johnson, 1989; Meyer, 1994; Shah, 1998). Thus, I ask the following question: which of the three social influence mechanisms—direct contact, group cohesion, or structural equivalence—best predicts similarity on undermining among organizational members?

Building on Johanson (2000), I assume that the three implicit influence processes—direct contagion, normative influence, and adaption—are equally strong or are parallel in explaining network peer influence on individual undermining. Taking the premise that the social influence processes of contagion, group pressure, and adaption are equally strong, Johanson (2000) explicitly hypothesizes and empirically tests the three network-based proximity mechanisms—direct contact, clique membership, and structural equivalence—in explaining network members' similarity on opinions regarding the job or the organization. As depicted in Figure 2, I argue that direct contact mechanism captures direct contagion; group cohesion mechanism captures both direct contagion and normative influence; and structural equivalence mechanism captures all these three influence processes. Therefore, I argue that, in predicting network peer influence on individuals' undermining, the structural equivalence mechanism should play the most prominent role, followed by the group cohesion mechanism, and then by the direct contact mechanism.

I further draw theoretical argument and empirical evidence from the extant works on network peer influence to support my argument that the structural equivalence mechanism plays the most prominent role. Theoretically, network researchers have suggested that the structural model of structural equivalence (i.e., the structural basis for the structural equivalence mechanism) creates a broader social influence field than the

structural model of cohesive subgroup (i.e., the structural basis for the group cohesion

mechanism) (e.g., Burt, 1980; 1987; Hartman & Johnson, 1989; Johanson, 2000).

Empirically, network researchers have found that the structural equivalence mechanism,

compared with the group cohesion mechanism, is much better at predicting *behaviorally*

based variables such as role ambiguity (Hartman & Johnson, 1989), turnover (Feeley &

Barnett, 1997; Krackhardt & Porter, 1986), adoption of new technology (Burkhardt &

Brass, 1990), and adoption of a new drug (Burt, 1987). Also, Johanson (2000) found

support for the proposition that structural equivalence is better than direct contact and

cohesive membership at explaining why individuals share similar opinions. I

hypothesize:

Hypotheses 4d: In organizational networks, structurally equivalent peers will exert most
        prominent influence on individuals' social undermining, followed by cohesive
        peers and then by direct-contact peers.

Chapter Three: Methodology

In this section, I introduce the samples for testing the hypotheses in this thesis and

describe in detail the measures of the dependent and independent variables: (1) social

undermining; (2) behavioral characteristics of personal networks—level and

inconsistency of network peer undermining; (3) structural characteristics of social

networks—network density of personal networks as well as network popularity and

information embeddedness in organizational networks; (4) three network-based proximity

mechanisms—direct contact, group cohesion, and structural equivalence—in

organizational networks; and (5) controls. I also illustrate the analytical approaches: (1)

the hierarchical regressions for testing the hypotheses underlying the first objective of

this thesis—the relationship between the level of network peer undermining and individual undermining and the conditioning roles of contextual and personal factors, and (2) the Quadratic Assignment Procedures (QAP) multiple regressions for testing the hypotheses underlying the second objective—the three network-based proximity mechanisms (i.e., direct contact, group cohesion, and structural equivalence) whereby direct-contact peers, cohesive peers, and structurally equivalent peers exert influence on individuals' undermining.

Sample

The data for this thesis were obtained from two samples of subjects—one employee sample and one student sample. The employee sample included the 131 full-time employees from two small-sized business units of a nation-wide stock exchange corporation in the People's Republic of China. The corporation has seven business units located in different big cities of China and implements highly standardized management practices and procedures across the business units. This standardization helps to minimize the potential effects of unit-level characteristics on individual undermining. The student sample included 137 full-time graduate students from two cohorts of a master's program at the University of Minnesota in the United States. I used the online survey to collect the responses from both samples. The subjects were provided with a web link to the questionnaire via email; they were guaranteed confidentiality, and assured that their participation was voluntary.

Within the employee sample, 109 employees in the two business units—that is, 59 of 67 in one unit named LF-Unit and 50 of 64 in the other unit named CH-Unit—

completed the questionnaire, resulting in an overall response rate of 83%. The participants averaged 30-year-old and had an average tenure of 32 months; 55% were male. Within the student sample, 108 students in the two cohorts—that is, 49 of 70 in the Cohort I and 59 of 67 in the Cohort II—completed the questionnaire, for an overall response rate of 79%. The participants averaged 25-year-old; 31% were male.

Measures

Dependent Measure

Social undermining. In this thesis, the dependent variable is social undermining, that is, individuals' engagement in undermining behaviors in organizations. I use two different methods to measure such engagement. First, the participants self-reported the frequency with which they engage in social undermining. The social undermining scale (Duffy, et al., 2002) was used to measure *how frequently* each respondent undermines fellow employees [students] in the organization [program] (see Appendix I for the scale of items). Example items include "insult them," "give them the silent treatment," and "spread rumors about them." Response options range from 1 (Never) to 6 (Often).

Second, I used the roster method (Marsden, 1990) to measure the network of social undermining interactions among all employees [students] in the organization [program] (see Appendix II for this network measure). Specifically, I used the wording from the social undermining scale (Duffy, et al., 2002). Participants responded on a frequency scale ranging from 1 (Never) to 6 (Often) to the following question:

> It happens frequently that fellow employees [students] have unpleasant
> interactions with one another in the workplace [classes]. Some fellow employees
> [students] may behave in unpleasant ways toward you, for example, criticizing
> the way you do things in an unhelpful way, not giving you as much help as they

promised, belittling your ideas, or competing with you for status and recognition at works [in classes], etc. Please recall your interactions with each of the fellow employees [students] listed below. Since you entered the company [program], how frequently has he or she acted in unpleasant ways toward you?

This formed an undermining matrix in which the value of each cell x_{ij} reflected the frequency of undermining behaviors that actor j performed toward actor i, as reported by actor i. I recoded this valued matrix into a binary one—that is, the values of 1 and 2 were coded as 0 and the values of 3 to 6 were coded as 1—for further calculating the number of fellow employees [students] who nominated a focal employee [student] as the perpetrator. In other words, a focal employee's [student's] social undermining was operationalized as the total number of fellow employees [students] who nominated him or her as the source (i.e., perpetrator) of undermining behaviors in the network of undermining interactions.

The simultaneous use of these two methods—self-report to the items of social undermining and roster method for measuring the social undermining network—enables me to capture individuals' social undermining from the viewpoints of both the source (i.e., perpetrator) and the target (i.e., victim) involved in social undermining. As highlighted in previous studies on workplace victimization (e.g., Aquino & Douglas, 2003; Douglas & Martinko, 2001), the self-report method may raise the social desirability concern so that respondents are unwilling to report their own "deviant" behaviors. In contrast, the roster method asks respondents to directly nominate their "perpetrators", thus greatly reducing the social desirability concern raised in the self-report method.

Independent Measures

The two objectives of this thesis (see Figure 1) indicate two subsets of independent variables to be measured. The first objective involves hypotheses on the relationship between level of network peer undermining and individual undermining and the contextual and personal forces that condition the relationship. Thus, I measured (1) behavioral characteristics of personal networks—level and inconsistency of network peer undermining, (2) structural characteristics of social networks—network density of personal networks as well as network popularity and information embeddedness in organizational networks, and (3) personality traits—self-monitoring and core self-evaluation. The second objective involves hypotheses on the influence mechanisms whereby social influence of social undermining occurs in organizational networks. Thus, I measured the three network-based proximity mechanisms—direct contact, group cohesion, and structural equivalence.

The measurement or calculation of these two subsets of independent variables (except the two personality traits) was built on the identification of two organizational social networks—friendship and communication—which I chose to focus on in investigating the effect of network peer influence on individuals' social undermining. That is, these two networks provide the fundamental structural bases for peers to exert influence on individuals' social undermining.

Organizational friendship and communication networks. Organizational friendship and communication networks capture different social relationships among organizational members and suggest different network interaction effects on the members

43

(Erickson, 1988). Specifically, the friendship network provides individuals social

supports and emotional attachments (Ibarra & Andrews, 1993). The communication

network depicts the flow of information among organizational members (Monge &

Contractor, 2003), indicating the primary channels—interpersonal processes and

interactions—through which individuals are exposed to social information and influence

from others. Overall, friendship network links tend to be more personal and stronger,

while communication network links arise out of work-role performance and tend to be

weaker (Meyer, 1994).

Drawing on previous studies (e.g., Ibarra & Andrews, 1993), I used the roster

method to measure the organizational friendship network. Specifically, the participants

responded to the following question on the scale of relationship closeness ranging from 1

(Don't Know) to 5 (Very Good Friend) (see Appendix II for this network measure).

> What is your relationship with each of the fellow employees [students] listed
> below? Please choose one option that best describes your relationship with him
> or her.

This formed a relationship closeness matrix in which cell entry x_{ij} reflected the extent of

relationship closeness that actor *i* reported toward actor *j*. I further recoded this valued

matrix into a binary one—the values of 1 to 3 were coded as 0 and the values of 4 and 5

were coded as 1. This binary organizational friendship network in which 1 represents the

presence of close friendship while 0 represents the absence of the relationship was

constructed for further identification of personal friendship network as well as calculation

of the network characteristics (e.g., network popularity and information embeddedness).

Following Ferrin et al. (2006), I measured the organizational communication

network in terms of the extent to which individuals communicate with fellow employees

[students] in the organization [program]. Participants responded to the question below on

a frequency scale ranging from 1 (Never) to 5 (Almost Everyday) (see Appendix II for

this network measure):

> How often do you personally communicate with each of your fellow employees
> [students] listed below? For example, how often do you have a work-related
> [course-related] discussion, a social conversation, a telephone discussion of
> general topics, or some kind of meeting with each other?

This formed a communication matrix in which cell entry x_{ij} reflected the frequency of

communication that actor *i* reported toward actor *j*. I further recoded this valued matrix

into a binary one—the values of 1 to 3 were coded as 0 and the values of 4 and 5 coded

as one. That is, I constructed the binary organizational communication network in which

1 represents the presence of communication while 0 represents the absence of

communication for further identification of personal communication network as well as

calculation of the network characteristics in this thesis.

Personal friendship and communication networks. As described previously, I

conceptualize an individual's personal networks as composed of peers whom the

individual is directly and/or indirectly connected with through one other individual (i.e.,

one intermediary). In other words, network peers include those who have a path of *length*

one and/or a path of *length two* to a focal individual. With the binary organizational

networks (friendship and communication), I identified each individual's personal

networks (friendship and communication) through a sequence of matrix operations via

the network software UCINET 6.2 (Borgatti, Everett, & Freeman, 2002). First, I

symmetrized the binary organizational friendship (communication) matrix using the rule

that only both members of a pair nominated the other, the pair was considered to have a

tie. This symmetric network indeed results in the *length-one* matrix, in which 1 indicates

there is a path of length one between members of a pair and 0 indicates the absence of

such path. Second, this symmetrized binary matrix was further squared, that is, the matrix

multiplication was performed with the function of Boolean Product, to generate a *length-

two* matrix, in which 1 indicates the presence of a path of length two between members of

a pair and 0 indicates the absence of such path. Third, after combining these two

matrices, I identified each member's personal friendship (communication) network,

which includes peers whom a member is directly connected and/or indirectly connected

with through one other actor in the organizational friendship (communication) network.

With the identification of the unique set of network peers, I was able to measure

the behavioral (level and inconsistency of network peer undermining) and structural

characteristic (network density) of individuals' personal friendship (communication)

network.

Level and inconsistency of network peer undermining. Level and

inconsistency of network peer undermining are operationalized as the *mean* and *variance*,

respectively, of social undermining that the unique set of peers exhibit in an individual's

personal friendship (communication) network.

Network density. The network density is the structural characteristic of an

individual's personal friendship (communication) network. Following Scott's (2000)

formula, the network density of the individual's personal friendship (communication)

46

network is calculated as the number of direct ties present in the network divided by

$N*(N-1)$, where N is the total number of peers in the individual's personal friendship

(communication) network.

Other than the behavioral and structural characteristics of an individual's personal

networks, the binary organizational friendship and communication networks also provide

the raw data needed to measure the other independent variables—network positions (i.e.,

network popularity and information embeddedness) and the three network-based

proximity mechanisms (i.e., direct contact, group cohesion, and structural equivalence) in

the networks. Using UCINET 6.2, I took the organizational friendship network as the

example and illustrate how to measure these independent variables.

Network popularity. Network popularity was measured using *in-degree*

centrality (Freeman, 1979) that calculates the number of direct ties one receives from

others in a social network. Thus, an individual's network popularity in the organizational

friendship network was calculated as the total number of others who nominated him or

her as a good friend in the network. The greater the individual's network popularity, the

more popular one he or she is in the organizational friendship network. Similarly, I

measured an individual's network popularity in the organizational communication

network in terms of the total number of others who indicate their communications with

the individual.

Information embeddedness. Information embeddedness was measured using

Stephenson and Zelen's (1989) index of centrality. An individual's information

embeddedness in the organizational friendship network directly denotes the extent to

which the individual is close to all other actors directly (i.e., a good friend) or indirectly (i.e., a good friend of a good friend, a good friend of a good friend of a good friend, and so on) (Baldwin, et al., 1997). The larger an individual's information embeddedness, the greater he or she is involved or embedded in the organizational friendship network. In a similar vein, I measured an individual's information embeddedness in the organizational communication network.

Direct contact mechanism. The structural basis (i.e., direct connection) for the direct contact mechanism was operationalized as the untransformed valued organizational networks. That is, for the organizational friendship network, the direct contact mechanism matrix is represented by the original organizational friendship network matrix in which cell entry x_{ij} indicates the extent of relationship closeness between actor i and actor j in the network. The higher the value x_{ij}, the closer the relationship actor i and actor j have. For the organizational communication network, the direct contact mechanism matrix is represented by the original organizational communication network matrix in which cell entry x_{ij} represents the frequency of communication between actor i and actor j in the network.

Group cohesion mechanism. The structural basis (i.e., cohesive subgroup) for the group cohesion mechanism was measured based on the reachability characterizing cohesive subgroups (Wasserman & Faust, 1994). For example, I submitted the binary organizational friendship network matrix to the *n*-clique function in UCINET 6.2. In this thesis, I focus on the *2*-clique subgroups in which "all members need not to be directly connected, but all members are reachable through at most one intermediary" (Wasserman

& Faust, 1994, p. 258). That is, all members in a cohesive subgroup are a good friend or a good friend of a good friend. Furthermore, the identification of all the *2*-clique subgroups allows me to construct the group cohesion mechanism matrix in terms of the co-membership matrix in which cell entry x_{ij} indicating the number of 2-clique subgroups in which actor *i* and actor *j* share memberships. Thus, the higher the value x_{ij}, the more cohesive actor *i* and actor *j* are. Similarly, I constructed the group cohesion mechanism matrix for the organizational communication network.

Structural equivalence mechanism. The structural basis (i.e., structural equivalence) for the structural equivalence mechanism was measured using Burt's (1976) algorithm that computes measures of the extent of structural equivalence in terms of the aggregate similarity between actor *i*'s and actor *j*'s relations in the network. Using UCINET 6.2, I submitted the original valued organizational friendship network matrix to Burt's (1976) structural equivalence algorithm based on the Pearson correlation coefficient. A larger correlation between two actors' relations in the network indicates a higher extent of structural equivalence they have in the network. Thus, the structural equivalence mechanism matrix contains element x_{ij} that indicates the extent of structural equivalence between actor *i*'s and actor *j*'s relations in the organizational friendship network. The higher the value x_{ij}, the more structurally equivalent actor *i* and actor *j* are in the network. Accordingly, I constructed the structural equivalence mechanism matrix for the organizational communication network.

Self-monitoring. The 13-item self-monitoring scale validated by Lennox and Wolfe (1984) was used to measure the personality trait of self-monitoring (see Appendix

I for the items). The scale includes a subscale for ability to modify self-presentation (e.g., "In social interactions, I have the ability to alter my behavior if I feel that something else is called for") and a subscale for sensitivity to expressive behavior of others (e.g., "I am often able to read people's true emotions correctly through their eyes"). The response options range from 1 (Strongly Disagree) to 7 (Strongly Agree).

Core self-evaluation. I used the 12-item core self-evaluation scale validated by Judge and his colleagues (2003) to measure the personality trait of core self-evaluation (see Appendix I for the items). Example items include: "I am confident I get the success I deserve in life," and "I am capable of coping with most of my problems." The response options range from 1 (Strongly Disagree) to 7 (Strongly Agree).

Controls. The first objective of this thesis is to isolate the predictive power of the level of network peer undermining in predicting individual undermining. To do so convincingly requires controlling for a large number of factors that have been shown to relate to social undermining and other forms of interpersonal mistreatment (see Aquino & Thau, 2009). On the basis of a review of the relevant literature, I identify individuals' demographics (age, gender, and tenure), negative affectivity, underlying need variables (need for belonging and need for power), and interactional justice perception as controls.

First, I controlled demographics (such as age, gender, and tenure) and negative affectivity that have been found to be related to social undermining and other forms of interpersonal mistreatment (e.g., Bowling & Beehr, 2006; Duffy, et al., 2002; Duffy et al., 2006; Glomb & Liao, 2003; Robinson & O'Leary-Kelly, 1998). For example, men, young people, workers with long tenure, and individuals with high negative affectivity

are more likely to engage in social undermining and related behaviors such as interpersonal aggression and antisocial behaviors (Duffy et al., 2006; Glomb & Liao, 2003; Robinson & O'Leary-Kelly, 1998). Gender was measured with 0 representing male and 1 representing female. Age was measured with years and tenure was measured with month. Negative affectivity was measured with the 10 negative affectivity markers from the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). Respondents were presented with a list of descriptors (e.g., distressed, upset) and indicated the frequency with which they felt each descriptor. The items were based on the response options from 1 (Never) to 5 (All the Time).

Second, I measured two need variables (need for belongingness and need for power). From the perspective of self-concept and self-regulation, Duffy and colleagues (2007) argued that individuals with high need for belongingness have strong self-interest in social inclusion and acceptance and thus are less likely to behave aggressively in terms of undermining others. Duffy et al. (2007) suggested that individuals who have a high need for power, in contrast, strongly desire to be in charge in the work environment, and undermining is one mechanism they can use to gain relative advantage in a social setting (see also, Duffy, Shaw, et al., 2006). Need for belongingness was measured with the 5-item scale (Steers & Braunstein, 1976). An example item is "I pay a good deal of attention to the feelings or others at work." Need for power was measured with the 5-item scale (Steers & Braunstein, 1976), for example, "I seek an active role in the leadership of a group." All the need items were based on the response options from 1 (Never) to 7 (Always).

Third, I also controlled interactional justice by peers and supervisors [professors] in this thesis. For example, individuals who perceive interpersonal injustice from peers and supervisors have been found to engage in interpersonal aggression or retaliation against coworkers (e.g., Glomb & Liao, 2003; Skarlicki & Folger, 1997). Interactional justice by coworkers was measured with the 4-item scale adapted from Colquitt (2001), for example, "My peers treat me politely". Interactional justice by supervisors was measured with the 6-item scale adapted from Moorman (1991), for example, "My supervisors [professors] consider my viewpoint." The response options for both measures range from 1 (Not at All) to 5 (To a Very Great Extent).

Analysis Approach

First, hierarchical regression analyses were conducted to test the hypotheses underlying the first objective of this thesis: (1) the relationship between level of network peer undermining and individual undermining (Hypothesis 1) and (2) the conditioning roles of the behavioral and structural of social networks (Hypothesis 2a-2d) as well as the personality traits of self-monitoring and core self-evaluation (Hypothesis 3a and 3b). In step 1, controls were entered; in step 2, level of network peer undermining was included; in step 3, moderators were entered; and in step 4, interactions between level of network peer undermining and moderators were added to the equation. The significance of the coefficient for the level of network peer undermining determined whether the results support Hypothesis 1. The explained variance change, the significance of the interaction term, and the plot of a significant interaction were used to determine the level of support for Hypotheses 2a-3b.

Second, following previous studies on network influence (e.g., Burkhardt, 1994; Krackhardt & Porter, 1986; Meyer, 1994), I used Quadratic Assignment Procedure (QAP) multiple regressions (Borgatti, Everett, & Freeman, 2002) to test the hypothesis 4a-4d regarding the three network-based proximity mechanisms whereby network peers influence individuals' social undermining. The QAP approach corresponds to the dyadic homogeneity approach that network researchers have typically taken to infer social influence effect by relating measures of structural similarity between two network members to a measure of their similarity on a dependent variable of interest (e.g., Burkhardt, 1994; Krackhardt & Porter, 1986; Meyer, 1994). The nature of social influence processes makes it untenable to observe a dependent variable of interest independently. This means that the standard linear regression models is inappropriate for predicting the dependent variable because independence of observation, a key assumption of standard linear regression models, no long holds in social influence processes (Ibarra & Andrews, 1993; Leenders, 2002; Marsden & Friedkin, 1994). In this thesis, individuals in organizational networks have structural proximity and thereby influence one another's social undermining. As a result, network autocorrelation obtains, that is, individuals' social undermining are interdependent in organizational networks. The QAP approach has been the most frequently used technique for handling such network autocorrelation. Specifically, this approach is similar to ordinary multiple regression but enables analysis of matrix data. It provides a nonparametric test of the relationship between two matrices, thus eliminating the network autocorrelation as a result of social influence (see also Shah,

53

1998). The unstandardized coefficients and R^2s obtained in QAP can be interpreted in the same manner as the regression coefficients and R^2s in OLS.

