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Social Psychology of Networks: Influence of Emotion on Perception of Personal and

Professional Networks

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Social Psychology of Networks: Perception of Personal and Professional Networks

Networks and one's social cognition of them have been shown to influence performance, promotion, and other corporate success (Brass, 1985; Burt, 1976, 2001; Krackhardt, 1990) – stronger network ties and greater network centrality lead to improved performance and greater opportunities for advancement. Similarly, positive emotion leads to improved performance, cooperative behavior, and attitude (Forgas, 1998; Lawler, 2002; Thoits, 1989). Given the numerous implications of both networks and emotions on professional development and success, it is both theoretically and practically important to understand the influence of emotions on one's perception and use of networks. In this article, I explore two research questions: In what ways, if any, do positive and negative work-related emotions influence one's perception and use of professional and personal advice networks? How, if at all, does this influence vary for managerial men and women?

Through this research, I will demonstrate empirically the relationship between emotions and network perception, focusing specifically on the positive and negative emotions triggered through success and failure in the workplace and their influence on one's perception and use of his/her advice network. First, I review the current understanding of networks and research on emotions. Second, I discuss the influence of emotion on networks. Then, I discuss the impact of gender on the influence of emotions on networks. After this, I outline the research context and methods.

Cognition of Personal and Professional Networks

A network is a set of actors connected through direct or indirect ties to each other. Actors can be individuals, teams, organizations, etc. Within a network, actor positions can lead to power, success, and knowledge (see Borgatti & Foster, 2003; Krackhardt, 2002, for a review of

network research and concepts); however there has been debate as to the importance of reported networks (with whom I think I have a tie) compared to observed networks (with whom I have a tie as observed through interactions). Bernard, Killworth, and Sailer (1982) show that participants' self reports of interaction networks are not very closely matched to their behaviors. They conclude that the error is driven by people's inability to accurately remember their actions and recommend using behavioral network schemas rather than self reports for network analysis. On the other hand, Freeman and Romney (1986) found that even though self reports may have some inaccuracies, people tend to accurately report more consistent patterns of interaction. In other words, people may not accurately report their network when asked about a specific situation, but when asked about generalizations or frequent occurrences, they do accurately recall their interactions. Krackhardt (1987) argued that regardless of the true accuracy of people's perceptions, it is worthwhile to understand their perceptions of their network and the causes of these perceptions.

In fact, perceived networks have greater predictions on performance reputation than actual networks (Kilduff and Krackhardt, 1994) and the accuracy of perceived advice networks is correlated with increased power (Krackhardt, 1990). Thus, the causes for people's perceptions of their networks are important to understand within a broader organizational context. The focus of many of these studies has been professional networks (ties from work activities) within one organization (Kilduff and Krackhardt, 1994; Krackhardt, 1990); however, when evaluating individual's networks, and the ties that he/she uses for advice and support, it is critical to evaluate both personal networks (ties from family, volunteer & social organizations, school, etc.) and professional networks. This ensures that all areas from which people may gain support are

captured (Ibarra, 1993, 1997). In this article, networks are defined from a focal individual's perspective and include both personal and professional ties used for advice.

The organizational role of individuals influences their position within the network and the strength of their network ties – generally individuals in roles higher in the organizational hierarchy have more developed networks with stronger ties (Burt, 1976, 1998; Ibarra, 1993, 1997; Kilduff and Krackhardt, 1994; Krackhardt, 1990). Thus, in this article, participants are limited to people who are at a manager-level or higher as a means of controlling for the influence of organizational role on network.

Emotion and Cognition

"Cognition is suffused with emotion" (Bower, 1983: 400) – it is difficult, if not impossible to investigate cognition without questioning the role of emotion. Memory is influenced both by information stored in the past and information present in one's immediate cognitive environment (Tulving and Watkins, 1973). Affect influences both parts of memory: congruence between affect at the point of learning and current affect improve memory and recall (Bartlett and Santrock, 1979; Bower, 1983; Isen and Shalker, 1982). However, there is greater recall when one has positive emotion both at the time of learning and recall than when one has negative emotion at both times. (Bartlett and Santrock, 1979; Isen and Shalker, 1982). When tasks require open, constructive processing, affect priming effects are observed (Forgas, 1995, 2002). Whereas negative affect leads to greater following of steps and reliance on structured analysis, positive affect leads to more dependence on intuition (Elsbach and Barr, 1999; Forgas, 1995, 2002). In a negotiation context, positive affect has been shown to lead to more cooperation and negative affect has been shown to lead to more competition (Forgas, 1998).

During experiments evaluating the relationship between emotion, self-confidence, and performance, Bower (1983) asked participants to remember a success or failure and found that the memories resulted in positive or negative emotion, respectively. In a similar approach, positive and negative emotions are primed in this research. Even though both professional and personal network ties are evaluated, the organizational focus of the research leads to a focus on the influence of work-related emotion on network ties. Therefore, rather than priming for positive or negative emotion alone, the memory of professional success or failure is used to induce positive or negative emotion.

