Antecedents and Consequences of Various Networking Behaviors

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Abstract. This paper proposes an integrative model connecting different motivations (i.e., for power, affiliation, and achievement) to various networking behaviors (i.e., search, maintenance, and leverage), and exploring how each of those networking behaviors relate to different network properties (i.e., size, diversity, and density). To test the hypothesized model, a cohort of EMBA students provided information about their motivations, the type of networking behaviors they undertake, and their network within the cohort. The results indicate that motivation for power is positively related to search activities, and motivation for affiliation is positively related to both search and maintenance activities. However, motivation for achievement does not appear to be significantly associated with networking behaviors. In turn, greater engagement in search activity is associated with larger networks, and greater engagement in maintenance activity is associated with sparser networks. However, none of the networking behaviors appear to be significantly associated with network diversity.

Keywords: networking behaviors, motivation, network structure

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The materials, raw data and code can be found on the OSF: https://osf.io/naf2h/

Table of Contents

INTRODUCTION

The literature on social networks has shown that occupying certain network positions is associated with multiple positive outcomes (Brass, Galaskiewicz, Greve, & Tsai, 2004; Burt, Kilduff, & Tasselli, 2013; Kilduff & Brass, 2010). For example, central network positions and network size are associated with power and influence (Brass, 1984, 1985; Brass & Burkhardt, 1992, 1993; Burkhardt & Brass, 1990; Krackhardt, 1990; Shaw, 1964), as well as with performance (Cross & Cummings, 2004; Mehra, Kilduff, & Brass, 2001). Proximity to the dominant coalition in an organization is related to power and promotion (Brass, 1985).Weak ties give access to a larger number, and to more diverse, job opportunities (Granovetter, 1973). Networks rich in structural holes enhance career mobility (Burt, 1992; Podolny & Baron, 1997) and are related to salary progression, promotions, and career satisfaction (Seibert, Kraimer, & Liden, 2001).

Crafting one's network so as to reach more favorable network positions could then be essential to succeed within organizations. The extent to which people can shape their network refers to a long-standing debate in social science on the relative impact of structure (versus agency) on social interactions (Gulati & Srivastava, 2014). So far, the extent literature has primarily emphasized structural factors, both conceptually and empirically (Emirbayer & Mische, 1998). In contrast, the role of human agency in the construction, perpetuation, and modification of network structure has received far less attention, and repeated calls have been made for a better understanding of the role of human agency on network dynamics (Ahuja, Soda, & Zaheer, 2012; Bensaou, Galunic, & Jonczyk-Sédès, 2014; Borgatti, Mehra, Brass, & Labianca, 2009; Emirbayer, 1997; Emirbayer & Goodwin, 1994; Gulati & Srivastava, 2014; Ibarra, Kilduff, & Tsai, 2005; Shipilov, Labianca, Kalnysh, & Kalnysh, 2014; Vissa, 2012).

Those calls have been paralleled by a heightened interest in the micro-foundations of networks. At its core, this stream of research is preoccupied by the following question (Tasselli & Kilduff, 2020): Can individual differences explain some amount of variance in the type of networks people build, and in the type of network positions people reach? This micro-foundational approach to networks therefore focuses on the decisions people make, and on the actions they take to shape their networks and access resources (Tasselli, Kilduff, & Menges, 2015).

From this micro-foundational view, agency refers to the motivation and ability of individuals to shape their network, and ultimately to influence the position they reach and the resources they get (Ahuja et al., 2012; Bensaou et al., 2014). To do so, people can engage in networking actions. Those actions are defined as proactive and purposeful efforts made by individuals to create, maintain, and leverage relationships toward professional goals (Bensaou et al., 2014; Kuwabara, Hildebrand, & Zou, 2018; Wolff & Moser, 2009). Networking actions facilitate access to resources such as social support, strategic information, or career opportunities (Forret & Dougherty, 2001; Gould & Penley, 1984; Michael & Yukl, 1993; Wanberg, Kanfer, & Banas, 2000), and are beneficial to those who undertake them. For example, past research has shown that networking fosters career success through promotion, salary progression, and satisfaction (Eddleston, Baldridge, & Veiga, 2004; Forret & Dougherty, 2004; Hwang, Kessler, & Francesco, 2004; Michael & Yukl, 1993; Wolff & Moser, 2009). It improves learning and knowledge acquisition (Leeman & Whymark, 2001; Sonnenberg, 1990), helps entrepreneurs strike deals (Vissa, 2012), and jobseekers find employment (Wanberg et al., 2000). The literature distinguishes several types of networking behaviors (Kuwabara et al., 2018; Wolff & Moser, 2009): *Searching* refers to activities of exploration and tie formation, *maintaining* refers to activities aimed at sustaining and strengthening ties, and *leveraging* refers to activities aimed at extracting valuable resources from relationships.