The Hypotheses 4a, 4b, and 4c about each of the three network-based proximity mechanisms—direct contact, group cohesion, and structural equivalence—require a measure of the extent of similarity on the dependent variable—social undermining. Following previous studies on network influence (e.g., Meyer, 1994), I constructed a square (n x n) matrix (**Y**) in which cell entry y_{ij} represents the absolute value of difference score in social undermining between actor i and actor j. That is,

$$y_{ij} = |y_i - y_j|$$

The higher the value y_{ij}, the lower the extent of similarity actor *i* and actor *j* have on undermining. Thus, cell entry y_{ij} indeed captures the extent of *dissimilarity* on undermining between actor *i* and actor *j*, and correspondingly the matrix **Y** is a matrix of dissimilarity on undermining. Therefore, the QAP equation in matrix notation for testing Hypotheses 4a, 4b, and 4c, respectively, was specified as

$$\mathbf{Y} = B_0 + B\mathbf{W} \qquad (1)$$

Where **W** is a (n x n) matrix representing each of the three network-based proximity mechanisms; and B_0 is a constant term and B is the unstandardized coefficient capturing the effect that each of the mechanisms has on dissimilarity on social undermining.

To test *Hypothesis 4d* regarding the relative predicting powers of the three network-based proximity mechanisms, Model (1) above was generalized into:

$$\mathbf{Y} = B_0 + B_1\mathbf{W_1} + B_2\mathbf{W_2} + B_3\mathbf{W_3} \qquad (2)$$

where W_1, W_2, and W_3 are (n x n) matrices representing the three network-based proximity mechanisms—direct contact, group cohesion, and structural equivalence—respectively; the parameters B_1, B_2, and B_3 indicate the predictive power of the corresponding mechanisms. As described previously, the interpretations (i.e., the sign, significance, and magnitude) of the parameter estimates Bs these equations are similar to those underlying the OLS regression. The significance of Bs indicates that the network-based proximity mechanisms are significant in predicting similarity on undermining among organizational members.

Chapter Four: Results

In this section, I report the results of testing the hypotheses among the employee sample and the student sample, respectively. Within each sample, the results of the hierarchical regressions for testing the hypotheses regarding the network peer influence (Hypothesis 1) and moderators (Hypothesis 2a-3b) are reported across the organizational friendship and communication networks, respectively. Furthermore, the QAP regressions for testing the three network-base proximity mechanisms (Hypothesis 4a-4d) in each of these two organizational networks are reported across the two business units (CH-Unit and LF-Unit) within the employee sample and across the two cohorts (Cohort I and Cohort II) within the student sample.

Sample 1—Employee Sample

For the employee sample, descriptive statistics and correlations among the study variables are reported in Table 1. The result in Table 1 shows that the correlation between self-rated undermining (UMS) and peer-rated undermining (UMI) was not significant (r =

.08, n.s.). In the organizational friendship network, the correlation between level of peer undermining and individual undermining is not significant when undermining is self-rated ($r = .17$, n.s.) and peer-rated ($r = .19$, n.s.). In the organizational communication network, the correlation is significant when undermining is self-rated ($r = .23$, $p<.05$) but non-significant when undermining is peer-rated ($r = -.10$, n.s.).

………………………….
Insert Table 1 about Here
………………………….

Among all the controls described previously, tenure, negative affectivity, and need for power remain significant when entered into the regression equations to predict individual undermining (self-rated or peer-rated). Thus, only these three controls, along with the dummy organization (0 = LF-Unit, 1 = CH-Unit), were retained in the hierarchical regressions presented below (see also Gibbons, 2004). Further, given the relatively small size of the employee sample and to save the statistical power for testing the hypotheses, the moderators hypothesized to strengthen or weaken the network peer influence were grouped into four separate sets when entered into the regression equations—(1) inconsistency of network peer undermining, (2) network density, network popularity, and information embeddedness, (3) self-monitoring and core self-evaluation, and (4) inconsistency of network peer undermining, self-monitoring, and core self-evaluation. Thus, the regression coefficients were interpreted within each set of the moderators, respectively.

Network Peer Influence and Moderators

Organizational Friendship Network

In the organizational friendship network, the results for testing the hypotheses are reported in Tables 1-1A (self-rated undermining) and 1-1B (peer-rated undermining).

……………………………………………………..
Insert Table 1-1A and Table 1-1B about Here
……………………………………………………..

Network peer influence. Hypothesis 1 proposed that level of network peer undermining is positively related to individual undermining. Results at Model 2 reveal that this relationship is not significant when individual undermining is self-rated (Table 1-1A) (b = -.33, n.s.) and peer-rated (Table 1-1B) (b = .32, n.s.). Therefore, Hypothesis 1 is not supported in the organizational friendship network.

Network characteristics. Hypotheses 2a-2d proposed that the four network characteristics—inconsistency of network peer undermining, network density, network popularity, and information embeddedness—moderate the relationship between level of network peer undermining and individual undermining such that the relationship will be stronger under lower inconsistency, denser network, higher network popularity, and higher information embeddedness, respectively. Results at Model 4 indicate that peer undermining inconsistency does not moderate the peer undermining → individual undermining relationship when undermining is self-rated (Table 1-1A) (b = -.57, n.s.) and peer-rated (Table 1-1B) (b = -.11, n.s.). Thus, Hypothesis 2a is not supported in the organizational friendship network. Results for the moderating effects of network density, network popularity, and information embeddedness are reported at Model 6 in Table 1-

1A (self-rated undermining) and Table 1-1B (peer-rated undermining). It shows that

network density does not play the moderating role when undermining is self-rated (Table

1-1A) (b = .49, n.s.) and peer-rated (Table 1-1B) (b = -.56, n.s.). Thus, Hypothesis 2b is

not supported. Similarly, results at Model 6 do not support the moderating effect of

network popularity when undermining is self-rated (Table 1-1A) (b = .10, n.s.) and peer-

rated (Table 1-1B) (b = -.20, n.s.). Hypothesis 2c is also not supported. For information

embeddedness, results reveal that it does not moderate the peer undermining →

individual undermining relationship when undermining is self-rated (Table 1-1A) (b = -

.54, n.s.); yet its moderation is marginally significant when undermining is peer-rated

(Table 1-1B) (b = .53, p<.10), accounting for additional 4% of the variance in individual

undermining (peer-rated). Furthermore, the plot in Figure 3A and simple-slope testing

indicate that the relationship is marginally significant and negative among individuals

with lower information embeddedness, but non-significant among individuals with higher

information embeddedness. This finding, although significant, is not as what Hypothesis

2d proposed. Thus, Hypothesis 2d is not supported in the organizational friendship

network.

…………………………….

Insert Figure 3A about Here

…………………………….

Personality traits. Hypotheses 3a and 3b proposed that the personality traits of

self-monitoring and core self-evaluation moderate the relationship between level of

network peer undermining and individual undermining such that the relationship is

stronger among high self-monitors and high-CSE individuals, respectively. Results

reported at Model 8 show that the moderating effects of both traits are not significant

when undermining is self-rated (Table 1-1A) (b = .53, n.s. for self-monitoring; b = -.74,

n.s. for core self-evaluation); but their moderations are significant when undermining is

peer-rated (Table 1-1B) (b = 1.69, p<.01 for self-monitoring; b = -1.68, p<.05 for core

self-evaluation), accounting for additional 8% of the variance in individual undermining.

For self-monitoring, the plot in Figure 3B and simple-slope testing indicate a significant

positive relationship between peer undermining and individual undermining among high

self-monitors but a non-significant relationship among low self-monitors. Thus,

Hypothesis 3a is supported in the organizational friendship network only when

undermining is peer-rated. For core self-evaluation, the plot in Figure 3C and simple-

slope testing show a significantly positive relationship between peer undermining and

individual undermining (peer-rated) among low-CSE individuals but a non-significant

relationship among high-CSE individuals. This finding, although significant, is not as

what Hypothesis 3b proposed. Thus, Hypothesis 3b is not supported in the organizational

friendship network.

……………………………………………..
Insert Figure 3B and Figure 3C about Here
……………………………………………..

In sum, in the organizational friendship network as summarized in Table 3, I do

not find support for the hypotheses about the relationship between level of network peer

undermining and individual undermining and the conditioning roles of the moderators—

inconsistency of network peer undermining, network density, network popularity, and

information embeddedness—when undermining is self-rated and peer-rated. Although

59

when undermining is peer-rated, the moderating effects of information embeddedness and core self-evaluation are significant, the patterns are not as what I hypothesized in this thesis. The only support I find is the moderating role that self-monitoring plays in the relationship between peer undermining and individual undermining (peer-rated) such that the relationship is stronger among high self-monitors.

<div align="center">

………………………………….

Insert Table 3 about Here

………………………………….

</div>

Organizational Communication Network

In the organizational communication network, the results for testing the hypotheses are reported in Tables 1-2A (self-rated undermining) and 1-2B (peer-rated undermining).

<div align="center">

……………………………………………………..

Insert Table 1-2A and Table 1-2B about Here

……………………………………………………..

</div>

Network peer influence. Hypothesis 1 proposed a positive relationship between level of network peer undermining and individual undermining. Results at Model 2 reveal that the relationship is not significant when undermining is self-rated (Table 1-2A) (b = .57, n.s.) and peer-rated (Table 1-2B) (b = -.62, n.s.). Therefore, Hypothesis 1 is not supported in the organizational communication network.

Network characteristics. Hypotheses 2a-2d proposed that the four network characteristics—inconsistency of network peer undermining, network density, network popularity, and information embeddedness—moderate the relationship between level of network peer undermining and individual undermining. Results reported at Model 4

<div align="center">

60

</div>

indicate that peer undermining inconsistency significantly moderates the relationship

when undermining is self-rated (Table 1-2A) (b = 10.93, p<.05) but does not moderate

the relationship when undermining is peer-rated (Table 1-2B) (b = .10, n.s.). The plot in

Figure 3D and simple-slope testing indicate that the relationship between peer

undermining and individual undermining (self-rated) is significantly positive under high

peer undermining inconsistency but non-significant under low inconsistency. This

finding, although significant, is not as what Hypothesis 2a proposed. Thus, Hypothesis 2a

is not supported in the organizational communication network. Results for the moderating

effects of network density, network popularity, and information embeddedness are

reported at Model 6 in Table 1-2A (self-rated undermining) and Table 1-2B (peer-rated

undermining). Results at Model 6 does not support the moderating effect of network

density when undermining is self-rated (Table 1-2A) (b = .38, n.s.) and peer-rated (Table

1-2B) (b = 1.72, n.s.). Thus, Hypothesis 2b is not supported. Results at Model 6 show that

network popularity does not moderate the relationship between peer undermining and

individual undermining when undermining is self-rated (Table 1-2A) (b = -.04, n.s.), but

marginally significantly moderates the relationship when undermining is peer-rated

(Table 1-2B) (b = .41, p<.10), accounting for additional 4% of the variance in individual

undermining (peer-rated). Furthermore, the plot in Figure 3E and simple-slope testing

indicate that the relationship between peer undermining and individual undermining is

not significant among individuals with high network popularity; but the relationship was

marginally significant and negative among individuals with low network popularity. This

finding, although significant, is not as what Hypothesis 2c proposed. Thus, Hypothesis 2c

is not supported in the organizational communication network. For information

embeddedness, results at Model 6 do not find support for its moderating effect when

undermining is self-rated (Table 1-2A) (b = .09, n.s.) and peer-rated (Table 1-2B) (b = -

.48, n.s.). Hypothesis 2b is not supported.

…………………………………………..
Insert Figure 3D and Figure 3E about Here
…………………………………………..

Personality traits. Hypotheses 3a and 3b proposed that the personality traits of

self-monitoring and core self-evaluation moderate the relationship between level of

network peer undermining and individual undermining. Results reported at Model 8 show

that both traits do not moderate the peer undermining → individual undermining

relationship when undermining is self-rated (Table 1-2A) (b = .74, n.s. for self-

monitoring; b = -.88, n.s. for core self-evaluation) and peer-rated (Table 1-2B) (b = -.39,

n.s. for self-monitoring; b = -1.49, n.s. for core self-evaluation). Therefore, Hypotheses

3a and 3b are not supported in the organizational communication network.

In sum, in the organizational communication network as summarized in Table 3, I

do not find support for the hypotheses about the relationship between level of network

peer undermining and individual undermining and the conditioning roles of the

moderators—inconsistency of network peer undermining, network density, network

popularity, and information embeddedness, core self-evaluation, and self-monitoring—

when undermining is self-rated and peer-rated. Although there are significant findings

about the moderating roles that inconsistency of network peer undermining and

information embeddedness play in the relationship between peer undermining and

individual undermining, the patterns are not as what I hypothesized in this thesis.

Therefore, in the employee sample, the overall findings taken together across the

organizational friendship and communication networks do not support what I proposed in

this thesis.

Network-based Proximity Mechanisms

The Quadratic Assignment Procedure (QAP) multiple regressions (Borgatti et al.,

2002) were conducted to test the Hypotheses 4a-4d regarding the network-based

proximity mechanisms (direct contact, group cohesion, and structural equivalence) in the

organizational friendship and communication networks, respectively. The controls—

tenure, negative affectivity, and need for power—included in the hierarchical regressions

were converted into matrices and entered into the QAP multiple regressions. Specifically,

these three control measures were continuous; thus, the matrixes contained difference

scores between two actors on each variable. For example, cell entry x_{ij} for the tenure

matrix represents the absolute value of actor i's tenure minus and actor j's tenure. The

smaller the value x_{ij}, the more similarity actor i and actor j have on tenure. Similarly, the

negative affectivity and need for power matrixes were constructed with cell entries

equaling the absolute value of negative affective or need for power differences between

two actors in the network. Below I reported the QAP correlations and regressions for the

employee sample in each of the two business units (CH-Unit and LF-Unit), respectively.

Employee Sample in CH-Unit

For the employee sample in CH-Unit, the QAP correlations among the matrices of

the study variables were reported in Table 1-3A. Within and cross the organizational

friendship and communication networks, the correlations among the three network-based

proximity mechanisms (direct contact, group cohesion, and structural equivalence) range

from -.06 (n.s.) to .54 (p<.001). These correlations are deemed to be sufficiently small to

support treating these mechanisms within and across both networks as distinct, and thus

do not indicate the potential problems with multicollinearity. The QAP regressions for

testing Hypotheses 4a-4d about these three influence mechanisms across the

organizational friendship and communication networks were reported in Table 1-4A.

…………………………………………………..
Insert Table 1-3A and Table 1-4A about Here
…………………………………………………..

Organizational friendship network. Hypotheses 4a-4c proposed that direct-

contact peers, cohesive peers, and structurally equivalent peers exert influence on

individuals' social undermining, respectively. In the upper part of Table 1-4A, results at

Model 2 show that direct contact mechanism does not relate to dissimilarity on

undermining (self-rated) (b = .03, n.s.); but the relationship is marginally significant and

negative when undermining is peer-rated (b = -.15, p<.10). That is, the closer the

relationship between two individuals in the organizational friendship network, the less

dissimilarity (or more similarity) they have on undermining (peer-rated). Thus in the

organizational friendship network, Hypothesis 4a is marginally supported only when

undermining is peer-rated. Results at Model 3 show that cohesive group mechanism is

not related to dissimilarity on undermining when undermining is self-rated (b = .00, n.s.)

and peer-rated (b = .00, n.s.). Thus, Hypothesis 4b is not supported in the organizational

friendship network. Similarly, results at Model 4 show that structural equivalence

64

mechanism does not relate to dissimilarity on undermining when self-rated (b = -.09, n.s.) and peer-rated (b = -.64, n.s.). Thus, Hypothesis 4c is not supported in the organizational friendship network as well. Hypothesis 4d proposed that structural equivalence mechanism plays the most prominent role among the three mechanisms. Results at Model 5 that tested these three mechanisms simultaneously show that all these three mechanisms do not relate to dissimilarity on undermining (self-rated) (b = .04, n.s. for direct contact, b = -.00, n.s. for group cohesion, and b = -.13, n.s. for structural equivalence); when undermining is peer-rated, only direct contact mechanism marginally significantly relates to dissimilarity on undermining (b = -.16, p<.10) yet group cohesion mechanism (b = .05, n.s.) and structural equivalence mechanism (b = -.58, n.s.) does not. Thus, Hypothesis 4d is not supported in the organizational friendship network.

In sum, in the organizational friendship network as summarized in Table 4, direct-contact peers exert marginally significant influence on individuals' social undermining only when undermining is peer-rated. However, the influences of both cohesive peers and structurally equivalent peers are not significant when undermining is self-rated and peer-rated.

Organizational communication network. In the lower part of Table 1-4A, results at Model 2 show that direct contact mechanism does not relate to dissimilarity on undermining when undermining is self-rated (b = -.00, n.s.) and peer rated (b = -.06, n.s.). Thus, Hypothesis 4a is not supported in the organizational communication network. Similarly, results at Model 3 show that cohesive group mechanism is not related to dissimilarity on undermining when undermining is self-rated (b = -.00, n.s.) and peer-

rated (b = .02, n.s.). Thus, Hypothesis 4b is not supported as well. Results at Model 4

show that structural equivalence mechanism does not relate to dissimilarity on

undermining (self-rated) (b = .08, n.s.); but the relationship is significantly negative when

undermining is peer-rated (b = -1.41, p<.05)—that is, the more structurally equivalent

two individuals are in the organizational friendship network, the less dissimilarity (or

more similarity) they have on undermining. Thus, Hypothesis 4c is supported only when

undermining is peer-rated. Results at Model 5 that tested these three mechanisms

simultaneously show that all the mechanisms do not relate to dissimilarity on

undermining (self-rated) (b = .01, n.s. for direct contact, b = -.01, n.s. for group cohesion,

and b = .08, n.s. for structural equivalence); when undermining is peer-rated, direct

contact mechanism is marginally significantly (b = -.12, p<.10), group cohesion

mechanism is not (b = .03, n.s.), and structural equivalence mechanism is significantly (b

= -1.46, p<.05) related to dissimilarity on undermining. Thus, in the organizational

friendship network, Hypothesis 4d is supported only when undermining is peer-rated.

In sum, in the organizational communication network as summarized in Table 4,

the influences of direct-contact peers, cohesive peers, and structurally equivalent peers

are not significant when undermining is self-rated. However, when undermining is peer-

rated, structurally equivalent peers are the most prominent in influencing individuals'

undermining; the influence of direct-contact peers is marginally significant while that of

group cohesion peers is not significant at all.

…………………………….
Insert Table 4 about Here
…………………………….

For the employee sample in the LF-Unit, the QAP correlations among the matrices of the study variables were reported in Table 1-3B. Within and across the organizational friendship and communication networks, the correlations among the three network-based proximity mechanisms—direct contact, group cohesion, and structural equivalence—range from -.09 (p<.05) to .44 (p<.001). These correlations are deemed to be sufficiently small to support treating these mechanisms within and across the two networks as distinct and thus do not indicate the potential problems with multicollinearity. The QAP regressions for testing Hypotheses 4a-4d about these three influence mechanisms in the organizational friendship and communication networks were reported in Table 1-4B.

……………………………………………………..
Insert Table 1-3B and Table 1-4B about Here
……………………………………………………..

Organizational friendship network. Hypotheses 4a-4c proposed that direct-contact peers, cohesive peers, and structurally equivalent peers in the network exert influence on individuals' social undermining, respectively. In the upper power of Table 1-4B, results at Model 2 show that direct contact mechanism does not relate to dissimilarity on undermining when undermining is self-rated (b = -.01, n.s.); but the relationship is significant and negative when undermining is peer-rated (b = -.33, p<.05). That is, the closer the relationship between two individuals in the organizational friendship network, the less dissimilarity (or more similarity) they have on undermining (peer-rated). Thus, Hypothesis 4a is supported in the organizational friendship network

only when undermining is peer-rated. Similarly, results at Model 3 show that cohesive group mechanism is not related to dissimilarity on undermining (self-rated) (b = .00, n.s.); but the relationship is significant and negative when undermining is peer-rated (b = -.03, p<.05). That is, the more cohesive two individuals are in the organizational friendship network, the less dissimilarity (or more similarity) they have on undermining (peer-rated). Thus, Hypothesis 4b is supported in the organizational friendship network *only* when undermining is peer-rated. Results at Model 4 indicate that structural equivalent mechanism is significantly and positively related to dissimilarity on undermining when undermining is self-rated (b = .17, p<.05). This finding, which suggests that the more structurally equivalent two members are in the organizational friendship network, the more dissimilarity (or less similarity) they have on undermining, is not as what I proposed in this thesis. However, when undermining is peer-rated, structural equivalent mechanism is significantly and negatively related to dissimilarity on undermining (b = -2.80, p<.01). This finding, which indicates that the more structurally equivalent two members are in the organizational friendship network, the less dissimilarity (or more similarity) they have on undermining, is consistent with my proposition. Thus, Hypothesis 4c is supported in the organizational friendship network only when undermining is peer-rated. Results at Model 5 that tested these three mechanisms simultaneously reveal that when undermining is self-rated, direct contact (b = -.02, n.s.) and group cohesion (b = .00, n.s.) mechanisms do not relate to dissimilarity on undermining; yet the effect of structural equivalence mechanism is positive (b = .20, p<.05)—the finding, while significant, is not as what I proposed. When undermining is

peer-rated, direct contact (b = -.10, n.s.) and group cohesion (b = -.03, n.s.) mechanisms

do not relate to dissimilarity on undermining; yet the effect of structural equivalence

mechanism is significantly negative (b = -2.52, p<.01)—a significant finding as what I

proposed. Therefore, Hypothesis 4d supported only when undermining is peer-rated.