Influence of Emotions on Networks

Emotions are integral to the process through which relationships form and affect how information about these relationships is coded and retrieved from memory (Lawler and Thye, 1999). Thus, it is likely that priming of emotions would influence which relationships people recall and use. As discussed previously, positive emotion leads to greater cooperation whereas negative emotion leads to greater competition (Forgas, 1998). Additionally, competition, as measured by perceived rivalry, is stronger between people within an organization as compared to people in similar roles in different organizations (Menon, Thompson, and Choi, 2005). This internal competition led to concerns about perceptions of one's originality, intelligence, and ability (Menon, et al, 2005). Therefore, positive emotion likely leads to increased recall and use of internal professional network ties. On the other hand, the competition triggered by negative emotion would lead individuals to avoid internal professional ties and recall and use personal and external professional ties – ties that minimize competition and concerns about organizational perception of ability. Thus, the following hypotheses:

Hypothesis 1: Positive emotion from a work-related event leads to increased recall and

use of internal professional network ties compared to the control.

Hypothesis 2: Negative emotion from a work-related event leads to increased recall and

use of personal and external professional network ties compared to the control.

Influence of Gender on Network Characteristics and Emotions

Men and women have different types of networks and variations in the relative strength

of their network ties (Burt, 1998, Ibarra, 1993, 1997).   Men tend to have more ties with co-

workers; on the other hand, women tend to have more ties with family (Marsden, 1987; Moore,

1990; Munch, McPherson, Smith-Lovin, 1997). In professional settings, men tend to have larger

professional networks with stronger professional ties. This is driven by two primary

demographic constraints within the average corporate organization. First, women are generally a

minority in the management tiers of organizations and minorities in a setting have more

difficulty developing ties with majority players (Ibarra, 1993, 1997). Thus, women generally

have a higher proportion of same-sex network contacts than expected based on their population

proportion (Ibarra, 1993, 1997). Because the numbers of women in professional organizations is

smaller than that of men, and because women have a higher proportion of ties with other women

than expected, the overall size of women's professional networks tends to be smaller than that

for men's. Second, women have a more difficult time developing strong ties with men, and vice

versa (Ibarra, 1993, 1997). Strength of ties is measured by frequency of interaction, length of

relationship, and affection (Burt, 1976; Krackhardt, 1992). So, because men are a higher

proportion of most professional networks, men tend to have more strong professional ties than

women.

The competition induced by negative emotions is likely only balanced or soothed through strong ties – ties that are formed through trust and reciprocity. Given that women have fewer strong professional ties than men (Ibarra, 1993, 1997), the negative emotions induced by work-related failures would lead to greater recall and use of personal ties compared to men. Also, given the added risk to minorities of appearing to lack professional ability and knowledge (Denton, 1989; Ibarra, 1997), the negative emotions also would lead to greater recall and use of external professional networks compared to men. Thus, the following hypothesis:

Hypothesis 3: Negative emotion from a work-related event leads to proportionally greater recall and use of personal and external professional networks for women than men.

Methods

Participants

Participants are 120 professionals (60 men and 60 women) from the metro-Chicago area. Each person has a full-time job as a manager-level or higher, has been employed by their current company for at least 1 year, and is between 30 and 45 years old.

Experimental Design

The experimental design, shown in Table 1, is a 2x3 full factorial between gender (male vs. female) and emotion activation (control, success/positive, failure/negative).

Operationalizations

Three manipulations are used. The participants assigned to the success condition are instructed as follows:

Please consider a recent situation at work in which you successfully led a team, improved a process or activity, or made a positive financial impact. In the space below, summarize this situation, focusing specifically on your role, what happened, and how you felt.

The participants assigned to the failure condition are instructed as follows:

Please consider a recent situation at work in which you failed to meet a goal or objective.

In the space below, summarize this situation, focusing specifically on your role, what

happened, and how you felt.

The participants assigned to the control condition are instructed as follows:

Please consider an average day at work. In the space below, outline your normal daily

activities and the amount of time you spend on each activity.

These manipulations were adopted from the high-power/low-power manipulations used

by Galinsky, Gruenfeld, & Magee (2003) and are detailed in Appendix A.

Manipulation Checks

Two different manipulation checks are used. First, the participants are asked to complete

word fragments (Appendix B). Similar to the approach developed by Isen, Labroo, and Durlach

(2004), each of the completed words is analyzed by two coders, who are blind to the

experimental conditions and hypotheses, as pleasant (1 for pleasant, 0 for not pleasant) and

uncommon (1 for uncommon, 0 for common). Higher scores relate to more positive affect and

the total score is expected to be greater for the success condition, followed by the control

condition, and lastly the failure condition. Also, one coder, who is blind to the experimental

conditions and hypotheses, will read all of the essays from the success, failure, and control

conditions and rate the level of success and level of positive emotion described in the essay on a

7-point Likert scale. A second coder will rate 10% of the essays to ensure that reliability is high

and the single coder's ratings can be used to ensure the success of the manipulation.