While past research has focused on the definition and identification of the different networking actions that people undertake, it is equally important to understand the possible antecedents in terms of individual attributes and the potential consequences in term of network structure of those various networking actions. From this perspective, the micro-foundational view of networks considers that differences in people's motives, cognition, and personality may explain differences in networking behaviors, that may in turn explain differences in structural configurations (Kilduff & Lee, 2020; Tasselli & Kilduff, 2020).

On the one hand, studying the antecedents of networking actions would help us understand why people engage in some networking activities and not others, and thus move from a binary perception of networking (i.e., people network or do not) to a more granular view (i.e., people may engage in some networking activities but not others). Some research has so far related personality traits (e.g., Big 5, Machiavellianism, proactive personality, desire for control, or self-esteem) to people's engagement in networking behaviors (Ashford & Black, 1996; Shipilov et al., 2014; Thompson, 2005; Wolff & Kim, 2012), while other research has related people's attitude (e.g., attitude toward workplace politics, attitude toward the utility and morality of networking) to their engagement in networking behaviors (Bensaou et al., 2014; Forret & Dougherty, 2001; Kuwabara et al., 2018).

In the present research, I instead turn my attention to people's motivation. Motivation is a more proximal antecedent of behavior than personality (Landis, 2016), and an individual attribute that may explain differences in the type of network people build (Casciaro, 1998; Shea & Fitzsimons, 2016; Tasselli & Kilduff, 2020). More precisely, I argue that different types of motivations could explain variations in the engagement in networking behaviors.

On the other hand, connecting different type of networking behaviors to different properties of people's network would provide us with a better understanding of how people profit from their networking actions. Indeed, past research in this area has established a link

between networking and tangible career benefits, but without investigating the mediating role of the network structure people shape through their networking actions (Forret & Dougherty, 2004; Wolff & Moser, 2009). However, if networking allows people to obtain valuable resources, we should also observe that networking actions are associated with specific network configurations through which those resources flow. The relationship between networking behaviors and network structure has received limited attention so far (with a few notable exceptions, see Bensaou et al., 2014; Kuwabara et al., 2018; Shipilov et al., 2014) and to this date, it is still not clear whether and how each of the networking behaviors documented in the literature may play a role on specific properties of the network.

The aim of the present paper is therefore to complement past research efforts by proposing an integrative model of networking behaviors. It examines how different motivations (i.e., power, affiliation, achievement) may account for the variance in the engagement in various networking behaviors (i.e., search, maintenance, leverage), and in turn how those various networking behaviors may relate to specific network properties (i.e., size, diversity, density) likely to increase people's network advantage and the resources flowing to them.

THEORY

Networking Behaviors

Networking behaviors refer to attempts made by individuals to create, maintain, or leverage relationships that can help them in their work and career development (Forret & Dougherty, 2004; Higgins & Kram, 2001; Higgins & Thomas, 2001). Search, maintenance, and leverage are three related, but distinct, networking behaviors, imbued with different logics, goals, and forms of engagement (Kuwabara et al., 2018; Wolff & Moser, 2009), and associated with different outcomes. *Search* refers to tie formation and occurs prior the creation of a relationship, it includes identification of needs and opportunities for new ties, and initiation to