In sum, in the organizational friendship network as summarized in Table 4, direct-

contact peers, cohesive peers, and structurally equivalent peers, respectively, exert

significant influence on individuals' peer-rated undermining. In addition, structurally

equivalent peers, compared to direct-contact and cohesive peers, play a more influential

role in the network. However, when undermining is self-rated, the influences of these

three types of peers in the network are not significant or not hypothesized.

Organizational communication network. In the lower part of Table 1-4B,

results at Model 2 show that direct contact mechanism does not relate to dissimilarity on

undermining when undermining is self-rated (b = -.01 n.s.), but its effect is marginally

significant and negative when undermining is peer-rated (b = -.13, p<.10). Thus,

Hypothesis 4a is marginally supported in the organizational communication network.

Results at Model 3 show that cohesive group mechanism is not related to dissimilarity on

undermining when undermining is self-rated (b = .00, n.s.) and peer-rated (b = -.01, n.s.).

Thus, Hypothesis 4b is not supported. Similarly, results at Model 4 show that structural

equivalence mechanism does not relate to dissimilarity on undermining when

undermining is self-rated (b = .07, n.s.) and peer-rated (b = -.60, n.s.). Hypothesis 4c is

not supported as well. Results at Model 5 that tested these three mechanisms

simultaneously show that all the mechanisms do not relate to dissimilarity on

undermining (self-rated) (b = -.01, n.s. for direct contact, b = .00, n.s. for group cohesion, and b = .06, n.s. for structural equivalence); when undermining is peer-rated, direct contact mechanism marginally significantly (b = -.12, p<.10) yet group cohesion mechanism (b = -.01, n.s.) and structural equivalence mechanism (b = -.65, n.s.) do not relate to dissimilarity on undermining. Thus, Hypothesis 4d is not supported.

In sum, in the organizational communication network as summarized in Table 4, direct-contact peers exert marginal influence on individuals' peer-rated (but not self-rated) undermining. However, the influences of cohesive peers and structurally equivalent peers are not significant when undermining is self-rated and peer-rated.

Sample 2—Student Sample

For the student sample, descriptive statistics and correlations among the study variables are reported in Table 2. The result in Table 2 indicates that the correlation between self-rated undermining (UMS) and peer-rated undermining (UMI) was positive and significant (r = .36, p<.01). In the organizational friendship network, the correlation between level of peer undermining and individual undermining is not significant when undermining is self-rated (r = .09, n.s.) and peer-rated (r = .19, n.s.). In the organizational communication network, the correlations are not significant when undermining is self-rated (r = .16, n.s.) and peer-rated (r = .06, n.s.) as well.

………………………………….
Insert Table 2 about Here
………………………………….

Among all the controls described previously, negative affectivity and need for power remain significant when entered into the regression equations to predict

individuals' social undermining (self-rated or peer-rated). Thus, only these two controls,

along with the dummy cohort (0 = Cohort I, 1 = Cohort II), were retained in the

hierarchical regressions (see also Gibbons, 2004). Similar to the hierarchical regressions

conducted in the employee sample, the moderators hypothesized to strengthen or weaken

the network peer influence were grouped into four separate sets when entered into the

regression equations—(1) inconsistency of network peer undermining, (2) network

density, network popularity, and information embeddedness, (3) self-monitoring and core

self-evaluation, and (4) inconsistency of network peer undermining, self-monitoring, and

core self-evaluation. This grouping helps save the statistical power for testing the

hypotheses given that the size of the student sample is relatively small. Thus, the

regression coefficients were interpreted within each set of the moderators, respectively.

Network Peer Influence and Moderators

Organizational Friendship Network

In the organizational friendship network, the results for testing the hypotheses are

reported in Tables 2-1A (self-rated undermining) and 2-1B (peer-rated undermining).

…………………………………………………..
Insert Table 2-1A and Table 2-1B about Here
…………………………………………………..

Network peer influence. Hypothesis 1 proposed that level of network peer

undermining is positively related to individual undermining. Results at Model 2 reveal

that this relationship is not significant when individual undermining is self-rated (Table

2-1A) (b = -.01, n.s.) and peer-rated (Table 2-1B) (b = .06, n.s.). Therefore, Hypothesis 1

is not supported in the organizational friendship network.

Network characteristics. Hypotheses 2a-2d proposed that the four network characteristics—inconsistency of network peer undermining, network density, network popularity, and information embeddedness—moderate the relationship between level of network peer undermining and individual undermining such that the relationship will be stronger under lower inconsistency, denser network, higher network popularity, and higher information embeddedness, respectively. Results at Model 4 indicate that peer undermining inconsistency does not moderate the peer undermining → individual undermining relationship when undermining is self-rated (Table 2-1A) (b = 2.96, n.s.) and peer-rated (Table 2-1B) (b = -.19, n.s.). Thus, Hypothesis 2a is not supported in the organizational friendship network. Results for the moderating effects of network density, network popularity, and information embeddedness are reported at Model 6 in Table 2-1A (self-rated undermining) and Table 2-1B (peer-rated undermining). It shows that network density does not play the moderating role when undermining is self-rated (Table 2-1A) (b = 2.79, n.s.) and peer-rated (Table 2-1B) (b = -.85, n.s.). Thus, Hypothesis 2b is not supported. Similarly, results at Model 6 do not support the moderating effects of network popularity and information embeddedness when undermining is self-rated (Table 2-1A) (b = -.03, n.s. for network popularity; b = -1.24, n.s. for information embeddedness) and peer-rated (Table 2-1B) (b = -.08, n.s. for network popularity; b = .05, n.s. for information embeddedness). Thus, Hypotheses 2c and 2d are not supported in the organizational friendship network.

Personality traits. Hypotheses 3a and 3b proposed that the personality traits of self-monitoring and core self-evaluation moderate the relationship between level of

network peer undermining and individual undermining such that the relationship is stronger among high self-monitors and high-CSE individuals, respectively. Results reported at Model 8 show that the moderating effects of both traits are not significant when undermining is self-rated (Table 2-1A) (b = .81, n.s. for self-monitoring; b = -.07, n.s. for core self-evaluation) and when undermining is peer-rated (Table 2-1B) (b = .02, n.s. for self-monitoring; b = -.28, n.s. for core self-evaluation). Thus, Hypotheses 3a and 3b are not supported in the organizational friendship network.

In sum, in the organizational friendship network as summarized in Table 3, I do not find any support for the hypotheses on the relationship between level of network peer undermining and individual undermining and the conditioning roles of the moderators—inconsistency of network peer undermining, network density, network popularity, and information embeddedness—when undermining is self-rated and peer-rated.

Organizational Communication Network

In the organizational communication network, the results for testing the hypotheses are reported in Tables 2-2A and 2-2B.

……………………………………………………..
Insert Table 2-2A and Table 2-2B about Here
……………………………………………………..

Network peer influence. Hypothesis 1 proposed a positive relationship between level of network peer undermining and individual undermining. Results at Model 2 reveal that the relationship is not significant when undermining is self-rated (Table 2-2A) (b = .50, n.s.) and peer-rated (Table 2-2B) (b = -.96, n.s.). Therefore, Hypothesis 1 is not supported in the organizational communication network.

73

Network characteristics. Hypotheses 2a-2d proposed that the four network

characteristics—inconsistency of network peer undermining, network density, network

popularity, and information embeddedness— moderate the relationship between level of

network peer undermining and individual undermining. Results reported at Model 4

indicate that peer undermining inconsistency do not moderate the relationship when

undermining is self-rated (Table 2-2A) (b = 1.25, n.s.) and peer-rated (Table 2-2B) (b =

.02, n.s.). Thus, Hypothesis 2a is not supported in organizational communication

network. Results for the moderating effects of network density, network popularity, and

information embeddedness are reported at Model 6 in Table 2-2A (self-rated

undermining) and Table 2-2B (peer-rated undermining). Results at Model 6 does not

support the moderating effect of network density when undermining is self-rated (Table

2-2A) (b = -2.77, n.s.) and peer-rated (Table 2-2B) (b = .71, n.s.). Thus, Hypothesis 2b is

not supported. Results at Model 6 show that network popularity significantly moderates

the peer undermining → individual undermining relationship when undermining is self-

rated (Table 2-2A) (b = -.58, p<.05), but does not moderate the relationship when

undermining is peer-rated (Table 2-2B) (b = .16, n.s.). Furthermore, the plot in Figure 4A

and simple-slope testing reveal that the relationship between peer undermining and

individual undermining was significant and positive among individuals with low network

popularity but non-significant among individuals with high network popularity. This

finding, although significant, is not as what Hypothesis 2c proposed. Thus, Hypothesis 2c

is not supported. For information embeddedness, results at Model 6 reveal that it

marginally significantly moderates the peer undermining → individual undermining

74

relationship when undermining is self-rated (Table 2-2A) (b = .39, p<.10) but

significantly moderate the relationship when undermining is peer-rated (Table 2-2B) (b =

-.40, p<.01). Furthermore, for self-rated undermining, the plot in Figure 4B and simple-

slope testing show that the peer undermining → individual undermining relationship is

not significant among individuals with high information embeddedness; but the

relationship is marginally significant and negative among individuals with low

information embeddedness. For peer-rated undermining, the plot in Figure 4C and

simple-slope testing show that the relationship was significant and negative among

individuals with high information embeddedness but non-significant among individuals

with low information embeddedness. Taken together, these findings, although significant,

are not as what Hypothesis 2c proposed. Thus, Hypothesis 2c is not supported in the

organizational communication network.

…………………………………………………………….
Insert Figure 4A, Figure 4B, and Figure 4C about Here
…………………………………………………………….

Personality traits. Hypotheses 3a and 3b proposed that self-monitoring and core

self-evaluation moderate the relationship between level of network peer undermining and

individual undermining. Results reported at Model 8 show that both traits do not

moderate the peer undermining → individual undermining relationship when

undermining is self-rated (Table 2-2A) (b = .57, n.s. for self-monitoring; b = -1.12, n.s.

for core self-evaluation) and peer-rated (Table 2-2B) (b = -.48, n.s. for self-monitoring; b

= -.57, n.s. for core self-evaluation). Thus, Hypotheses 3a and 3b are not supported in the

organizational communication network.

In sum, in the organizational communication network as summarized in Table 3, I do not find support for the hypotheses regarding the relationship between level of network peer undermining and individual undermining and the conditioning roles of the moderators—inconsistency of network peer undermining, network density, network popularity, and information embeddedness, core self-evaluation, and self-monitoring—when undermining is self-rated and peer-rated. Although there are significant findings about the moderating roles that network popularity and information embeddedness play in the relationship between peer undermining and individual undermining, the patterns are not as what I hypothesized. Thus in the student sample, the overall findings integrated from the organizational friendship and communication networks do not support what I proposed in this thesis.

Network-based Proximity Mechanisms

For the student sample, the controls—negative affectivity and need for power—included in the hierarchical regressions were converted into matrices and entered into the QAP multiple regressions, along with the three network-based proximity mechanisms. Specifically, these two control measures were continuous; thus, the matrixes contained difference scores between two network members on each variable. For example, cell entry x_{ij} for the negative affectivity matrix represents the absolute value of actor i's negative affectivity minus and actor j's negative affectivity. The smaller the value x_{ij}, the more similar actor i and actor j are in terms of negative affectivity. Similarly, the need for power matrix was constructed with cell entries equaling the absolute value of need for power difference between two actors in the networks. Below I reported the QAP

correlations and regressions for the student sample in Cohort I and Cohort II, respectively.

Student Sample in Cohort I

For the student sample in Cohort I, the QAP correlations among the matrices of the study variables were reported in Table 2-3A. Within the organizational friendship network, the correlation between direct contact and group cohesion ($r = .49$, p<.001), between direct contact and structural equivalence ($r = .57$, p<.001), and between group cohesion and structural equivalence ($r = .44$, p<.001) are not extremely high to indicate the potential problems with multicollinearity. Within the organizational communication network, the correlation between direct contact and group cohesion ($r = .52$, p<.001), between direct contact and structural equivalence ($r = .55$, p<.001), and between group cohesion and structural equivalence ($r = .47$, p<.001) within the communication network are also not extremely high to indicate the potential problems with multicollinearity. However, the cross-network correlation between friendship direct contact and communication direct contact ($r = .74$, p<.001) and between friendship structural equivalence and communication structural equivalence ($r = .89$, p<.001) are particularly high, suggesting that the friendship and communication networks highly overlap. The QAP regressions for testing Hypotheses 4a-4d about these three influence mechanisms in the organizational friendship and communication networks were reported in Table 2-4A.

………………………………………………..
Insert Table 2-3A and Table 2-4A about Here
………………………………………………..

Organizational friendship network. Hypotheses 4a-4c proposed that direct-contact peers, cohesive peers, and structurally equivalent peers exert influence on individuals' social undermining, respectively. In the upper part of Table 2-4A, results at Model 2 show that direct contact mechanism does not relate to dissimilarity on undermining (self-rated) (b = -.01, n.s.); but the relationship is significantly negative when undermining is peer-rated (b = -.23, p<.05). That is, the closer the relationship between two individuals in the organizational friendship network, the less dissimilarity (or more similarity) they have on undermining (peer-rated). Thus, Hypothesis 4a is supported in the organizational friendship network only when undermining is peer-rated. Results at Model 3 show that cohesive group mechanism is not related to dissimilarity on undermining when undermining is self-rated (b = -.00, n.s.) and peer-rated (b = -.01, n.s.). Thus, Hypothesis 4b is not supported in the organizational friendship network. Similarly, results at Model 4 show that structural equivalence mechanism does not relate to dissimilarity on undermining (self-rated) (b = -.03, n.s.) and peer-rated (b = .28, n.s.). Thus, Hypothesis 4c is not supported in the organizational friendship network as well. Hypothesis 4d proposed that structural equivalence mechanism plays the most prominent role among the three mechanisms. Results at Model 5 that tested these three mechanisms simultaneously show that all these three mechanisms do not relate to dissimilarity on undermining (self-rated) (b = -.02, n.s. for direct contact, b = -.00, n.s. for group cohesion, and b = .02, n.s. for structural equivalence); when undermining is peer-rated, direct contact mechanism significantly and negatively relates to dissimilarity on undermining (b = -.38, p<.01)—a finding which means that the closer the relationship

78

between two individuals in the organizational friendship network, the less dissimilarity (or more similarity) they have on undermining; group cohesion mechanism does not relate to dissimilarity on undermining (b = -.01, n.s.); and structural equivalence mechanism significantly and positively relates to dissimilarity on undermining (b = 1.29, p<.01)—an unexpected finding which means that the more structurally equivalent two individuals are in the organizational friendship network, the more dissimilarity (or less similarity) they have on undermining. Thus, Hypothesis 4d is not supported in the organizational friendship network.

In sum, in the organizational friendship network as summarized in Table 4, direct-contact peers exert significant influence on individuals' social undermining only when undermining is peer-rated. The influence of cohesive peers is not significant when undermining is self-rated and peer-rated. The influence of structurally equivalent peers is not significant when undermining is self-rated and unexpected, although significant, when undermining is peer-rated.

Organizational communication network. In the lower part of Table 2-4A, results at Model 2 show that direct contact mechanism does not relate to dissimilarity on undermining when undermining is self-rated (b = .02, n.s.); but the relationship is significantly negative when undermining is peer-rated (b = -.29, p<.01). That is, the closer the relationship between two individuals in the organizational friendship network, the less dissimilarity (or more similarity) they have on undermining (peer-rated). Thus, Hypothesis 4a is supported in the organizational communication network only when undermining is peer-rated. Results at Model 3 show that cohesive group mechanism is

not related to dissimilarity on undermining when undermining is self-rated (b = -.01, n.s.) and peer-rated (b = -.09, n.s.). Thus, Hypothesis 4b is not supported in the organizational communication network. Similarly, results at Model 4 show that structural equivalence mechanism does not relate to dissimilarity on undermining when undermining is self-rated (b = -.02, n.s.) and peer-rated (b = .03, n.s.). Thus, Hypothesis 4c is not supported in the organizational communication network as well. Hypothesis 4d proposed that structural equivalence mechanism plays the most prominent role among the three mechanisms. Results at Model 5 that tested these three mechanisms simultaneously show that all these three mechanisms do not relate to dissimilarity on undermining (self-rated) (b = .04, n.s. for direct contact, b = -.02, n.s. for group cohesion, and b = -.07, n.s. for structural equivalence); when undermining is peer-rated, direct contact mechanism significantly and negatively relates to dissimilarity on undermining (b = -.44, p<.01)—a finding which means that the closer the relationship between two individuals in the organizational communication network, the less dissimilarity (or more similarity) they have on undermining; group cohesion mechanism does not relate to dissimilarity on undermining (b = .05, n.s.); and structural equivalence mechanism significantly and positively relates to dissimilarity on undermining (b = .92, p<.01)—an unexpected finding which means that more structurally equivalent two individuals are in the organizational communication network, the more dissimilarity (or less similarity) they have on undermining. Thus, Hypothesis 4d is not supported in the organizational communication network.

In sum, in the organizational communication network as summarized in Table4, the findings about the influences of direct contact-peers, cohesive peers, and structurally equivalent peers are similar to the findings in the organizational friendship network described above. That is, direct-contact peers exert significant influence on individuals' social undermining only when undermining is peer-rated. The influence of cohesive peers is not significant when undermining is self-rated and peer-rated. The influence of structurally equivalent peers is not significant when undermining is self-rated and is unexpected, although significant, when undermining is peer-rated.

Student Sample in Cohort II

For the student sample in Cohort II, the QAP correlations among the matrices of the study variables were reported in Table 2-3B. Within the organizational friendship network, the correlation between direct contact and group cohesion (r = .56, p<.001), between direct contact and structural equivalence (r = .57, p<.001), and between group cohesion and structural equivalence (r = .52, p<.001) are not extremely high to indicate the potential problems with multicollinearity. Within the organizational communication network, the correlation between direct contact and group cohesion (r = .41, p<.001), between direct contact and structural equivalence (r = .53, p<.001), and between group cohesion and structural equivalence (r = .30, p<.001) are also not extremely high to indicate the potential problems with multicollinearity. However, across these two networks, the correlation between friendship direct contact and communication direct contact (r = .81, p<.001) and between friendship structural equivalence and communication structural equivalence (r = .90, p<.001) are particularly high, suggesting

that these two networks highly overlap. The QAP regressions for testing Hypotheses 4a-4d about these three influence mechanisms in the organizational friendship and communication networks were reported in Table 2-4B.

…………………………………………………..
Insert Table 2-3B and Table 2-4B about Here
…………………………………………………..

Organizational friendship network. Hypotheses 4a-4c proposed that direct-contact peers, cohesive peers, and structurally equivalent peers exert influence on individuals' social undermining, respectively. In the upper part of Table 2-4B, results at Model 2 show that direct contact mechanism does not relate to dissimilarity on undermining when undermining is self-rated (b = -.01, n.s.) and peer-rated (b = .03, n.s.). Hypothesis 4a is supported in the organizational friendship network. Similarly, results at Model 3 and Model 4 show that cohesive group mechanism and structural equivalence mechanism are not related to dissimilarity on undermining when undermining is self-rated (b = -.01, n.s. for group cohesion; b = -.02, n.s. for structural equivalence) and peer-rated (b = -.02, n.s. for group cohesion; b = .07, n.s. for structural equivalence). Thus, Hypotheses 4b and 4c are not supported in the organizational friendship network. Hypothesis 4d proposed that structural equivalence mechanism plays the most prominent role among the three mechanisms. Results at Model 5 that tested these three mechanisms simultaneously show that all these three mechanisms do not relate to dissimilarity on undermining when undermining is self-rated (b = -.00, n.s. for direct contact, b = -.01, n.s. for group cohesion, and b = .06, n.s. for structural equivalence) and peer-rated (b = .06, n.s. for direct contact, b = -.05, n.s. for group cohesion, and b = .10, n.s. for structural

equivalence). Thus, Hypothesis 4d is not supported in the organizational friendship network.

In sum, in the organizational friendship network as summarized in Tbale 4, the influences of direct-contact peers, cohesive peers, and structurally equivalent peers on individuals' social undermining are not significant when undermining is self-rated and peer-rated, regardless whether their influences are examined respectively or simultaneously.

Organizational communication network. In the lower part of Table 2-4B, results at Model 2 show that direct contact mechanism does not relate to dissimilarity on undermining when undermining is self-rated (b = -.00, n.s.) and peer-rated (b = .12, n.s.). Hypothesis 4a is supported in the organizational communication network. Similarly, results at Model 3 and Model 4 show that cohesive group mechanism and structural equivalence mechanism are not related to dissimilarity on undermining when undermining is self-rated (b = -.00, n.s. for group cohesion; b = .02, n.s. for structural equivalence) and peer-rated (b = .02, n.s. for group cohesion; b = -.31, n.s. for structural equivalence). Thus, Hypotheses 4b and 4c are not supported in the organizational communication network. Hypothesis 4d proposed that structural equivalence mechanism plays the most prominent role among the three mechanisms. Results at Model 5 that tested these three mechanisms simultaneously show that all these three mechanisms do not relate to dissimilarity on undermining (self-rated) (b = .01, n.s. for direct contact; b = -.00, n.s. for group cohesion; b = .06, n.s. for structural equivalence); when undermining is peer-rated, direct contact mechanism is positively related to dissimilarity on

undermining (b = .24, p<.05))—an unexpected finding which means that the closer the relationship between two individuals in the organizational communication network, the more dissimilarity (or less similarity) they have on undermining; both group cohesion mechanism and structural equivalence mechanism do not relate to dissimilarity on undermining (b = -.00, n.s. for group cohesion; b = -.85, n.s. for structural equivalence).