Procedure

Upon arrival, participants are brought to individual rooms to complete the experiment and are provided an overview of the research objectives (see Appendix C). They are given the appropriate manipulation on a sheet with 20 lines to complete this task (see Appendix A). After completing the priming task and manipulation check, they are given a survey with questions about their personal and professional networks. To evaluate which advice network ties a participant would use, he/she is first asked to list the initials of up to 5 people he/she would go to for advice (see Appendix D). To understand which network ties a participant would recall, he/she is then asked to list the initials of everyone in his/her network (see Appendix E). There is no limit to the number of people listed. Finally, after listing the initials for everyone in their network, the participants are asked to evaluate a number of characteristics, including type of network tie (personal vs. internal professional vs. external professional), gender, and type of communication for each of these network ties (see Appendix F). The four type of communication questions (1 for yes, 0 for no) proxy strength of advice tie. Summation of answers provides the strength of advice tie that varies from 0, or weak, to 4, or strong. This is based on surveys developed by Krackhardt (1990) and De Lange, Agneessens, and Waege (2004). After completing the network surveys, participants complete a brief demographic survey (See Appendix G). At the end of the experiment, each participant is debriefed and thanked.

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Table 1

Experimental Design

		Emotional Manipulations		
		Control (A)	Positive Emotion via Success (B)	Negative Emotion via Failure (C)
Gender	Male (1)	A1	B1	C1
	Female (2)	A2	B2	C2

Appendix A: Manipulation Materials

The first example is for the control condition, the second is for the success condition, and the third is for the failure condition. The format is the same as provided to the participants.

Please consider an average day at work. In the space below, outline your normal daily activities and the amount of time you spend on each activity.

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Please consider a recent situation at work in which you successfully led a team, improved a process or activity, or made a positive financial impact. In the space below, summarize this situation, focusing specifically on your role, what happened, and how you felt.

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Please consider a recent situation at work in which you failed to meet a goal or objective. In the space below, summarize this situation, focusing specifically on your role, what happened, and how you felt.

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Appendix B: Manipulation Check

Each participant is asked to complete the following word fragment exercise.

Please complete the following words:

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H_____

H_____

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S_____

S_____

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S_____

Appendix C: Research Objectives and Overview

Thank you for participating in this research project. We appreciate your time and consideration.

This research is being conducted to gain a greater understanding of the personal and professional networks that businesspeople have and the ways in which people use their networks. You will be asked to complete a situational exercise explaining something that happened at work. You will then be asked to complete a survey of your professional and personal networks. This includes some questions about your relationship with each person in your network. Lastly, you will be asked some demographic questions that will help us evaluate the responses. In total, this exercise should take no longer than 1 hour and 15 minutes.

Please feel free to ask questions at any time.

If you would like to receive an abstract on the findings of this research, please provide your name and e-mail below. Please be assured that this information will not, in any way, be linked to your responses.

Thank you.

Appendix D: Survey of Advice Network

Please list the initials of up to 5 people to whom you would go for advice.

1. _____

2. _____

3. _____

4. _____

5. _____

Appendix E: Survey of Network Ties

Please list the initials of everyone who you consider to be part of your network (ties from family, work, volunteer & social organizations, school, etc.). Please list as many or as few as you feel applicable – there is no "right" number of contacts and the number varies by individual. Additional sheets of paper are available on the table near the door if necessary.

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Appendix F: Professional and Personal Network Characteristics Survey

Each participant is asked to complete the professional and personal network characteristics survey. He/she receives directions and 5 copies of the survey. Each copy of the survey has space for 5 network ties. Additional surveys are available in the room as needed. The directions are shown below and are followed by the surveys.

Directions:

There are 5 sheets of the survey enclosed. Additional sheets are available on the table by the door.

Copy the initials of your network ties from the previous exercises onto this spreadsheet. After listing the initials for each person in your networks, please complete the survey information.

Please let me know if you have questions at any time.

1. _____ Initials of person in your network

2. What is this person's gender?   Male   Female

3. Does this person work in the same department as you?   Yes   No

4. Does this person work in the same organization as you?   Yes   No

5. Is this person someone you know from professional or personal (family, school, volunteer

    activities, etc.) activities?   Professional   Personal

6. Would you consider this person a friend?   Yes   No

7. Do you go to this person for simple answers?   Yes   No

8. Do you go to this person to discuss challenges?   Yes   No

9. Does this person come to you with simple questions?   Yes   No

10. Does this person come to you to discuss challenges?   Yes   No

Appendix G: Demographic Survey

After completing the network surveys, each participant is asked to complete a brief

demographic survey. The survey is below in the format seen by the participants.

Please complete the following questions.

1. What is your gender?

    a. Male

    b. Female

2. How old are you? _____

3. What is the highest education that you completed?

    a. Some high school

    b. High school or GED equivalent

    c. Undergraduate college

    d. Graduate Masters, JD, MBA degree

    e. Graduate PhD or MD degree

    f. Other, please explain _____

4. How long have you been employed with your current company?

    a. Less than 1 year

    b. 1 – 3 years

    c. 3 – 6 years

    d. 6 – 10 years

    e. 10 – 15 years

    f. More than 15 years

5. Since finishing with your education, how many different companies have you worked

   for?

    a. 1

    b. 2 – 3

    c. 3 – 4

    d. 4 – 6

    e. More than 6