In sum, in the organizational communication network as summarized in Table 4, the influence of direct-contact peers is not significant when undermining is self-rated and is unexpected, although significant, when undermining is peer rated. The influences of cohesive peers and structurally equivalent peers are not significant when undermining is self-rated and peer-rated as well.

Chapter Five: Discussion

In this thesis, I integrate the network theory of social influence into extant work on social influence of undermining behaviors in the workplace. The theoretical model (see Figure 1) indicates that network peers influence individual undermining: the level of network peer undermining is positively related to individuals' social undermining, and the peer influence is further conditioned on characteristics—behavioral and structural— of social networks and personality traits of self-monitoring and core self-evaluation. Furthermore, I articulate three network-based proximity influence mechanisms—direct contact, group cohesion, and structural equivalence—underlying the network peer influence on individuals' undermining engagement. Below, I briefly summarize the findings of this thesis, and discuss its implications for recent group-based studies on social undermining and related behaviors (e.g., antisocial behavior and interpersonal

84

aggression) as well as for research on social networks. I also discuss the potential

limitations of this thesis and directions for future research.

Network Peer Influence and Moderator

The overall finding in this thesis does not support the hypothesized relationship

between level of network peer undermining and individual undermining when

undermining is self-rated and peer-rated. The relationship is found to be contingent on

characteristics of social networks (inconsistency of peer undermining, information

embeddedness, and network popularity) and personality traits (self-monitoring and core

self-evaluation). However, the patterns of the significant moderations, that is, how the

contextual and personal characteristics (except self-monitoring) condition the influence

of peer undermining on individual undermining are not consistent with what I proposed

in this thesis. Below I illustrate these significant conditioning forces in the order of

inconsistency of network peer undermining, network popularity, information

embeddedness, self-monitoring, and core self-evaluation.

Inconsistency of network peer undermining. In the organizational

communication network, inconsistency of peer undermining is found to significantly

moderate the relationship between level of peer undermining and individual undermining

when undermining is self-rated (see Figure 3D in employee sample). The finding that

under low inconsistency of peer undermining, level of peer undermining has non-

significant effect is not consistent with what I proposed. This inconsistent finding may be

due to the role that the organizational communication network plays in facilitating peers

to influence individuals' undesirable behaviors (i.e., social undermining); it may be also

85

due to the social desirability concern underlying the measurement of self-rated social

undermining in the employee sample. First, the organizational communication network,

while facilitating peers to influence employees' desirable work-related behaviors (e.g.,

use of new technology; Burkhardt, 1994), may be limited in enabling peers to influence

individuals' undesirable behaviors (i.e., social undermining). Compared to close friends,

peers with whom individuals communicate in the workplace may be less influential in

driving the individuals to engage in undermining. This may explain that, in the employee

sample, there are more significant findings in the organizational friendship network than

in the organizational communication network (see Table 3). Thus, although low

inconsistency of peer undermining in the communication network conveys a strong signal

that peers homogeneously practice undermining, level of peer undermining does not

affect individual undermining. Second, the social desirability concern raised in the

measurement of self-rated social undermining may be particularly obvious in this

employee sample from P. R. China, although cultural difference is not of interest in this

thesis. In other words, the reluctance of the employees to report their undermining

behaviors may bias the finding about the conditioning role that inconsistency of network

peer undermining plays. To validate these two possible explanations in the employee

sample, I conducted a post hoc analysis to examine in the organizational *friendship*

network, how inconsistency of peer undermining interacts with level of peer undermining

to predict individual undermining when undermining is *peer-rated*. Although the

interaction is not significant (see b = -.11 in Table 1-1B), the pattern is consistent with

my hypothesis—that is, in the organizational friendship network, when inconsistency of

peer undermining is lower, level of peer undermining has a positive effect on individual

undermining (peer-rated) but a negative effect when inconsistency of peer undermining is

higher.

Network popularity. In the organizational communication network, network

popularity significantly moderates the relationship between peer undermining and

individual undermining—when undermining is peer-rated (employee sample) (see Figure

3E) and when undermining is self-rated (student sample) (see Figure 4A). The

comparison across these two samples shows that the relationship is not significant among

individuals with higher network popularity; but the relationship is significant among

individuals with lower network popularity—negative in the employee sample yet positive

in the student sample. Overall, these findings are not consistent with what I proposed in

the thesis. There are several potential explanations for these unexpected findings.

First for individuals with high network popularity, the non-significance of peer

undermining may be due to two possibilities. One, having high popularity in the

organizational communication network suggests that individuals are approached by many

peers for information, communications, and discussions; thus they are prominent and

powerful in the network (Brass & Burkhardt, 1993; Wasserman & Faust, 1994). Such

informal power helps reduce constraints or pressures that the individuals may experience

in conforming to peer undermining. That is, the individuals are less susceptible to

behavioral influence from peers. Two, I made a post hoc analysis about the correlation

between network popularity and being targets (or victims) in the network of undermining

interactions. The non-significant correlations in the student ($r = -.16$, n.s.) and employee

(r = .10, n.s.) samples indicate that individuals having higher network popularity do not perceive being undermined by peers. Thus, it is reasonable to expect that these individuals need not engage in social undermining to protect their informal power in the organizational communication network from being challenged by peer undermining.

Second for individuals with low network popularity, their unpopular network position indicates that they are excluded by peers in the organizational communication network. Given that engagement in undermining behaviors may further increase social rejection and exclusion from peers, these individuals are not likely to undermine others if they are concerned about being further disconnected from the network. This concern may explain why in the employee sample, level of peer undermining is negatively related to individual undermining when undermining is peer-rated. However, compared to the employees in the employee sample, the students in the student sample had more infrequent and shorter periods of interactions in the program when I conducted the investigation. Thus, the students with low network popularity may care less about social exclusions or rejections from fellow students and thus are more influenced by their network peers' undermining behaviors. Instead, it is likely that they may regard undermining engagement as an appropriate approach to increase their popularity in the network. Therefore, the student sample characteristics may explain the unexpected finding that level of peer undermining is positively related to individual undermining when undermining is self-rated.

Information embeddedness. In the organizational friendship network, information embeddedness moderates the relationship between level of peer undermining

and individual undermining when undermining is peer-rated (employee sample) (see Figure 3A). In the organizational communication network, information embeddedness also moderates the relationship when undermining is self-rated (see Figure 4B) and peer-rated (see Figure 4C) in the student sample. The overall pattern across these two samples reveals that the peer undermining → individual undermining relationship is either non-significant or significantly negative among individuals with high information embeddedness; the relationship is also non-significant or (marginally) significantly negative among individuals with low information embeddedness. These findings are not as what I proposed. There are several potential explanations for these unexpected findings.

First among individuals with high information embeddedness, level of peer undermining has a non-significant effect on individual undermining when undermining is peer-rated in both samples (Figure 3A and Figure 4B), but a significantly negative effect when undermining is self-rated in the student sample (Figure 4C). As argued above, individuals with high information embeddedness have great control over and access to valued information and resources and thus gain informal power in social networks (Ibarra & Andrews, 1993; Krackhardt, 1990). These individuals, similar to those with high network popularity, may thus experience less constraint or pressure on conforming to peers' behaviors, including social undermining. Correspondingly, they are not influenced or are less likely to be influenced by level of network peer undermining. I conducted the post hoc analysis about the correlation between information embeddedness and being targets (or victims) in the network of undermining interactions. The correlations are not

significant in the student (r = -.04, n.s.) and employee (r = .04, n.s.) samples—that is, individuals with high information embeddedness do not perceive being undermined by peers. Thus, it is likely that they need not engage in undermining behaviors to protect their informal power from being challenged by peer undermining.

Second among individuals with low information embeddedness, level of peer undermining is significantly and negatively related to individual undermining when undermining is peer-rated in the employee sample (Figure 3A), but non-significantly related to individual undermining when undermining is self-rated and peer-rated in the student sample (Figure 4B and 4C). Given that undermining engagement may increase social exclusion and rejection from peers, the individuals, similar to those with low network popularity, are not likely to undermine others for the concern of gaining further social exclusion or disconnection from the network. In addition, low information embeddedness means lack of information saliency and validation regarding peers' engagement in undermining. Thus, an alternative explanation for the non-significance or negative effect of peer undermining may be because individuals with low information embeddedness are not even aware of peer undermining in their network environments.

Self-monitoring. The personality trait of self-monitoring, as hypothesized in this thesis, moderate the influence of peer undermining on individual undermining when undermining is peer-rated (employee sample) (see Figure 3B). The finding that the influence is more stronger among high self-monitors supports my arguments that high self-monitors, compared to low self-monitors, are more sensitive to social information or cues on peers undermining, have a higher level of expressive control to act on such

informational cues, and manage their behaviors according to situational appropriateness.

Specifically, the significantly positive effect that level of network peer undermining has

on high self-monitors' undermining suggests that high self-monitors are susceptible to

social influence of network peers. The post hoc analysis of the correlation between self-

monitoring and being targets (or victims) in the network of undermining interactions

reveal that high self-monitors indeed do not feel being targeted for undermining (r = -.09,

n.s.). This additional finding adds to my argument that high self-monitors may engage in

undermining behaviors as a result of peer influence but not because they want to get an

even from being undermined by others. The non-significance of network peer

undermining among low self-monitors indicates that low self-monitors, in contrast, are

either less sensitive to situational cues on peer undermining or unwilling to adjust their

behavior to meet expectations and norms on the behavior even if they are aware of the

informational cues. The findings about the significant moderating role of self-monitoring

corresponds to previous findings that employees, depending on their levels of self-

monitoring, respond more or less intensely to informational cues about interpersonal

interactions and relationships (e.g., social undermining interactions) in the workplace

(e.g., Fang & Shaw, 2009).

Core self-evaluation. The personality trait of core self-evaluation (CSE) also

significantly conditions the relationship between level of network peer undermining and

individual undermining when undermining is peer-rated (employee sample) (see Figure

3C). The findings reveal a non-significant relationship among high-CSE individuals but a

significantly positive relationship among low-CSE individuals. This pattern of

moderation is not as what I proposed. The constructive definition of core self-evaluation may explain these unexpected findings.

First, recall that high-CSE individuals, who have the characteristics of higher self-esteem, generalized self-efficacy, emotional stability, and locus of control, have more positive sense of self-worth as well as mastery and control of their environment than low-CSE individuals (Judge et al., 2004). Judge and colleagues (2004) argue that high-CSE individuals "appraise themselves in a consistently positive manner across situations" (p. 326). Therefore, although high level of network peer undermining presents an esteem-threatening situation—an external warning cues that individuals may be targeted for undermining (Duffy et al., 2006), I argue that high-CSE individuals are less susceptible to situational influence given that they have personal resilience to protect their own positive self-image and to exercise successful control over their environments. Furthermore, prior studies have found that high-CSE individuals, compared to low-CSE ones, are less likely to perceive being undermined by coworkers (Fang & Duffy, 2009; Scott & Judge, 2009). The post hoc analysis also shows a non-significant correlation between core self-evaluation and being targets in the network of undermining interactions (r = .04, n.s.). Therefore, high-CSE individuals, when not targeted for undermining, are not expected to undermine others purely because of the saliency or availability of situational cues about peer undermining.

Second for low-CSE individuals, the significantly positive influence that network peer undermining has on their undermining might be explained by the sensitivity and responses of low-CSE individuals to negative informational cues and signals conveyed at

a high level of peer undermining. It has been suggested that people with negative personality traits, such as high neuroticism and low self-esteem, are sensitive to signals of punishment (e.g., pay cut; Shaw, Duffy, Jenkins, & Gupta, 1999) and negative informational cues from social comparison (e.g., patients' distressing emotions; Buunk et al., 2009). Similar to people with low self-efficacy and low locus of control, individuals with high neuroticism and low self-esteem are also less confident in dealing with a threatening situation (Buunk et al., 2009; Duffy et al., 2006). Therefore, when the social environment is characterized by high level of network peer undermining which conveys an esteem-threatening situation, low-CSE individuals, who tend to have high neuroticism, low self-esteem, low self-efficacy, and low locus of control, will be sensitive to negative informational cues and signals in such situation and further deal with the situation in terms of conforming to what peers do, that is, undermining engagement.

Network-based Proximity Mechanisms

Regarding the network-based proximity mechanisms (direct contact, group cohesion, and structural equivalence) by which direct-contact peers, cohesive peers, and structurally equivalent peers exert influence on individuals' social undermining, the overall finding summarized in Table 4 reveals that when undermining is self-rated, no support is found for the influences of these different network peers on individuals' social undermining, no matter whether their influences are examined separately or simultaneously. In contrast when undermining is peer-rated, these three network-based proximity mechanisms, when separately or simultaneously, significantly contribute to similarity on undermining among individuals.

First, in the organizational friendship and communication networks, direct contact mechanism facilitates direct-contact peers to influence individuals' social undermining across the employee and student samples. This finding indicates that the existence of direct connection is a critical structural basis for social influence to be transmitted (Erickson, 1988; Weiss & Shaw, 1979). As argued previously, this evidence explicates the implicit influence process of direct contagion. Second, in the organizational friendship network, support is found for the significance of group cohesion mechanism in the employee sample. The finding suggests that individuals who are linked directly or indirectly within the structural subunits of cohesive groups influence one another's undermining behaviors beyond the structural basis of their direct interactions at dyads. In other words, cohesive peers may exert normative influence on individuals' undermining beyond direct contagion. Third, in the organizational friendship and communication networks, the significance of structural equivalence mechanism in the employee sample suggests that individuals who are structurally equivalent in the networks may converge in their undermining engagement. This finding illustrates the functioning of adaption in enabling structurally equivalent peers to exert influence on individuals' undermining beyond direct contagion and normative influence. Furthermore, in both organizational networks, when these three mechanisms are tested simultaneously, structurally equivalent peers are also found to be most prominent in transmitting social influence of network peers in the employee sample.

Therefore, given the relative low correlations among the three network-based influence mechanisms (direct contact, group cohesion, and structural equivalence) in the

employee sample (see Table 1-3A and Table 1-3B), all these significant findings regarding these mechanisms, whether examined separately or simultaneously, support my propositions that structural arrangements and their corresponding influence mechanisms are important in our understanding of how network peers influence individuals' undermining engagement.

Implications

This thesis has several implications for recent group-based studies on social undermining and related behaviors (e.g., antisocial behavior and interpersonal aggression). First, this thesis provides a broader view into social influence among organizational members in their engagement in social undermining. Although the group-based studies on social undermining and related behaviors (e.g., Duffy et al., 2006; Glomb & Liao, 2003; Ferguson & Barry, 2008; Robinson & O'Leary-Kelly, 1998) are insightful in suggesting the impact of group influence on individuals' undermining behaviors, the studies excludes social influence that non-group-member peers may exert on individuals' undermining engagement and thus limit our understanding of this influence phenomenon within the workgroup boundary. I argue that the exclusive focus on the social context of workgroups can mask nuanced details about organization-wide interpersonal communications and interactions that underlie how social influence occurs among organizational members' undermining behaviors. Drawing on the network theory of social influence, I investigate network peer influence on individual undermining in a larger organizational landscape of social networks. The results of this thesis show that individuals, depending on their network positions and personality traits, are influenced by

95

peers in the informal structures of organizational friendship and communication networks. Therefore, this investigation of network peer influence captures the nuanced details about how organizational members interact and communicate beyond the formal workgroup settings. Not surprisingly, organizational researchers have increasingly broadened their views from the group settings to organizational social networks when they examine how organizational members develop shared or similar job-related affect (e.g., Totterdell, Wall, Holman, Diamond, & Epitropaki, 2004), judgments about task-related issues (e.g., Wong, 2008), and justice perception (e.g., Roberson & Colquitt, 2005).

Second, I investigate how situational characteristics of social networks and personal factors further condition the influence of network peer undermining on individual undermining. This thesis finds that individuals' network positions (network popularity and information embeddedness) and personality traits (self-monitoring and core self-evaluation) significantly moderate the network peer influence. Although the findings are not as I proposed, they do suggest that a better understanding of the network peer influence should integrate into investigation the situational and personal characteristics that may condition the extent to which network peers exert influence on individual undermining. In addition, these findings adds to the group-based studies (e.g., Duffy et al., 2006) by indicating that personality traits that capture high levels of individual sensitivity and susceptibility to social influence can condition the effect of peer influence on individual undermining; it also suggests that it is not just under *what* formal workgroup structures individuals work (e.g., task interdependence, Robison & O'Leary-

Kelly, 1998), but *where* individuals are positioned in organizational networks (i.e., network popularity and information embeddedness) affect the extent to which network peers exert influence. Therefore, examining situational and personal conditioning factors contribute to our better understanding of network peer influences in organizations.

Third, I articulate the specific influence mechanisms whereby individuals' social undermining is influenced by peers with whom the individuals have different models of structural (or interpersonal) proximity in the organizational networks (friendship and communication). This articulation casts valuable insight into the group-based studies on social undermining and related behaviors, which focuses on the *overall* group-level interactions to explain how group-level social undermining is related to individual members' undermining yet fails to consider that individuals respond differentially to social influence from different peers. In other words, while it is meaningful to examine overall group interactions in predicting shared agreement among group members (Wong, 2008), we need to better understand how different structural (relational or positional) arrangements and their corresponding influence mechanisms function in facilitating network peers to affect individuals' social undermining. The overall findings of this thesis reveal that the three network-based proximity mechanisms (direct contact, group cohesion, and structural equivalence), when examined separately or simultaneously, contribute to similarity on undermining among organizational members. Therefore, it is critical to explicate the three implicit social influences (direct contagion, normative influence, and adaption) whereby peer influence is transmitted to affect individuals' social undermining.

This thesis also has some implication for research on social networks. Although network research has been informative in identifying positive aspects of social networks in contributing to organizations' effective functioning and individuals' career success (e.g., Burt, 1992; Podolny & Baron, 1997), relatively less attention has been paid to the dark sides of social networks in hindering the success of organizations and their members. In this thesis, I investigate that social networks function as salient arenas where peers drive individuals to engage in social undermining. This investigation adds to the current few studies (e.g., Brass et al., 1998) that examine how organizational networks function as salient arenas in which organizational members influence one another's undesirable workplace behaviors, rather than the well-known desirable work-related attitudes (e.g., job satisfaction; Rice & Aydin, 1991) and behaviors (e.g., use of new technology; Burkhardt, 1994). The findings of this thesis show that organizational social networks play a significant role in driving organizational members to engage in undesirable workplace behaviors like social undermining. Clearly, this is an untended consequence for those organizations (e.g., Toyota) that actively encourage their employees to build organization-wide social networks intended for open and effective communication. Given that organizations may spend a great deal of time, efforts, and even money actively fostering social networks, this thesis highlights the necessity to understand the negative aspects of social networks beyond their well-known positive benefits. In other words, organizations need to understand how social networks function in fostering unwanted behaviors such as social undermining in the workplace if they want to reap beneficial effects yet curb untended consequences of social networks.

Limitations and Future Directions

This thesis also has several theoretical and methodological limitations and thus highlights future directions. Theoretically, first, this thesis focused how contextual and personal forces, respectively, condition the relationship between level of network peer undermining and individual undermining. It is possible that the structural characteristics of social networks (e.g., network positions) will interact with the personality traits (e.g., self-monitoring and core self-evaluation) to strengthen or weaken the influence of network peers on individual undermining. For example, individuals with different levels of self-monitoring are positioned differentially in organizational social networks (e.g., Kalish & Robins, 2006; Mehra et al., 2000). Given that high self-monitors, compared to low self-monitors, are better at taking advantaging of their network positions (Mehra et al., 2000), whether network positions provide opportunities for or constraints on peers to influence individuals' undermining engagement may be further contingent on the individuals' self-monitoring. Therefore, future studies can investigate how structural characteristics and personality traits work interactively to affect the extent to which network peers influence individuals' social undermining. This simultaneous investigation of both structural and personal characteristics indeed corresponds to the call for exploring how individual differences affect the likelihood that individuals utilize potential social network opportunities (e.g., Anderson, 2008).

Second, although this thesis simultaneously examined the functions of the two types of organizational networks—friendship and communication—as salient arenas in which network peers influence individuals' undermining engagement, it failed to theorize

the differentially prominent roles that these two types of organizational networks may have in facilitating the network peer influence. In this thesis, the more significant findings in the organizational friendship network suggest that this network, compared to the organizational communication network, may be more prominent in facilitating the flow of network peer influence. Given that close friends are more influential than communication peers and that undermining behaviors are undesirable in the workplace, it is likely that the organizational friendship network is more influential than the organizational communication network in driving the flow of network peer influence. Indeed, network researchers have called for research to understand the effects of characteristics of network types on organizational processes (Gibbsons, 2004). Therefore, future attempt can be made to theorize about the effects that different types of organizational networks have on the process by which network peers influence individuals' undermining engagement.

Third, this thesis follows Friedkin's (1998) description of "immediate network environment" and defines the unique set of peers in an individual's personal network as those whom the individual is directly or indirectly connected through one intermediary. This conceptualization is based on the assumption that both direct observation of peers' engagement in undermining and transmission of social information from intermediaries (i.e., indirect observation of peer undermining) are important in influencing individuals' social undermining. However, it has been suggested that behaviors of peers are more influential than informational cues about peer behaviors (Warr & Stafford, 1991). The finding about the non-significant effect that level of network peer undermining has on

individual undermining may indeed indicate that peer influences transmitted through intermediaries may not play role in influencing individuals' undermining engagement. Therefore, future research can narrow the conceptualization of "immediate network environment" and purely focus on direct-connected peers, whose behaviors can be easily observed directly.

Fourth, the prediction that the three network based-proximity influence mechanisms—direct contact, group cohesion, and structural equivalence—play differentially prominent roles in contributing to similarity on undermining among organizational members is based on the assumption that the social influence process—direct contagion, normative influence, and adaption—are equally strong or parallel in explaining network peer influence. The assumption is subjected to further testing in future studies and depends on the interests of investigation—behavior versus opinions. For example, the overall findings of this thesis reveal that direct contact mechanism is more prominent than group cohesion mechanism in contributing to similarity on undermining among individuals. Given that behaviors of peers is more influential than informational cues about peer behaviors (Warr & Stafford, 1991), it is likely that direct observation of peer undermining underlying the direct contact mechanisms is more powerful than the normative influence of peer undermining underlying the group cohesion mechanisms.

In terms of methodological limitations, first, the cross-sectional design of this thesis does not allow me to infer the causality between network peer undermining and individuals' social undermining. This thesis took the theoretical frameworks of traditional

social influence theories and focused on the direction from network peer undermining to individuals' undermining. Indeed, the group-based studies also suggest the opposite direction from individual member's deviant behavior to group-level deviant behavior, for example, one bad apple spoiling the whole barrel (Felps et al., 2006). Therefore, future studies should examine how these dynamic effects unfold over time via the longitudinal designs. Second, common method bias is concern given that respondents in both the employee and student samples report their engagement in social undermining and network relationships (friendship and communication)—the fundamental structural bases to measure the behavioral and structural characteristics of social networks as well as the network-based proximity mechanisms. However, this bias is reduced with the roster method to measure the network of social undermining interactions in which individuals' undermining engagement is nominated by their victims or targets. Third, the roster method of measuring the organizational friendship and communication networks means that only single-item measures are used. I tried to balance adequate measurement of key constructs and limiting factors such as questionnaire length and participant fatigue. Although network scholars argue that single-item measures are appropriate when the construct being measured is sufficiently unambiguous and when situational constraints limit the use of scales (e.g., Wanous, Reicher & Hudy, 1997), it is difficult to gauge the reliability of single-item measures and it is reasonable to question whether or not a single-item measure can adequately cover the construct space of the conceptual variables. Future research is needed to devise ways to measure constructs more precisely.

References

Anderson, M.H. (2008). Social networks and the cognitive motivation to realize network opportunities: A study of managers' information gathering behaviors. *Journal of Organizational Behavior*, 29, 51-78.

Aquino, K. & Douglas, S. (2003). Identity threat and antisocial behavior in organizations: The moderating effects of individual differences, aggressive modeling, and hierarchical status. *Organizational Behavior and Human Decision Processes*, 90, 195-208.

Aquino, K. & Lamertz, K. (2004). A relational model of workplace victimization: Social roles and patterns of victimization in dyadic relationships. *Journal of Applied Psychology*, 89, 1023-1034.

Aquino, K. & Thau, S. (2009). Workplace victimization: Aggression from the target's perspective. *Annual Review of Psychology*, 60, 717-741.

Agnew, R. (1991). The interactive effects of peer variables on delinquency. *Criminology*, 29, 47-72.

Baldwin, T.T, Bedell, M.D., & Johnson, J.L. (1997). The social fabric of a team-based MBA program: Network effects on student satisfaction and performance. *Academy of Management Journal*, 40, 1369-1397.

Barley, S.R. & Knight, D.B. (1991). Toward a cultural theory of stress complaints. In B. Staw and L.L. Cummings (Eds.), *Research in organizational behavior*, 14. Greenwich, CT: Jai Press.

Berscheid, E., Graziano, W.G., Monson, T., & Dermer, M. (1976). Outcome dependency: Attention, attribution, and attraction. *Journal of Personality and Social Psychology*, 34, 978-989.

Booth, J.E., Glomb, T.M., & Duffy, M.K. (2007). Primary and secondary appraisals of supervisor undermining: The role of subordinate core self-evaluations and general trust in management. Working Paper.

Borgatti, SP., Everett, M.G., & Freeman, L.C. (2002). UciNet for Windows: Software for Social Network Analysis. Harvard, MA: Analytical Technologies.

Bowling N.A. & Beehr, T.A. (2006). Workplace harassment from the victim's perspective: A theoretical model and meta-analysis. *Journal of Applied Psychology*, 91, 998-1012.

Brass, D.J., Butterfield, K.D., & Skaggs, B. (1998). Relationships and unethical behavior: A social network perspective. *Academy of Management Review*, 23, 14-31.

Brass, D.J. & Burkhardt, M.E. (1993). Potential power and power use: An investigation of structure and behavior. *Academy of Management Journal*, 36, 441-470.

Brockner, J. 1988. *Self-esteem at work*. Lexington, MA: Lexington.

Burkhardt, M.E., & Brass, D.J. (1990). Changing patterns or patterns of change: The effects of a change in technology on social network structure and power. *Administrative Science Quarterly*, 35, 104-127.

Burkhardt, M.E. (1994). Social interaction effects following a technological change: A longitudinal investigation. *Academy of Management Journal*, 37, 869-898.

Burt, R.S. (1976). Positions in networks. *Social Forces*, 55, 93-122.

Burt, R.S. (1980). Models of network structure. *Annual Review of Sociology*, 6, 79-141.

Burt, R.S. (1987). Social contagion and innovation: Cohesion versus structural equivalence. *American Journal of Sociology*, 92, 1287-1335.

Burt, R.S. (1992). *Structural holes*. Cambridge, MA: Harvard University Press.

Buunk, A.P., Brakel, T.M., Bennenbroek, F.T.C., Stiegelis, H.E., Sanderman, R., Van Den Bergh, A.C.M., & Hagedoorn, M. (2009). Neuroticism and responses to social comparison among cancer patients. *European Journal of Personality*, 23, 475-487.

Chan, D. (1998). Functional relations among constructs in the same content domain at different levels of analysis: A typology of composition models. *Journal of Applied Psychology*, 83, 234-246.

Coleman, J.R. (1990). Foundations of social theory. Cambridge, Mass: Harvard University Press.

Colquitt, J.A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology*, 86, 3, 386-400.

Degoey, P. (2000). Contagious Justice: Exploring the social construction of justice in organizations. *Research in Organizational Behavior*, 22, 51-102.

Dodge, K. (1991). The structure and function of reactive and proactive aggression. In D. Pepler and K. Rubin (Eds.), *The development and treatment of childhood aggression* (pp. 201-218). Hillsdale, NJ: Erlbaum.

Douglas, S.C. & Martinko, M.J. (2001). Exploring the role of individual differences in

    the prediction of workplace aggression. *Journal of Applied Psychology*, 86, 547-

    559.

Duffy, M.K., Ganster, D.C., & Pagon, M. (2002). Social undermining in the workplace.

    Academy of Management Journal, 45, 331-352.

Duffy, M.K., Shaw, J.D., Scott, K.L., & Tepper, B.J. (2006). The moderating roles of

    self-esteem and neuroticism in the relationship between group and individual

    undermining behavior. *Journal of Applied Psychology*, 91, 5, 1066-1077.

Duffy, M.K., Ganster, D.C., Shaw, J.D., Johnson, J.L., & Pagon, M. (2006). The social

    context of undermining behavior at work. *Organizational Behavior and Human*

    Decision Processes, 101, 105-126.

Duffy, M.K., Shaw, J.D., Fang, R., & Johnson, J.L. (2007). Multiple motives for

    undermining behaviors at work: A multilevel theory and test. Paper presented at

    the 2007 Society for Industrial and Organization Psychology conference, New

    York.

Dunlop, P.D. & Lee, K. (2004). Workplace deviance, organizational citizenship behavior,

    and business unit performance: The bad apples do spoil the whole barrel. *Journal*

    of Organizational Behavior, 25, 67-80.

Eder, D. (1985). The cycle of popularity: Interpersonal relations among female

    adolescents. *Sociology of Education*, 58, 154-165.

Ehrhart, M.G. & Naumann, S.E. (2004). Organizational citizenship behavior in work

    groups: A group norms approach. *Journal of Applied Psychology*, 89, 960-974.

Erickson, B.H. (1988). The relational basis of attitudes. In S. Berkovitz and B. Wellman (Eds.), *Social structure: A network approach* (pp. 99-121). New York: Cambridge University Press.

Fang, R. & Shaw, J.D. (2009). Self-monitoring, status, and justice-related information flow. *Journal of Occupational and Organizational Psychology*, 82, 405-430.

Fang, R. & Duffy, M.K. (2009). Protection from social undermining experiences? The role of social capital and core self-evaluations. Presented at 2009 Academy of Management Meeting, Chicago, Illinois.

Farmer, T.W. (2000). The social dynamics of aggressive and disruptive behavior in school: Implications for behavior consultation. *Journal of Educational and Psychological Consultation*, 11, 299-321

Feeley, T.H. & Barnett, G.A. 1997. Predicting individual turnover from communication networks. *Human Communication Research*, 23, 370-387.

Feeley, T.H., Hwang, J., & Barnett, G.A. 2008. Predicting individual turnover from friendship networks. *Journal of Applied Communication Research*, 36, 1, 56-73.

Felps, W., Mitchell, T.R., & Byington, E. (2006). How, when, and why bad apples spoil the barrel: Negative group members and dysfunctional groups. *Research in Organization behavior*, 27, 175-222.

Ferguson, M. & Barry, B. (2008). The muck stops here: How interpersonal deviance spreads within work groups. Paper presented at 2008 Academy of Management Meeting, Anaheim, California. Winner of CM Division Best Paper Award – New directions.

Ferrin, D.L., Dirks, K.T., & Shah, P.P. (2006). Direct and indirect effects of third-party relationships on interpersonal trust. *Journal of Applied Psychology*, 91, 870-883.

Freeman, L.C. (1979). Centrality in social networks: Conceptual clarification. *Social Networks*, 1, 215-239.

Friedkin, N.E. (1984). Structural cohesion and equivalence explanations of social homogeneity. *Sociological Methods and Research*, 12, 235-261.

Friedkin, N.E. (1998). A structural Theory of Social Influence. Cambridge, Mass: Harvard University Press.

Furnham, A. & Capon, M. (1983). Social skills and self-monitoring processes. *Personality and Individual Differences*, 3, 311-320.

Gangestad, S.W. & Snyder, M. (2000). Self-monitoring: Appraisal and reappraisal. *Psychological Bulletin*, 126, 530-555.

Gargiulo, M. & Benassi, M. (2000). Trapped in your own net? Network cohesion structural holes, and the adaptation of social capital. *Organization Science*, 11, 183-196.

Gibbons, D.E. (2004). Friendship and advice networks in the context of changing professional values. *Administrative Science Quarterly*, 49, 238-262.

Glomb, T.M. & Liao, H. (2003). Interpersonal aggression in work groups: Social influence, reciprocal, and individual effects. *Academy of Management Journal*, 46, 486-496.

Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology*, 81, 1287-1303.

Granovetter, M. (1985). Economic action and social structure: The problem of

    embeddedness. *American Journal of Sociology*, 91, 481-510.

Grant, A.M. & Parker, S.K. (2009). Redesigning work design theories: The rise of

    relational and proactive perspectives. *Academy of Management Annals*, 3, 273-

    331.

Hartman, R.L. & Johhson, J.D. (1989). Social contagion and multiplexity:

    Communication networks as predictors of commitment and role ambiguity.

    Human Communication Research, 15, 523-548.

Haynie, D.L. (2001). Delinquent peers revisited: Does network structure matter?

    American Journal of Sociology, 106, 1013-1057.

Ickes, W.J., Reidhead, S., & Patterson, M. (1985). Machiavellianism and self-monitoring:

    As different as "me" and "you". Unpublished manuscript, University of Texas at

    Arlington and University of Missouri, St. Louis.

Ibarra, H. & Andrews, S.B. (1993). Power, social influence, and sense making: Effects of

    network centrality and proximity on individual perceptions. *Administrative*

    Science Quarterly, 38, 277-303.

Johanson, J.E. (2000). Intraorganizational influence: Theoretical clarification and

    empirical assessment of intraorganizational social influence. *Management*

    Communication Quarterly, 13, 393-425.

Judge, T.A., Erez, A., & Bono, J.E. (1998). The power of being positive: The relation

    between positive self-concept and job performance. *Human Performance*, 11,

    167-188.

Judge T.A., Erez, A., Bono, J.E., & Thoresen, C.J. (2003). The core self-evaluation scale: Development of a measure. *Personnel Psychology*, 56, 303-331.

Judge, T.A. & Hurst, C. (2007). Capitalizing on one's advantages: Role of core self-evaluation. *Journal of Applied Psychology*, 92, 1212-1227.

Judge, T.A., Van Vianen, A.E.M., & De Pater, I.E. (2004). Emotional stability, core self-evaluations, and job outcomes: A review of the evidence and an agenda for future research. *Human Performance*, 17, 325-346.

Kalish, Y. & Robins, G. (2006). Psychological predispositions and network structure: The relationship between individual predispositions, structural holes and network closure. *Social Networks*, 28, 56-84.

Kammeyer-Muller, J.D., Judge, T.A., & Scott, B.A. (2009). The role of core self-evaluations in the coping processing: Testing an integrative model. *Journal of Applied Psychology*, 94, 177-195.

Krackhardt, D. (1990). Assessing the political landscape: Structure cognition, and power in organizations. *Administrative Science Quarterly*, 35, 241-369.

Krackhardt, D. & Porter, L.W. (1986). The snowball effect: Turnover embedded in communication networks. *Journal of Applied Psychology*, 71, 50-55.

Krackhardt, D. & Hanson, J.R. (1993). Informal networks: The company. *Harvard Business Review (July-August)*, 104-111.

Leenders, R. Th.A.J. (2002). Modeling social influence through network autocorrelation: Constructing the weight matrix. *Social Networks*, 24, 21-47.

Lennox, R.D. & Wolfe, R.N. (1984). Revision of the self-monitoring scale. *Journal of Personality and Social Psychology*, 46, 1349-1364.

Marsden, P.V. (1990). Network data and measurement. *Annual Review of Sociology*, 16, 435-463.

Marsden, P.V. & Andrews, S.B. (1991). Network sampling and the network effects model. Unpublished manuscript, Harvard University.

Marsden, P.V. & Friedkin, N.E. (1994). Network studies of social influence. In S. Wasserman and J. Galaskienicz (Eds.), *Advances in social network analysis*, 22 (pp. 3-25). Sage, Thousand Oaks, CA

Mehra, A., Kilduff, M., & Brass, D.J. (2001). The social networks of high and low self-monitors: Implications for workplace performance. *Administrative Science Quarterly*, 46, 121-149.

Meyer, G.W. (1994). Social information processing and social networks: a test of social influence mechanisms. *Human Relations*, 47, 1013-1047.

Miller, K.I. & Monge, P.R. (1985). Social information and individual anxiety about organizational change. *Human Communication Research*, 11, 365-386.

Monge, P.R. & Contractor, N.S. (2003). Theories of communication networks. Oxford NY: Oxford University Press.

Moorman, R.H. (1991). Relationship between organizational justice and organizational citizenship behavior: Do fairness perceptions influence employee citizenship? *Journal of Applied Psychology*, 76, 845-855.

Moscovi, S. (1976). *Social influence and social change*. London: Academic Press.

O'Leary, C.A. III & Caldwell, D.F. (1985). The impact of normative social influence and cohesiveness on task perceptions and attitudes: A social information processing approach. *Journal of Occupational Psychology*, 58, 193-206.

O'Leary-Kelly, A.M., Griffin, R.W., & Glew, D.J. (1996). Organization-motivated aggression: A research framework. *Academy of Management Review*, 21, 225-253.

Podolny, J.M. & Baron, J.N. (1997). Resources and relationships: Social networks and mobility in the workplace. *American Sociological Review*, 62, 673-693.

Pollock, T.G., Whitbred, R.C., & Contractor, N. (2000). Social information processing and job characteristics: A simultaneous test of two theories with implications for job satisfaction. *Human Communication Research*, 26, 292-330.

Rice, R.E. (1993). Using social network concepts to clarify sources and mechanisms of social influence. In W. Richards and G. Barnett (Eds.), Progress in Communication Science Vol. XII (pp. 43-61). Norwood, NJ: Ablex.

Rice, R.E. & Aydin, C. (1991). Attitudes towards new organizational technology: Network proximity as a mechanism for social influence processing. *Administrative Science Quarterly*, 36, 219-224.

Roberson, Q.M., & Colquitt, J.A. 2005. Shared and configural justice: A social network model of justice in teams. *Academy of Management Review*, 30, 595-607.

Robinson, S.L. & O'Leary-Kelly, A.M. (1998). Monkey see, monkey do: The influence of work groups on the antisocial behavior of individuals. *Academy of Management Journal*, 41, 658-672.

Salancik, G.R. & Pfeffer, J. (1978). A social information processing approach to job

    attitudes and task design. *Administrative Science Quarterly*, 23, 224-253.

Salmivalli, C. (2001). Feeling good about oneself, being bad to others? Remarks on self-

    esteem, hostility, and aggressive behavior. *Aggression and Violent Behavior*, 6,

    375-393.

Schaubroeck J. & Lam, S.S.K. (2004). Comparing lots before and after: Promotion

    rejectees' invidious reactions to promotees. *Organizational Behavior and Human*

    Decision Processes, 94, 33-47.

Scott, B.A. & Judge, T.A. (2009). The popularity contest at work: Who wins, why, and

    what do they receive? *Journal of Applied Psychology*, 94, 1, 20-33.

Scott, J. (2000). *Social network analysis: A handbook* . London: Sage.

Shah, P.P. (1998). Who are individuals' social referents? Using a network perspective to

    determine referent others. *Academy of Management Journal*, 41, 249-268.

Shaw, J.D., Duffy, M.K., Jenkins, G.D., & Gupta, N. (1999). Positive and negative affect,

    signal sensitivity, and pay satisfaction. *Journal of Management*, 25, 189-206.

Skarlicki, D.P. & Folger, R. (1997). Retaliation in the workplace: The roles of

    distributive, procedural, and interactional justice. *Journal of Applied Psychology*,

    82, 434-443.

Steers, R.M. & Braunstein, D.N. (1976). A behaviorally-based measure of manifest needs

    in work settings. *Journal of Vocational Behavior*, 9, 251-266.

Stephenson, K. & Zelen, M. (1989). Rethinking centrality. *Social Networks*, 11, 1-37.

Snyder, M. 1987. *Public appearance public realities: the psychology of self-monitoring*. Freeman, NY.

Snyder, M. & Gangestad, S. (1986). On the nature of self-monitoring: Matters of assessment, matters of validity. *Journal of Personality and Social Psychology*, 51, 125-139.

Takeuchi, H., Osono, E., & Shimizu, N. (2008). The contradictions that drive Toyota's success. *Harvard Business Review (June)*, 96-104.

Taylor, S.E. (1991). Asymmetrical effects of positive and negative events: The mobilization-minimization hypothesis. *Psychological Bulletin*, 110, 67-85.

Totterdell, P., Wall, T., Holman, D., Diamond, H., & Epitropaki, O. (2004). Affect networks: A structural analysis of the relationship between work ties and job-related affect. *Journal of Applied Psychology*, 89, 845-867.

Venkataramani, V. & Dalal, R.S. (2007). Who helps and harms whom? Relational antecedents or interpersonal helping and harming in organizations. *Journal of Applied Psychology*, 92, 952-966.

Wanous, J.P., Reichers, A.E., & Hudy, M.J. (1997). Overall job satisfaction: How good are single-item measures? *Journal of Applied Psychology*, 82, 247-252.

Warr, M. & Stafford, M.C. (1991). The influence of delinquent peers: What they think or what they do? *Criminology*, 29, 851-866.

Wasserman, S. & Faust, K. (1994). *Social network analysis: Methods and applications*. Cambridge University Press.

Watson, D., Clark, L.A., & Tellegen, A. (1988). Development and validation of brief

    measures of positive and negative affect: The PANAS scales. *Journal of*

    Personality and Social Psychology, 54, 1063-1070.

Wellman, B. 1983. Network analysis: Some basic principles. In R. Colins (Ed.),

    Sociological theory (pp. 155-200). San Francisco: Jossey-Bass.

Weiss, H.M. & Nowicki, C.E. (1981). Social influences on task satisfaction: Model

    competence and observer field dependence. *Organizational Behavior and Human*

    Performance, 27, 345-366.

Weiss, H.M. & Shaw, J.B. (1979). Social influences on judgments about tasks.

    Organizational Behavior and Human Performance, 24, 126-140.

White, S.E. & Mitchell, T.E. (1979). Job enrichment versus social cues: A comparison

    and competitive test. *Journal of Applied Psychology*, 64, 1-9.

Wong, S. (2008). Judgments about knowledge importance: The roles of social referents

    and network structure. *Human Relations*, 61, 1565-1591.

TABLE 1: Descriptive Statistics and Correlations (Employee Sample)

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12
1. Organization	.46	.50												
2. Gender	.46	.50	-.18											
3. Age	30.11	7.37	.07	-.01										
4. Tenure	32.22	28.99	-.18	.19	.43**									
5. Negative Affectivity	1.95	.46	.04	-.07	.02	.05								
6. Supervisor IJ	3.28	.77	-.12	.11	-.20*	-.06	-.15							
7. Coworker IJ	3.60	.66	-.19	-.12	-.19*	.03	-.19	.60**						
8. Need for Power	3.76	.76	.20*	-.07	.27**	.05	-.04	.04	.06					
9. Need for Affiliation	4.46	.61	-.05	-.02	-.15	-.05	-.19*	.20*	.17	.04				
10. Core Self-evaluation	4.80	.77	.17	.08	.13	.11	-.48**	.15	.17	.32**	.14			
11. Self-monitoring	4.92	.81	.13	.00	.10	.13	-.35**	.16	.30**	.22*	.28**	.54**		
12. FR Network Popularity	9.53	4.21	-.51**	.23*	-.30**	.23*	.08	.22*	.32**	-.11	.11	-.05	-.05	
13. FR Information Embeddeness	5.85	2.04	-.73**	.15	-.13	.24*	.00	.16	.25**	-.18	.13	-.11	-.11	.71**
14. FR Network Density	.29	.168	.16	.10	-.03	-.13	.07	-.15	-.22*	-.25*	-.08	-.13	-.21	-.26*
15. Level of FR Peer UMS	1.99	.22	.79**	-.29**	.01	-.20	.03	-.10	-.06	.37**	-.02	.18	.17	-.39**
16. Level of FR Peer UMI	7.36	1.09	-.13	.28**	.15	.15	.09	-.17	-.19	.11	-.09	-.02	.00	.08
17. Inconsistency of FR Peer UMS	.29	.21	-.22*	.03	-.22*	.00	-.20*	.26**	.28**	-.20*	.11	.11	.12	.28**
18. Inconsistency of FR Peer UMI	8.14	5.37	-.03	.30**	-.12	.06	-.11	.02	.03	-.22*	.01	.01	-.09	.29**
19. CO Network Popularity	12.87	4.56	-.46**	.28**	-.24*	.18	.11	.23*	.26**	-.01	.06	-.12	-.10	.76**
20. CO Information Embeddedness	8.57	2.49	-.64**	.17	-.15	.19*	-.15	.28**	.42**	.13	.28**	.13	.16	.57**
21. CO Network Density	.28	.13	.13	-.09	.21	.01	.15	-.27*	-.41**	-.12	-.08	-.18	-.23*	-.20
22. Level of CO Peer UMS	1.98	.16	.80**	-.24*	.17	-.08	.04	-.14	-.10	.19	-.01	.15	.18	-.44**
23. Level of CO Peer UMI	7.39	.54	.04	.06	.14	.04	.09	-.33**	-.24*	.00	-.19	-.02	-.04	.12
24. Inconsistency of CO Peer UMS	.25	.13	-.37**	.06	-.19	-.04	-.21*	.31**	.26**	-.14	.12	.07	.05	.27**
25. Inconsistency of CO Peer UMI	10.95	5.20	-.21*	.11	-.09	.13	-.04	.13	.01	.01	.06	.04	.07	.17
26. Self-rated Undermining (UMS)	2.02	.56	.24*	-.15	.05	-.01	.37**	-.17	-.14	.12	-.09	-.04	-.20*	-.15
27. Peer-rated Undermining (UMI)	7.57	3.31	-.04	.11	.32**	.35**	-.08	-.09	-.06	.27**	.01	.08	.10	-.07

TABLE 1: Descriptive Statistics and Correlations (Employee Sample) (Continued)

	13	14	15	16	17	18	19	20	21	22	23	24	25	26
13. FR Information Embeddeness														
14. FR Network Density	-.91**													
15. Level of FR Peer UMS	.13	-.01												
16. Level of FR Peer UMI	-.12	-.21*	.02											
17. Inconsistency of FR Peer UMS	.66**	.12	-.13	-.47**										
18. Inconsistency of FR Peer UMI	.74**	.29**	-.03	.24*	.44**									
19. CO Network Popularity	.39**	-.22*	-.35**	.09	.13	.20*								
20. CO Information Embeddedness	.63**	-.31**	-.44**	.02	.26*	.27*	.56**							
21. CO Network Density	-.30	.38**	.11	-.08	-.08	-.13	-.15	-.79**						
22. Level of CO Peer UMS	-.05	.22	.79**	-.06	.01	.04	-.41**	-.60**	.37**					
23. Level of CO Peer UMI	-.05	.02	-.01	.38**	-.24*	.14	.01	.00	-.12	-.10				
24. Inconsistency of CO Peer UMS	.40**	-.02	-.25*	-.14	.62**	.31**	.24*	.35**	.01	-.09	-.24*			
25. Inconsistency of CO Peer UMI	.25	.07	-.10	-.18	.33**	.18	.12	.43**	.21*	.09	.18	.53**		
26. Self-rated Undermining (UMS)	.14	.10	.17	-.07	-.10	-.05	-.10	-.08	.26*	.23*	-.06	-.21*	-.07	
27. Peer-rated Undermining (UMI)	-.18	-.04	-.10	.19	-.21*	-.02	.13	-.19	-.08	-.05	-.10	-.15	-.08	.08

Notes: FR = Friendship Network, CO = Communication Network, UMS = Self-rated Undermining, UMI = Peer-rated Undermining; N = 109; * p<.05, ** p<.01

TABLE 1-1A: Hierarchical Regressions for Self-rated Undermining (UMS) in Friendship Network (Employee Sample)

	Main-Effect		SET 1		SET 2		SET 3		SET 4	
	1	2	3	4	5	6	7	8	9	10
Controls										
Organization	$.30^*$	$.38^*$	$.45^*$	$.46^*$	.37	$.47^*$	.30	.30	.37	.38
Tenure	.00	.00	.00	.00	.00	.00	.00	-.00	.00	-.00
Negative Affectivity	$.38^{**}$	$.38^{**}$	$.36^{**}$	$.36^{**}$	$.39^{**}$	$.41^{**}$	$.41^{**}$	$.39^{**}$	$.41^{**}$	$.38^*$
Need for Power	.01	.04	.02	.02	.05	.09	.01	.04	-.01	.02
Independent Variables										
Level of Peer UMS (LUMS)		-.33	-.52	-.54	-.31	1.10	-.14	-.14	-.31	-.32
Inconsistency of Peer UMS (IUMS)			-.29	-.25					-.17	-.08
Network Density (NetD)					.09	-.30				
Network Popularity (NetP)					-.02	-.02				
Information Embeddedness (InfoE)					.03	-.02				
Self-monitoring (SM)							$-.19^*$	$-.15^*$	$-.17^*$	-.15
Core Self-evaluation (CSE)							$.17^*$	.12	$.17^*$	.12
Interactions										
SET 1 – LUMS * IUMS				-.57						
SET 2 – LUMS * NetD						.49				
LUMS * NetP						.10				
LUMS * InfoE						-.54				
SET 3 – LUMS * SM								.53		
LUMS * CSE								-.74		
SET 4 – LUMS * IUMS										-.39
LUMS * SM										.53
LUMS * CSE										-.71
Total R^2	$.19^{**}$	$.20^{**}$	$.21^{**}$	$.21^*$	$.21^*$	$.27^*$	$.26^{**}$	$.28^{**}$	$.26^{**}$	$.28^{**}$
ΔR^2		.01	.01	.00	.01	.06	$.06^*$	.02	.06	.02

Notes: Unstandardized coefficients are reported; N = 109; * p<.05, ** p<.01, *** p<.001

TABLE 1-1B: Hierarchical Regressions for Peer-rated Undermining (UMI) in Friendship Network (Employee Sample)

	Main-Effect		SET 1		SET 2		SET 3		SET 4	
	1	2	3	4	5	6	7	8	9	10
Controls										
Organization	-.27	-.41	-.16	-.51	-2.08*	-1.87	-.22	-.22	-.09	-.46
Tenure	.04***	.04**	.04**	.04**	.05***	.05***	.04***	.04**	.04***	.04**
Negative Affectivity	-.54	-.53	-.55	-.68	-.28	-.32	-1.27	-1.44*	-1.26	-1.68*
Need for Power	.63	.83*	.65	.63	.88*	.80	1.10*	1.22*	.92	.95*
Independent Variables										
Level of Peer UMI (LUMI)		.32	.16	.19	.12	-1.87	.31	.48	.16	.55
Inconsistency of Peer UMI (IUMI)			.04	.02					.00	-.14
Network Density (NetD)					.10	.12				
Network Popularity (NetP)					-.07	-.15				
Information Embeddedness (InfoE)					-.48	-.25				
Self-monitoring (SM)							-.26	.32	-.23	.30
Core Self-evaluation (CSE)							-.77	-1.36	-.74	-1.48*
Interactions										
SET 1 – LUMI * IUMI				-.11						
SET 2 – LUMI * NetD						-.56				
LUMI * NetP						-.20				
LUMI * InfoE						.53†				
SET 3 – LUMI * SM								1.69**		
LUMI * CSE								-1.68*		
SET 4 – LUMI * IUMI										-.03
LUMI * SM										1.94**
LUMI * CSE										-2.05*
Total R²	.18**	.19*	.19*	.19*	.25**	.29**	.24**	.32***	.21**	.31**
ΔR²		.01	.00	.00	.06	.04†	.05	.08*	.02	.10*

Notes: Unstandardized coefficients are reported; N = 109; † p<.10, * p<.05, ** p<.01, *** p<.001

TABLE 1-2A: Hierarchical Regressions for Self-rated Undermining (UMS) in Communication Network (Employee Sample)

	Main-Effect		SET 1		SET 2		SET 3		SET 4	
	1	2	3	4	5	6	7	8	9	10
Controls										
Organization	$.22^*$	.08	.17	.04	.17	.15	.07	.05	.21	.12
Tenure	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Negative Affectivity	$.41^{**}$	$.41^{**}$	$.41^{**}$	$.44^{**}$	$.37^{**}$	$.38^{**}$	$.44^{**}$	$.42^*$	$.44^{**}$	$.42^{**}$
Need for Power	.04	.04	.04	.05	.06	.06	.03	.06	.03	.07
Independent Variables										
Level of Peer UMS (LUMS)		.57	.47	1.03	.05	.10	.58	.71	.46	.97
Inconsistency of Peer UMS (IUMS)			.57	.35					.82	.87
Network Density (NetD)					.81	.76				
Network Popularity (NetP)					.00	.00				
Information Embeddedness (InfoE)					-.00	.00				
Self-monitoring (SM)							-.07	-.02	-.09	-.02
Core Self-evaluation (CSE)							.09	.04	.10	.02
Interactions										
SET 1 – LUMS * IUMS				10.93*						
SET 2 – LUMS * NetD						.38				
LUMS * NetP						-.04				
LUMS * InfoE						.09				
SET 3 – LUMS * SM								.74		
LUMS * CSE								-.88		
SET 4 – LUMS * IUMS										8.97
LUMS * SM										.58
LUMS * CSE										-.91
Total R^2	$.18^{**}$	$.18^{**}$	$.19^*$	$.22^{**}$	$.21^*$	$.21^*$	$.20^*$	$.21^*$	$.21^*$	$.25^*$
ΔR^2		.00	.01	$.03^*$	.03	.03	.02	.01	.03	.04

Notes: Unstandardized coefficients are reported; N = 109; * p<.05, ** p<.01, *** p<.001

120

TABLE 1-2B: Hierarchical Regressions for Peer-rated Undermining (UMI) in Communication Network (Employee Sample)

	Main-Effect		SET 1		SET 2		SET 3		SET 4	
	1	2	3	4	5	6	7	8	9	10
Controls										
Organization	-.13	-.10	.16	.26	.72	.62	-.08	-.04	.17	.18
Tenure	.04***	.04***	.04***	.04***	.04***	.04***	.04***	.04***	.04***	.04***
Negative Affectivity	-.72	-.66	-.80	-.80	-.68	-.53	-.79	-.83	-.91	-.93
Need for Power	1.36**	1.35**	1.36**	1.36**	1.20**	1.12**	1.38**	1.11*	1.39**	1.17**
Independent Variables										
Level of Peer UMI (LUMI)		-.62	-.78	-.78	-.61	-1.00	-.61	-.59	-.77	-.63
Inconsistency of Peer UMI (IUMI)			.14	.14					.13	.05
Network Density (NetD)					.42	.68				
Network Popularity (NetP)					.07	.02				
Information Embeddedness (InfoE)					.16	.16				
Self-monitoring (SM)							.13	.27	.07	.27
Core Self-evaluation (CSE)							-.27	-.71	-.19	-.65
Interactions										
SET 1 – LUMI * IUMI				.10						
SET 2 – LUMI * NetD						1.72				
LUMI * NetP						.41†				
LUMI * InfoE						-.48				
SET 3 – LUMI * SM								-.39		
LUMI * CSE								-1.49		
SET 4 – LUMI * IUMI										.05
LUMI * SM										-.18
LUMI * CSE										-1.36
Total R^2	.30***	.31***	.33***	.33***	.32***	.36***	.31***	.35***	.33***	.36***
ΔR^2		.01	.02	.00	.01	.04†	.00	.04	.02	.03

Notes: Unstandardized coefficients are reported. N = 109; † $p<.10$, * $p<.05$, ** $p<.01$, *** $p<.001$

TABLE 1-3A: Quadratic Assignment Procedure (QAP) Correlations for the Employee Sample in CH-Unit

	1	2	3	4	5	6	7	8	9	10
1. Tenure										
2. Negative Affectivity	.10									
3. Need for Power	-.05	-.02								
4. FR Direct Contact	-.05	.06	-.11**							
5. FR Group Cohesion	-.11*	.03	-.11*	.41***						
6. FR Structural Equivalence	-.09*	-.02	-.02	.20***	.21***					
7. CO Direct Contact	.06	.01	-.03	.54***	.26***	.24***				
8. CO Group Cohesion	-.02	-.06	-.05	.23***	.32***	.15**	.38***			
9. CO Structural Equivalence	-.05	.07	-.03	.04	.08*	.25***	-.06	.00		
10. Dissimilarity on Undermining (Self-rated)	.15*	.33***	-.12*	.09*	.02	-.06	.01	-.06	.06	
11. Dissimilarity on Undermining (Peer-rated)	-.10*	.00	.09	-.05	.00	-.04	-.04	.03	-.12*	-.04

Notes: FR = Friendship Network, CO = Communication Network; N = 50; * p<.05, ** p<.01, *** p<.001

TABLE 1-3B: Quadratic Assignment Procedure (QAP) Correlations for the Employee Sample in LF-Unit

	1	2	3	4	5	6	7	8	9	10
1. Tenure										
2. Negative Affectivity	-.03									
3. Need for Power	.08	-.02								
4. FR Direct Contact	-.09*	.04	-.08*							
5. FR Group Cohesion	-.05	.03	-.13**	.36***						
6. FR Structural Equivalence	-.10*	.06*	-.09*	.32***	.09*					
7. CO Direct Contact	-.09*	-.00	.04	.44***	.14**	.28***				
8. CO Group Cohesion	-.03	-.03	.11	.10*	.16*	.02	.38***			
9. CO Structural Equivalence	.01	.04	-.06	.07*	.03	.17***	-.09*	.03		
10. Dissimilarity on Undermining (Self-rated)	.07	.06	-.04	-.02	.01	.06*	-.03	.00	.04	
11. Dissimilarity on Undermining (Peer-rated)	.19*	-.02	.11*	-.12**	-.12**	-.17**	-.06	-.04	-.04	.18*

Notes: FR = Friendship Network, CO = Communication Network; N = 59; * p<.05, ** p<.01, *** p<.001

TABLE 1-4A: QAP Multiple Regressions for Dissimilarity on Undermining (Self-rated and Peer-rated) in Both Networks (CH-Unit)

	Dissimilarity on Undermining (Self-rated)					Dissimilarity on Undermining (Peer-rated)				
	1	2	3	4	5	1	2	3	4	5
FRIENDSHIP NETWORK										
Controls										
Tenure	.00	.00	.00	.00	.00	-.00	-.01*	-.01*	-.01*	-.00
Negative Affectivity	.32***	.32***	.32***	.32***	.31***	.08	.10	.08	.08	.09
Need for Power	-.07	-.06†	-.07†	-.07†	-.06	.32	.30	.32	.32	.31
Network-based Proximity Mechanisms										
Direct Contact		.03			.04		-.15†			-.16†
Group Cohesion			.00		-.00			.00		.05
Structural Equivalence				-.09	-.13				-.64	-.58
R^2	.13***	.14***	.13***	.13***	.14***	.01*	.02*	.02*	.02*	.02*
COMMUNICATION NETWORK										
Controls										
Tenure	.00	.00	.00	.00	.00	-.00	-.01	-.01	-.01	-.01*
Negative Affectivity	.32***	.32***	.32***	.32***	.31**	.08	.08	.09	.13	.15
Need for Power	-.07	-.07	.-.07	-.07	-.07	.32	.32	.33	.31	.31
Network-based Proximity Mechanisms										
Direct Contact		-.00			.01		-.06			-.12†
Group Cohesion			-.00		-.01			.02		.03
Structural Equivalence				.08	.08				-1.41*	-1.46*
R^2	.13***	.13***	.13***	.13***	.14***	.01*	.02*	.02*	.03**	.03**

Notes: Unstandardized coefficients are reported; N =50; † p<.10, * p<.05, ** p<.01, *** p<.001

TABLE 1-4B: QAP Multiple Regressions for Dissimilarity on Undermining (Self-rated and Peer-rated) in Both Networks (LF-Unit)

	Dissimilarity on Undermining (Self-rated)					Dissimilarity on Undermining (Peer-rated)				
	1	2	3	4	5	1	2	3	4	5
FRIENDSHIP NETWORK										
Controls										
Tenure	.00	.00	.00	.00	.00	.02*	.02*	.02*	.02*	.02*
Negative Affectivity	.08	.08	.08	.08	.08	-.13	-.11	-.11	-.06	-.04
Need for Power	-.03	-.03	-.03	-.03	-.03	.48†	.45†	.42	.43	.37
Network-based Proximity Mechanisms										
Direct Contact		-.01			-.02	-.33*				-.10
Group Cohesion			.00		.00			-.03*		-.03
Structural Equivalence				.17*	.20*				-2.80**	-2.52**
R²	.01*	.01*	.01*	.01*	.02*	.04*	.05**	.05**	.07**	.07***
COMMUNICATION NETWORK										
Controls										
Tenure	.00	.00	.00	.00	.00	.02*	.02*	.02*	.02*	.02*
Negative Affectivity	.08	.08	.08	.08	.08	-.13	-.14	-.14	-.12	-.13
Need for Power	-.03	-.03	-.03	-.03	-.03	.48†	.49†	.51†	.47†	.49†
Network-based Proximity Mechanisms										
Direct Contact		-.01			-.01	-.13†				-.12†
Group Cohesion			.00		.00			-.01		-.01
Structural Equivalence				.07	.06				-.60	-.65
R²	.01*	.01*	.01*	.01	.01	.04*	.05*	.05*	.05*	.05**

Notes: Unstandardized coefficients are reported; N = 59; † p<.10, * p<.05, ** p<.01, *** p<.001

TABLE 2: Descriptive Statistics and Correlations (Student Sample)

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. Cohort	.55	.50											
2. Gender	.71	.45	-.03										
3. Age	25.08	5.23	-.11	.03									
4. Negative Affectivity	2.28	.62	.13	.09	-.37**								
5. Supervisor IJ	3.83	.72	.13	.02	.06	-.03							
6. Coworker IJ	4.05	.71	.02	-.05	.08	-.08	.64**						
7. Need for Power	4.65	.80	.12	-.04	.03	-.03	.01	.07					
8. Need for Affiliation	4.36	.59	.12	.03	.07	.04	.28**	.25*	.20*				
9. Core Self-evaluation	5.06	.81	.04	-.14	.16	-.37**	.13	.06	.35**	.19			
10. Self-monitoring	3.99	.39	.04	-.14	-.02	-.06	.20*	.23*	.48**	.19	.38**		
11. FR Network Popularity	7.47	4.77	-.06	-.01	-.04	-.13	.11	.25*	.10	.12	.21*	.22*	
12. FR Information Embeddedness	1.57	0.48	-.56**	.14	.10	-.22*	-.09	.06	.01	.10	.09	.05	.63**
13. FR Network Density	.35	.19	-.03	.04	.06	-.00	-.22*	-.12	-.16	-.05	-.29**	-.10	-.40**
14. Level of FR Peer UMS	1.48	.13	-.51**	-.09	-.11	-.05	-.15	-.01	-.07	-.04	-.01	.15	.28**
15. Level of FR Peer UMI	3.11	.77	-.69**	-.05	.11	-.10	-.04	-.05	-.11	-.03	-.10	-.11	-.02
16. Inconsistency of FR Peer UMS	.20	.15	-.46**	-.13	.07	-.08	-.11	-.03	-.10	.00	.06	.12	.11
17. Inconsistency of FR Peer UMI	3.72	2.67	.09	-.11	-.10	.06	.10	-.07	.08	.15	.19	.23*	.27**
18. CO Network Popularity	7.60	5.58	.63**	-.05	-.09	-.03	.23*	.20*	.14	.22*	.14	.12	.57**
19. CO Information Embeddedness	5.87	5.12	.96**	-.06	-.12	.05	.12	.02	.16	.15	.09	.07	.06
20. CO Network Density	.37	.14	.08	.09	.06	.22*	-.09	-.10	-.12	-.24*	-.13	-.11	-.30**
21. Level of CO Peer UMS	1.47	.12	-.46**	.04	.01	-.10	-.15	-.05	-.08	.02	.18	.11	.05
22. Level of CO Peer UMI	3.14	.80	-.84**	-.01	.08	-.12	-.08	.07	-.16	-.04	-.15	-.14	.11
23. Inconsistency of CO Peer UMS	.20	.24	-.32**	-.12	.08	.00	-.16	-.04	-.11	.05	.05	.03	-.02
24. Inconsistency of CO Peer UMI	3.14	.80	.08	-.07	-.09	.17	-.03	.03	.15	.15	.22*	.20	.10
25. Self-rated Undermining (UMS)	1.50	.50	-.18	-.31**	-.03	.02	-.15	-.11	.21*	.01	.10	.11	.05
26. Peer-rated Undermining (UMI)	3.15	2.51	-.21*	-.20*	.05	-.21*	-.19	-.10	.18	-.06	.24*	.02	.01

TABLE 2: Descriptive Statistics and Correlations (Student Sample) (Continued)

	12	13	14	15	16	17	18	19	20	21	22	23	24	25
12. FR Information Embeddeness														
13. FR Network Density	-.22*													
14. Level of FR Peer UMS	.60**	-.19												
15. Level of FR Peer UMI	.49**	.05	.45**											
16. Inconsistency of FR Peer UMS	.44**	-.15	.77**	.45**										
17. Inconsistency of FR Peer UMI	.19	-.23*	.31**	.30**	.16									
18. CO Network Popularity	.01	-.25*	-.17	-.43**	-.24*	.21*								
19. CO Information Embeddedness	-.43**	-.06	-.44**	-.68**	-.42**	.14	.75**							
20. CO Network Density	-.28**	.35**	-.08	.05	-.02	-.13	-.25*	-.06						
21. Level of CO Peer UMS	.37**	.14	.39**	.28**	.50**	-.03	-.29**	-.43**	.12					
22. Level of CO Peer UMI	.59**	.03	.40**	.71**	.49**	-.07	-.53**	-.83**	-.07	.27**				
23. Inconsistency of CO Peer UMS	.21*	.19	.35**	.33**	.73**	.05	-.22*	-.30**	.01	.72**	.37**			
24. Inconsistency of CO Peer UMI	.01	.02	-.06	-.01	.11	.33**	.05	.11	-.08	.01	.16	.18		
25. Self-rated Undermining (UMS)	.20*	.19	.09	.26**	.10	.08	-.04	-.10	.08	.16	.10	.19	.02	
26. Peer-rated Undermining (UMI)	.11	-.03	.23*	.19	.16	.01	-.07	-.12	-.11	.03	.06	.05	-.13	.36**

Note: FR = Friendship Network, CO = Communication Network, UMS = Self-rated Undermining, UMI = Peer-rated Undermining;
    N = 108; * p<.05; ** p<.01

TABLE 2-1A: Hierarchical Regressions for Self-rated Undermining (UMS) in Friendship Network (Student Sample)

	Main-Effect		SET 1		SET 2		SET 3		SET 4	
	1	2	3	4	5	6	7	8	9	10
Controls										
Cohort	-.21*	-.22*	-.21*	-.23*	.10	.05	-.23*	-.22*	-.22*	-.23*
Negative Affectivity	.11	.12	.11	.10	.14	.13	.13	.13	.13	.11
Need for Power	.12*	.12*	.13*	.13*	.12	.11	.11	.11	.11	.11
Independent Variables										
Level of Peer UMS (LUMS)		-.01	-.34	.47	-.24	-.87	.00	-.10	-.37	.53
Inconsistency of Peer UMS (IUMS)			.33	-.73					.31	-.85
Network Density (NetD)					.89**	.84**				
Network Popularity (NetP)					-.00	-.01				
Information Embeddedness (InfoE)					.63*	.69*				
Self-monitoring (SM)							.03	.05	.04	.08
Core Self-evaluation (CSE)							.03	.01	.03	.03
Interactions										
SET 1 – LUMS * IUMS				2.96						
SET 2 – LUMS * NetD						2.79				
LUMS * NetP						-.03				
LUMS * InfoE						-1.24				
SET 3 – LUMS * SM								.81		
LUMS * CSE								-.07		
SET 4 – LUMS * IUMS										3.25
LUMS * SM										.62
LUMS * CSE										-.21
Total R^2	.09*	.09*	.10	.11	.20	.24	.10	.11	.10	.12
ΔR^2		.00	.01	.01	.11	.04	.01	.01	.01	.02

Notes: Unstandardized coefficients are reported; N = 108; * p<.05, ** p<.01, *** p<.001

TABLE 2-1B: Hierarchical Regressions for Peer-Rated Undermining (UMI) in Friendship Network (Student Sample)

	Main-Effect		SET 1		SET 2		SET 3		SET 4	
	1	2	3	4	5	6	7	8	9	10
Controls										
Cohort	-1.04*	-1.01*	-.96	-.95	-.41	-.44	-1.01	-.99	-.87	-.85
Negative Affectivity	-.75*	-.72*	-.75*	-.74*	-.69*	-.72*	-.56	-.55	-.53	-.57
Need for Power	.61*	.58*	.61*	.62*	.58*	.60*	.60*	.61*	.61*	.65*
Independent Variables										
Level of Peer UMI (LUMI)		.06	.07	-.20	.12	.16	.08	.06	.18	-.07
Inconsistency of Peer UMI (IUMI)			.01	.04					-.01	.02
Network Density (NetD)					.58	.46				
Network Popularity (NetP)					-.00	-.01				
Information Embeddedness (InfoE)					.90	.83				
Self-monitoring (SM)							-.56	-.46	-.51	-.46
Core Self-evaluation (CSE)							.35	.34	.43	.35
Interactions										
SET 1 – LUMI * IUMI				-.19						
SET 2 – LUMI * NetD						-.85				
LUMI * NetP						-.08				
LUMI * InfoE						.05				
SET 3 – LUMI * SM								.02		
LUMI * CSE								-.28		
SET 4 – LUMI * IUMI										-.16
LUMI * SM										.19
LUMI * CSE										-.21
Total R^2	.16**	.16**	.16**	.19**	.17*	.18*	.18**	.18*	.19*	.21*
ΔR^2		.00	.00	.03	.01	.02	.02	.00	.03	.02

Notes: Unstandardized coefficients are reported; N = 108; * p<.05, ** p<.01, *** p<.001

TABLE 2-2A: Hierarchical Regressions for Self-rated Undermining (UMS) in Communication Network (Student Sample)

	Main-Effect		SET 1		SET 2		SET 3		SET 4	
	1	2	3	4	5	6	7	8	9	10
Controls										
Cohort	-.20	-.15	-.15	-.16	-1.29**	-.97*	-.15	-.18	-.15	-.19
Negative Affectivity	.06	.06	.05	.05	.08	.06	.06	.06	.06	.05
Need for Power	.14*	.18*	.14*	.15*	.14*	.12*	.11	.13	.12	.13
Independent Variables										
Level of Peer UMS (LUMS)		.50	-.02	.23	.25	.28	.45	.54	-.10	.27
Inconsistency of Peer UMS (IUMS)			.36	-.22					.37	-.32
Network Density (NetD)					.85*	.97*				
Network Popularity (NetP)					-.01	-.02				
Information Embeddedness (InfoE)					.12*	.10*				
Self-monitoring (SM)							.11	.10	.11	.12
Core Self-evaluation (CSE)							-.00	-.02	.00	-.01
Interactions										
SET 1 – LUMS * IUMS				1.25						
SET 2 – LUMS * NetD						-2.77				
LUMS * NetP						-.58*				
LUMS * InfoE						.39†				
SET 3 – LUMS * SM								.57		
LUMS * CSE								-1.12		
SET 4 – LUMS * IUMS										1.39
LUMS * SM										1.02
LUMS * CSE										-.94
Total R^2	.08	.09	.11	.11	.18*	.24*	.10	.11	.11	.14
ΔR^2		.01	.02	.00	.09*	.06*	.01	.01	.02	.03

Notes: Unstandardized coefficients are reported; N = 108; † p<.10, * p<.05, ** p<.01, *** p<.001

TABLE 2-2B: Hierarchical Regressions for Peer-rated Undermining (UMI) in Communication Network (Student Sample)

	Main-Effect		SET 1		SET 2		SET 3		SET 4	
	1	2	3	4	5	6	7	8	9	10
Controls										
Cohort	-.93	-2.25*	-2.05*	-2.03*	-	-6.89**	-2.34*	-2.53	-2.01*	-2.01
Negative Affectivity	-.99*	-.91*	-.88*	-.89*	-.77*	-.64	-.75	-.64	-.67	-.57
Need for Power	.83**	.83*	.79*	.79*	.62*	.69*	.83*	.81*	.83*	.77*
Independent Variables										
Level of Peer UMI (LUMI)		-.96	-.82	-.80	-.84	-1.76*	-.99	-1.23*	-.75	-.87
Inconsistency of Peer UMI (IUMI)			-.05	-.05					-.07	-.09
Network Density (NetD)					-.71	.13				
Network Popularity (NetP)					-.12*	-.06				
Information Embeddedness (InfoE)					.71**	.46*				
Self-monitoring (SM)							-.76	-.46	-.66	-.22
Core Self-evaluation (CSE)							.29	.40	.38	.54
Interactions										
SET 1 – LUMI * IUMI				.02						
SET 2 – LUMI * NetD						.71				
LUMI * NetP						.16				
LUMI * InfoE						-.40**				
SET 3 – LUMI * SM								-.48		
LUMI * CSE								-.57		
SET 4 – LUMI * IUMI										.12
LUMI * SM										-.52
LUMI * CSE										-.70
Total R^2	.18**	.21**	.21**	.21**	.30***	.37***	.22**	.26**	.23**	.27**
ΔR^2			.00	.00	.09**	.07*	.01	.04	.02	.04

Notes: Unstandardized coefficients are reported; N = 108; * $p<.05$, ** $p<.01$, *** $p<.001$

131

TABLE 2-3A: Quadratic Assignment Procedure (QAP) Correlations for the Student Sample in Cohort I

	1	2	3	4	5	6	7	8	9
1. Negative Affectivity									
2. Need for Power	-.02								
3. FR Direct Contact	-.03	-.10*							
4. FR Group Cohesion	.00	-.11	.49***						
5. FR Structural Equivalence	.01	-.15**	.57***	.44***					
6. CO Direct Contact	-.03	-.09*	.74***	.36***	.54***				
7. CO Group Cohesion	-.06	-.03	.48***	.41***	.44***	.52***			
8. CO Structural Equivalence	.01	-.15**	.55***	.40***	.89***	.55***	.47***		
9. Dissimilarity on Undermining (Self-rated)	.09	.11	-.05	-.03	-.03	.03	-.03	-.03	
10. Dissimilarity on Undermining (Peer-rated)	-.01	.00	-.13*	-.05	.03	-.14**	-.04	.00	-.03

Notes: FR = Friendship Network, CO = Communication Network; N = 59; * p<.05, ** p<.01, *** p<.001

132

TABLE 2-3B: Quadratic Assignment Procedure (QAP) Correlations for the Employee Sample in Cohort II

	1	2	3	4	5	6	7	8	9
1. Negative Affectivity									
2. Need for Power	-.02								
3. FR Direct Contact	-.06	.11*							
4. FR Group Cohesion	-.05	.13*	.56***						
5. FR Structural Equivalence	-.04	.07*	.57***	.52***					
6. CO Direct Contact	-.07*	.11**	.81***	.46***	.53***				
7. CO Group Cohesion	-.10	.11	.41***	.54***	.33***	.41***			
8. CO Structural Equivalence	-.04	.05	.56***	.48***	.90***	.53***	.30***		
9. Dissimilarity on Undermining (Self-rated)	-.02	.23*	.01	-.02	.02	.02	-.08	.02	
10. Dissimilarity on Undermining (Peer-rated)	.05	.25*	.03	.02	.02	.07	-.01	-.01	.45**

Notes: FR = Friendship Network, CO = Communication Network; N = 49; * p<.05, ** p<.01, *** p<.001

TABLE 2-4A: QAP Multiple Regressions for Dissimilarity on Undermining (Self-rated and Peer-rated) in Both Networks (Cohort I)

	Dissimilarity on Undermining (Self-rated)					Dissimilarity on Undermining (Peer-rated)				
	1	2	3	4	5	1	2	3	4	5
FRIENDSHIP NETWORK										
Controls										
Negative Affectivity	.08	.08	.08	.09	.08	-.04	-.06	-.04	-.04	-.07
Need for Power	.09	.08	.08	.08	.08	.00	-.03	-.01	.02	.01
Network-based Proximity Mechanisms										
Direct Contact		-.01			-.02		-.23*			-.38**
Group Cohesion			-.00		-.00			-.01		-.00
Structural Equivalence				-.03	.02				.28	1.29**
R^2	.02*	.02*	.02*	.02*	.02*	.00	.02*	.00	.00	.03***
COMMUNICATION NETWORK										
Controls										
Negative Affectivity	.08	.08	.08	.09	.09	-.04	-.06	-.06	-.04	-.07
Need for Power	.09	.09	.08	.08	.08	.00	-.03	.00	.00	.00
Network-based Proximity Mechanisms										
Direct Contact		.02			.04		-.29**			-.44**
Group Cohesion			-.01		-.02			-.09		.05
Structural Equivalence				-.02	-.07				.03	.92*
R^2	.02*	.02*	.02*	.02*	.02*	.00	.02**	.00	.00	.03**

Notes: Unstandardized coefficients are reported; N =59; † p<.10, * p<.05, ** p<.01, *** p<.001

TABLE 2-4B: QAP Multiple Regressions for Dissimilarity on Undermining (Self-rated and Peer-rated) in Both Networks (Cohort II)

	Dissimilarity on Undermining (Self-rated)					Dissimilarity on Undermining (Peer-rated)				
	1	2	3	4	5	1	2	3	4	5
FRIENDSHIP NETWORK										
Controls										
Negative Affectivity	-.01	-.01	-.01	-.01	-.01	.31	.31	.31	.31	.31
Need for Power	.13*	.13*	.14*	.14*	.14*	1.07*	1.06*	1.07*	1.07*	1.07*
Network-based Proximity Mechanisms										
Direct Contact		-.01			-.00		.03			.06
Group Cohesion			-.01		-.01			-.02		-.05
Structural Equivalence				-.00	.06				.07	.10
R²	.05*	.05*	.05*	.05*	.05*	.07*	.07*	.07*	.07*	.07*
COMMUNICATION NETWORK										
Controls										
Negative Affectivity	-.01	-.01	-.02	-.01	-.01	.31	.33	.29	.31	.31
Need for Power	.13*	.13*	.14*	.13*	.14*	1.07*	1.05*	1.08*	1.07*	1.06*
Network-based Proximity Mechanisms										
Direct Contact		-.00			.01		.12			.24*
Group Cohesion			-.00		-.00			-.00		-.00
Structural Equivalence				.02	.06				-.31	-.85
R²	.05*	.05*	.06**	.05*	.06**	.07*	.07*	.07*	.07*	.07*

Notes: Unstandardized coefficients are reported; N = 49; † p<.10, * p<.05, ** p<.01, *** p<.001

TABLE 3: Summary of Hierarchical Regressions in Friendship and Communication Networks across Employee and Student Samples

	Employee Sample				Student Sample			
	Friendship Network		Communication Network		Friendship Network		Communication Network	
	UMS	UMI	UMS	UMI	UMS	UMI	UMS	UMI
Level of Peer Undermining (H1)	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Inconsistency of Peer Undermining (H2a)	n.s.	n.s.	10.93^{*}	n.s.	n.s.	n.s.	n.s.	n.s.
Network Density (H2b)	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Network Popularity (H2c)	n.s.	n.s.	n.s.	$.41^{\dagger}$	n.s.	n.s.	$-.58^{*}$	n.s.
Information Embeddedness (H2d)	n.s.	$.53^{\dagger}$	n.s.	n.s.	n.s.	n.s.	$.39^{\dagger}$	$-.40^{**}$
Self-monitoring (H3a)	n.s.	1.69^{**}	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Core Self-evaluation (H3b)	n.s.	1.68^{*}	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.

Notes: UMS = Self-rated Undermining, UMI = Peer-rated Undermining; n.s. = non-significant; † P<.10, * P<.05; ** P<.01

TABLE 4: Summary of QAP Regressions in Friendship and Communication Networks across Employee and Student Samples

		Dissimilarity on Undermining (Self-rated)				Dissimilarity on Undermining (Peer-rated)			
		H4a DC	H4b GC	H4c SE	H4d All Three	H4a DC	H4b GC	H4c SE	H4d All Three
Friendship Network	CH-Unit	n.s.	n.s.	n.s.	DC = n.s. GC = n.s. SE = n.s.	$-.15^\dagger$	n.s.	n.s.	DC = $-.16^\dagger$ GC = n.s. SE = n.s.
	LF-Unit	n.s.	n.s.	$.17^*$	DC = n.s. GC = n.s. SE = $.20^*$	$-.33^*$	$-.03^*$	-2.80^{**}	DC = n.s. GC = n.s. SE = -2.52^{**}
Communication Network	CH-Unit	n.s.	n.s.	n.s.	DC = n.s. GC = n.s. SE = n.s.	n.s.	n.s.	-1.41^*	DC = $-.12^\dagger$ GC = n.s. SE = -1.46^*
	LF-Unit	n.s.	n.s.	n.s.	DC = n.s. GC = n.s. SE = n.s.	$-.13^\dagger$	n.s.	n.s.	DC = $-.13^\dagger$ GC = n.s. SE = n.s.
Friendship Network	Cohort I	n.s.	n.s.	n.s.	DC = n.s. GC = n.s. SE = n.s.	$-.23^*$	n.s.	n.s.	DC = $-.38^{**}$ GC = n.s. SE = 1.29^{**}
	Cohort II	n.s.	n.s.	n.s.	DC = n.s. GC = n.s. SE = n.s.	n.s.	n.s.	n.s.	DC = n.s. GC = n.s. SE = n.s.
Communication Network	Cohort I	n.s.	n.s.	n.s.	DC = n.s. GC = n.s. SE = n.s.	$-.29^*$	n.s.	n.s.	DC = $-.44^*$ GC = n.s. SE = $.92^*$
	Cohort II	n.s.	n.s.	n.s.	DC = n.s. GC = n.s. SE = n.s.	n.s.	n.s.	n.s.	DC = $.24^*$ GC = n.s. SE = n.s.

Note: DC = Direct Contact, GC = Group Cohesion, SE = Structural Equivalence; n.s. = non-significant, † P<.10, * P<.05; ** P<.01

FIGURE 1

Thesis Model

1st Objective: Network Peer Influence on Individual Undermining
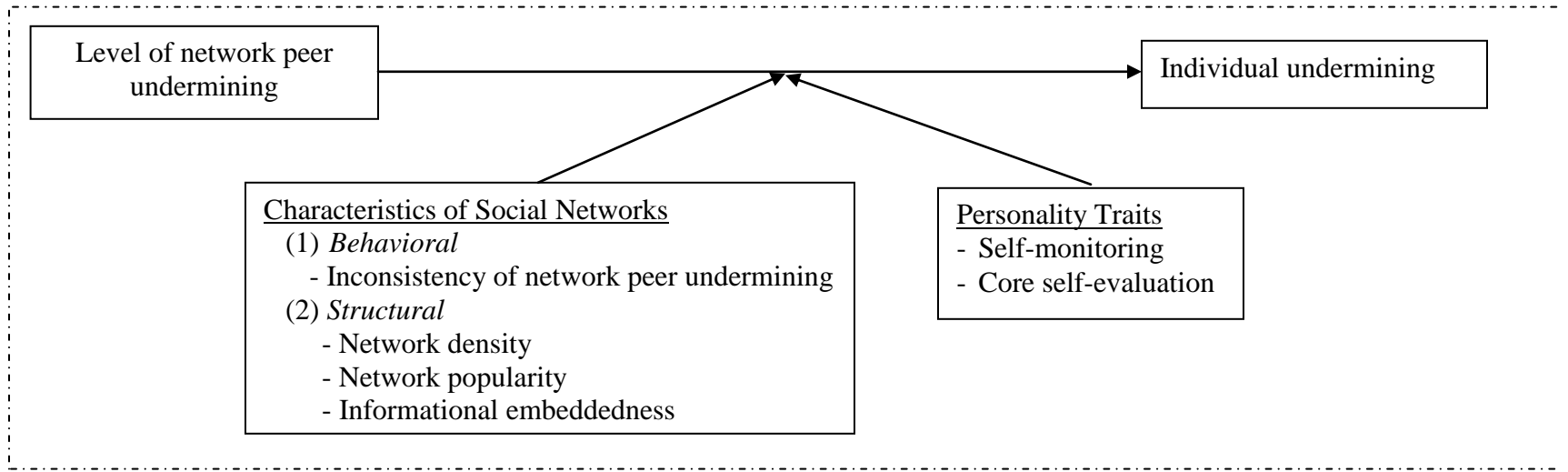

2nd Objective: Social Influence Mechanisms

To explicate the social influence processes whereby peers influence individuals' social undermining, that is, to specify the three network-based proximity influence mechanisms:
- Direct contact
- Group cohesion
- Structural equivalence

FIGURE 2

Mechanisms and Processes underlying Social Influence of Undermining Behaviors

Implicit Social Influence Processes
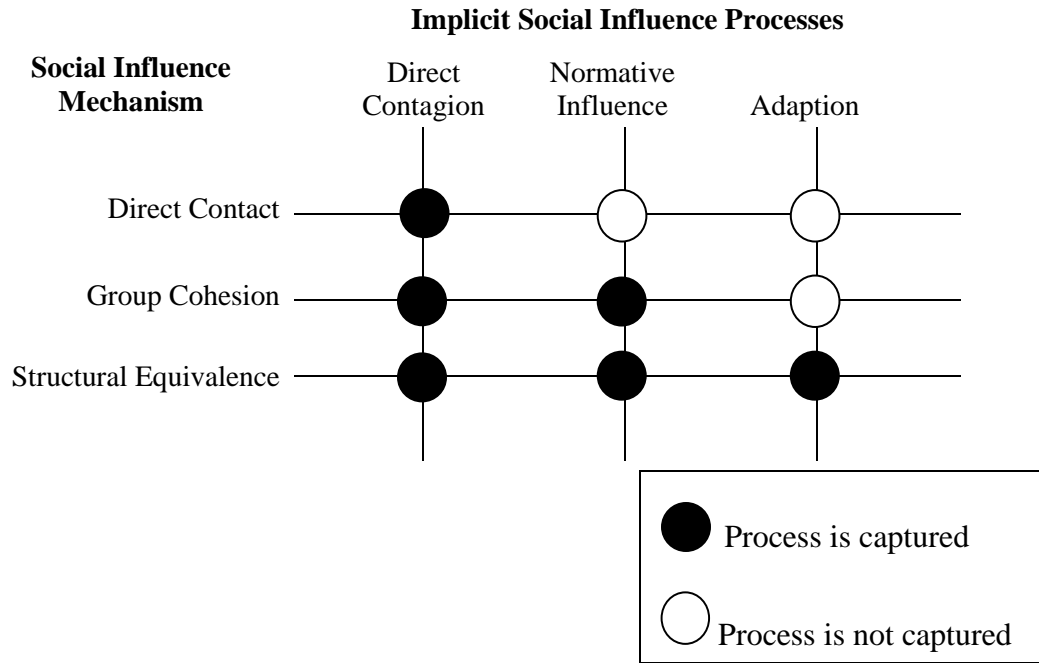
The figure is adapted from Johanson (2000)

FIGURE 3A

Interaction between Level of Peer UMI (Peer-rated Undermining) and Information Embeddedness in Predicting Individual UMI in Friendship Network (Employee Sample)
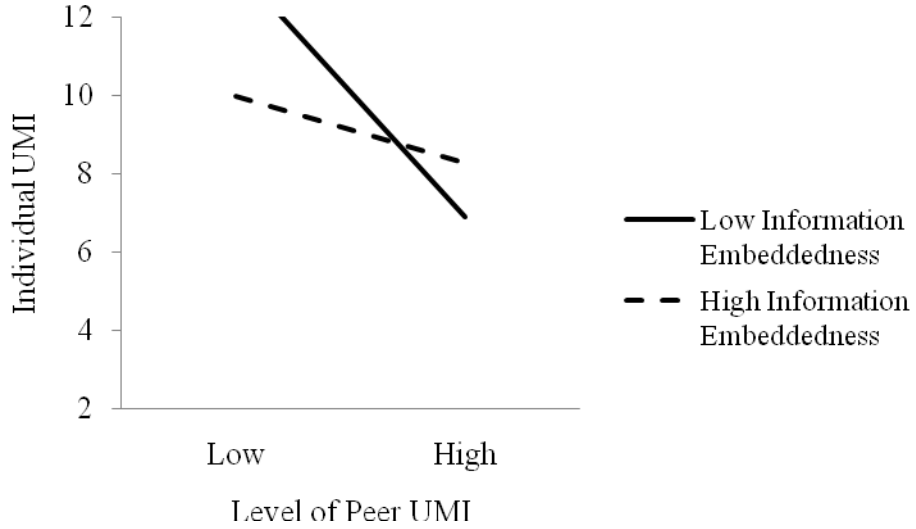

FIGURE 3B

Interaction between Level of Peer UMI (Peer-rated Undermining) and Self-monitoring in Predicting Individual UMI in Friendship Network (Employee Sample)
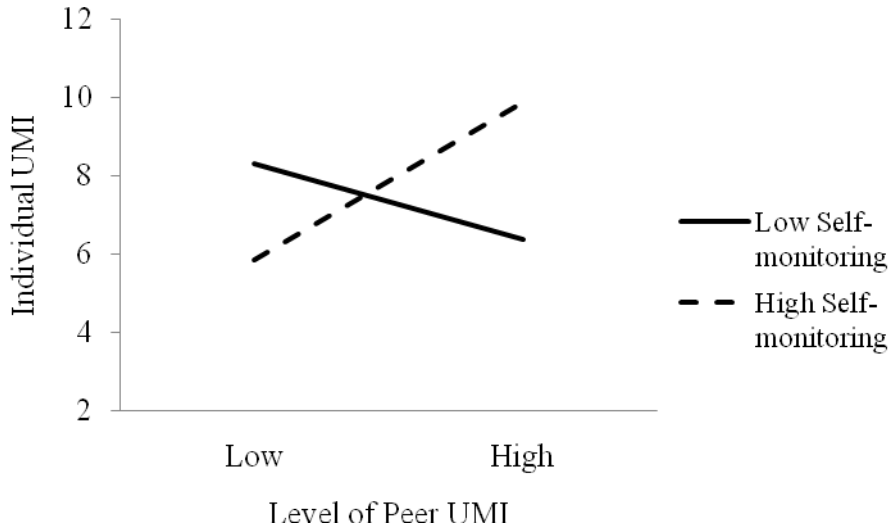
FIGURE 3C

Interaction between Level of Peer UMI (Peer-rated Undermining) and Core Self-evaluation in Predicting Individual UMI in Friendship Network (Employee Sample)
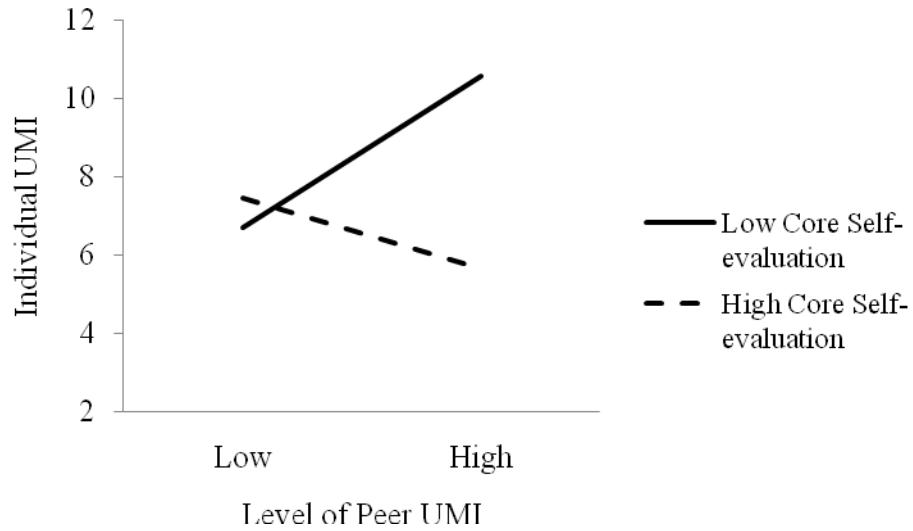

FIGURE 3D

Interaction between Level of Peer UMS (Self-rated Undermining) and Inconsistency of Peer UMS in Predicting Individual UMS in Communication Network (Employee Sample)
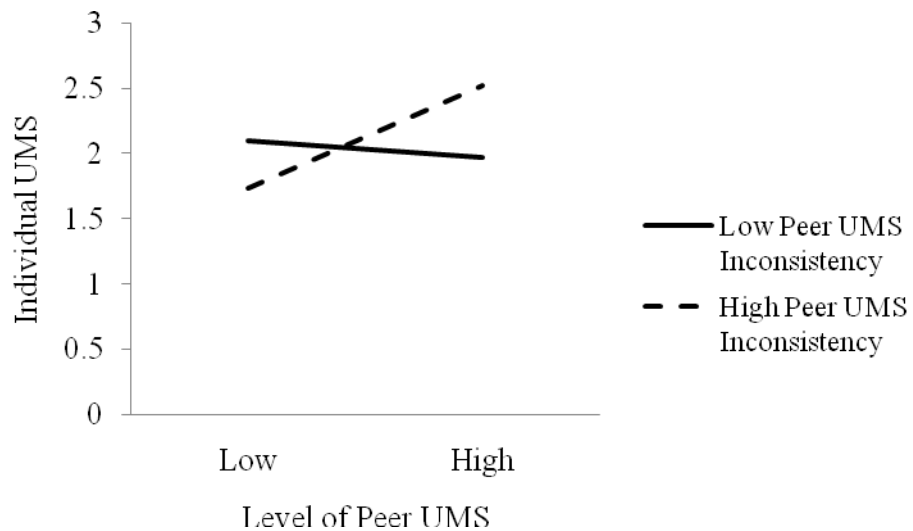
FIGURE 3E

Interaction between Level of Peer UMI (Peer-rated Undermining) and Network
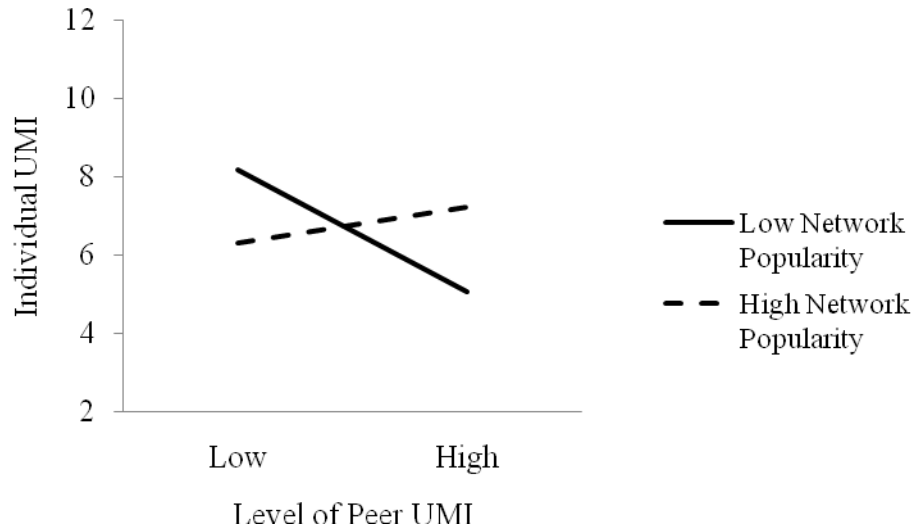Popularity in Predicting Individual UMI in Communication Network (Employee Sample)

FIGURE 4A

Interaction between Level of Peer UMS (Self-rated Undermining) and Network
Popularity in Predicting Individual UMS in Communication Network (Student Sample)

FIGURE 4B

Interaction between Level of Peer UMS (Self-rated Undermining) and Information Embeddedness in Predicting Individual UMS in Communication Network (Student Sample)
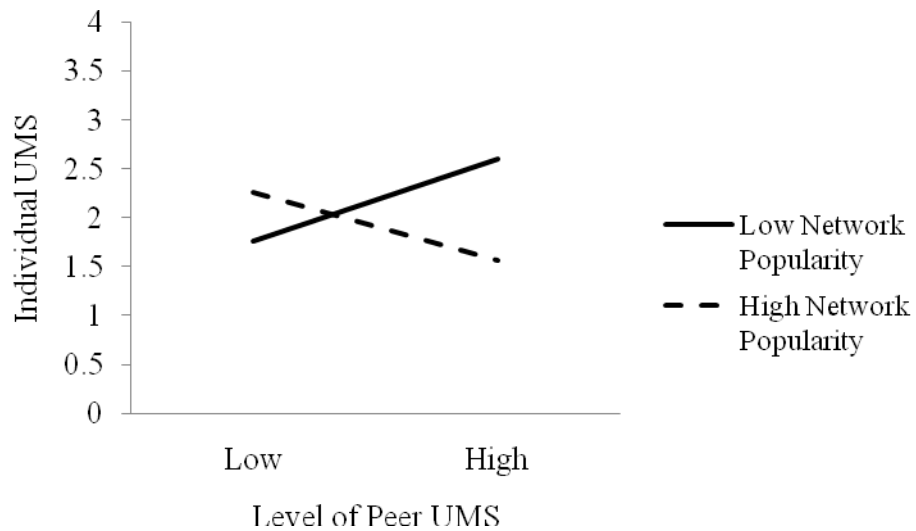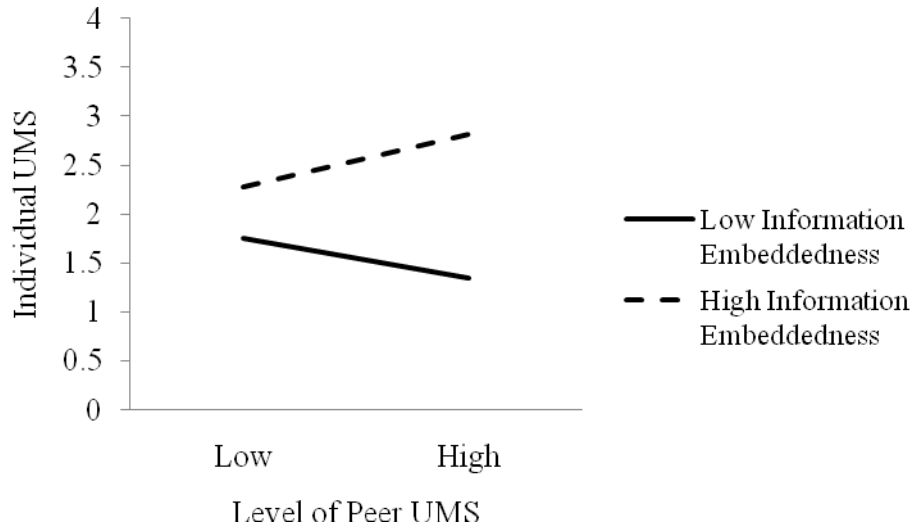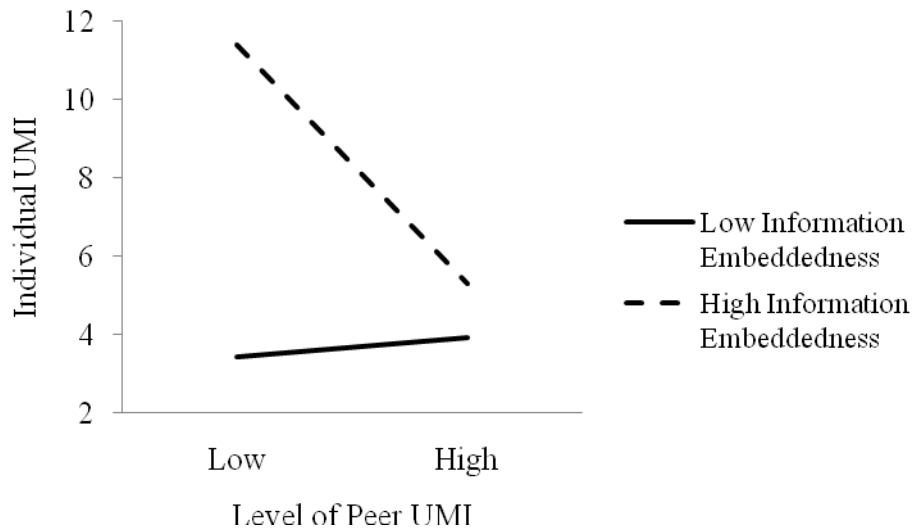

FIGURE 4C

Interaction between Level of Peer UMI (Peer-rated Undermining) and Information Embeddedness in Predicting Individual UMI in Communication Network (Student Sample)

Appendix I: Scales of Measures

Social Undermining (Duffy et al., 2002)

The statements below describe negative interactions among people. Since you entered the company [program], how often have you ...
1. insulted your fellow employees [students]?
2. gave your fellow employees [students] the silent treatment?
3. spread rumors about your fellow employees [students]?
4. delayed work to make your fellow employees [students] look bad or slow them down?
5. belittled your fellow employees [students] or their ideas?
6. hurt the feelings of your fellow employees [students]?
7. talked bad about your fellow employees [students] behind their back?
8. criticized the way your fellow employees [students] handled things in a way that was not helpful?
9. did not give your fellow employees [students] as much help as you promised?
10. gave your fellow employees [students] incorrect or misleading information about the job?
11. competed with your fellow employees [students] for status and recognition?
12. let your fellow employees [students] know you did not like something about them?
13. did not defend your fellow employees [students] when people spoke poorly of them?

Self-monitoring (Lennox & Wolfe, 1984)

The following statements describe people's responses in social occasions. How much do you agree with each statement?
1. In social situations, I have the ability to alter my behavior if I feel that something else is called for.
2. I have the ability to control the way I come across to people, depending on the impression I wish to give them.
3. When I feel that the image I am portraying isn't working, I can readily change it to something that does.
4. I have found that I can adjust my behavior to meet the requirements of any situation I find myself in.
5. Once I know what the situation calls for, it's easy for me to regulate my actions accordingly.
6. I have trouble changing my behavior to suit different people and different situations [R].
7. Even when it might be to my advantage, I have difficulty putting up a good front [R].
8. I am often able to read people's true emotions correctly through their eyes.

9. In conversations, I am sensitive to even the slightest change in the facial expression of the person I'm conversing with.
10. My powers of intuition are quite good when it comes to understanding others' emotions and motives.
11. I can usually tell when others consider a joke to be in bad taste, even though they may be laughing convincingly. I can usually tell when I said something inappropriate by reading it in the listener's eyes.
12. If someone is lying to me, I usually know it at once from that person's manner of expression.

Core Self-evaluation (Judge, Erez, Bono, & Thoresen, 2003)

The statements below describe people's confidence toward themselves. How much do you agree with each statement?
1. I am confident I get the success I deserve in life.
2. Sometimes I feel depressed [R].
3. When I try, I generally succeed.
4. Sometimes when I fail I feel worthless [R].
5. I complete tasks successfully.
6. Sometimes, I do not feel in control of my work [R].
7. Overall, I am satisfied with myself.
8. I am filled with doubts about my competence [R].
9. I determine what will happen in my life.
10. I do not feel in control of my success in my career [R].
11. I am capable of coping with most of my problems.
12. There are times when things look pretty bleak and hopeless to me [R].

Negative Affectivity Markers (Watson, Clark, & Tellegen, 1988)

The words below describe people's feelings. In the past 6 months, how often have you felt this way?
1. Distressed
2. Upset
3. Guilty
4. Scared
5. Jittery
6. Afraid
7. Ashamed
8. Nervous
9. Irritable
10. Hostile

Need for Power (Steers & Braunstein, 1976)

The statements below describe various things people do or try to do on their jobs. Please think about the job [coursework] you are doing. Which of the statements most accurately describe your own behavior when you are at work?
1. I find myself organizing and directing the activities of others.
2. I strive to gain more control over the events around me in class.
3. I strive to be "in command" when I am working in a group.
4. I seek an active role in leadership in class.
5. I avoid trying to influence those around me to see things my way [R].

Need for Belongingness (Steers & Braunstein, 1976)

The statements below describe various things people do or try to do on their jobs. Please think about the job [coursework] you are doing. Which of the statements most accurately describe your own behavior when you are at work?
1. When I have a choice, I try to work in a group instead of by myself.
2. I pay a good deal of attention to the feelings of others at work.
3. I prefer to do my work and let others do theirs [R].
4. I try not to express my disagreements with others openly.
5. I find myself talking to those around me about non-business related matters.

Interactional Justice by Supervisors [Professors] (Moorman, 1991)

The statements below describe interpersonal treatments among people. In the your company [program], to what extent have your supervisors [professors]
- considered your viewpoints?
- been able to suppress their personal biases?
- provided you with timely feedback about decisions relating to the courses?
- treated you with kindness and consideration?
- showed concern for your rights as a student?
- taken steps to deal with you in a truthful manner?

Interactional justice by Fellow Employees [Students] (Colquitt, 2001)

The statements below describe interpersonal treatments among people. In the your company [program], to what extent have your fellow employees [students]
1. treated you politely?
2. treated you with dignity?
3. treated you with respect?
4. refrained from improper remarks or comments?

Appendix II: Social Network Measures

Network of Undermining Interactions

It happens frequently that fellow employees [students] have unpleasant interactions with one another in the workplace [classes]. Some fellow employees [students] may behave in unpleasant ways toward you, for example, criticizing the way you do things in an unhelpful way, not giving you as much help as they promised, belittling your ideas, or competing with you for status and recognition at works [in classes], etc. Please recall your interactions with each of the fellow employees [students] listed below. Since you entered the company [program], how frequently has he or she acted in unpleasant ways toward you?

	Never	Rarely	Occasionally	Several Times	Relatively Often	Often
Peer 1						
Peer 2						
Peer 3						
…						

Organizational Friendship Network

What is your relationship with each of your fellow employees [students] listed below? Please choose one option that best describes your relationship with him or her.

	Don't Know	Acquaintance	Common Friend	Good Friend	Very Good Friend
Peer 1					
Peer 2					
Peer 3					
…					

Organizational Communication Network

How often do you personally communicate with each of your fellow employees [students] listed below? For example, how often do you have a work-related [course-related] discussion, a social conversation, a telephone discussion of general topics, or some kind of meeting with each other?

	Never	Rarely	Several Times A Month	Several Times a Week	Almost Everyday
Peer 1					
Peer 2					
Peer 3					
…					