approach and establish initial contact (Kuwabara et al., 2018; Vissa, 2012). Search is essentially an activity of exploration aiming "at maximizing the number of new relationships, seeking to broaden the network, and exploring possibilities" (Bensaou et al., 2014, p. 34). Search activities consist at looking for opportunities to establish contact in order to gain visibility (Bensaou et al., 2014), for example, by participating in social events to meet new people, or making the first step to approach people above. *Maintenance* refers to efforts made to affirm, sustain, preserve, deepen or strengthen ties (Kuwabara et al., 2018; Porter & Woo, 2015). The goal of maintenance is to intensify selected relationships and strive for depth (Bensaou et al., 2014), typically by overlaying friendships over purely professional relationships (Vissa, 2012). Maintenance activities consist at getting closer from one's professional relationships (Forret & Dougherty, 2001; Michael & Yukl, 1993), for example, by keeping in touch, attending and organizing lunches and parties, sending greeting cards or giving gifts, engaging in informal conversations about non-work-related topics to get to know each other, or using forms of ingratiation such as praise and congratulations. *Leverage* refers to "accessing or mobilizing resources from others or brokering structural holes" (Kuwabara et al., 2018, p. 12). Leverage is essentially motivated by concerns for resources. It refers to exploitation, that is to activities aimed at extracting value (Bensaou et al., 2014). Typical examples of leveraging activities would be taking a break with someone to get access to the resources he or she has, regularly meeting someone well-informed to get strategic information, or making bold asks about what one wants in terms of promotion, position, or assignment to projects to people who have the power and influence to make things happen.

Motivation to network

Past research has emphasized the role of motivation in networking. For example, Kuwabara and colleagues (2018) conceptualize networking as a motivational problem and argue that acknowledging the benefits of networking may not be sufficient to motivate people

to network. Similarly, Gulati and Srivastava (2014) have developed a theoretical model linking structural constraints to agency, in which motivation represents the reason why people exert agency to change their network. These theoretical pieces underline the importance of motivation in networking actions. However, they do not elaborate on the potential connections between different motivations and different networking actions.

Motivation is the psychological process that causes the arousal, direction, and persistence of a behavior (Atkinson, 1964; Campbell, Dunnette, Lawler, & Weick, 1970; Huse & Bowditch, 1977; Kast & Rosenzweig, 1974; Korman, 1974; Luthans, 1977; Mitchell, 1982). Motivation is an internal force that pushes individuals to satisfy their needs and wants (Yorks, 1976), by energizing them to act, by determining the direction of their action, and by helping them sustain their efforts (Duttweiler, 1986; Russel, 1971).

Motivations for Specific Networking Behaviors

Engagement in networking reflects "the extent to which people commit their emotional, mental, or physical resources and energy toward networking" (Kuwabara et al., 2018, p. 52). Since the actions a person undertake are a function of motivational forces (Casciaro, 1998), it is reasonable to expect that different motivations will be associated with different networking behaviors. The question is then to determine which motivational drivers push people to engage in different networking actions.

In their qualitative work, Bensaou and colleagues (2014) propose a typology of networking strategies implemented by employees in the consulting and auditing industries, and discuss the antecedents of those different networking strategies. They observed that people's networking strategy varies with the "focus" of the individual, that is with the specific motivational force that pushes them to act. For example, people who were concerned with climbing the hierarchical ladder and occupying influential positions within the organization networked extensively. In contrast, those who were focused on the development of expertise

and the mastery of new skills networked very little. Finally, those who saw the company as a "family" and had a strong desire to be part of the firm had intermediate levels of networking activities. From this qualitative work it appears that people's motivation may account for variations in their engagement in various networking behaviors.

More precisely, the different foci that Bensaou and colleagues (2014) describe echo the three different motivations documented by McClelland in his theory of human motivation (1987): power, affiliation and achievement. *Motivation for power* reflects a desire to have impact on others by influencing their emotions, attitudes, and behaviors, to acquire status and prestige (Schönbrodt & Gerstenberg, 2012), and to have control over people and resources (Kalish, 2008). *Motivation for affiliation* reflects a desire to secure and maintain warm and friendly relationships with unfamiliar people and acquaintances, to be liked and accepted by others, and to feel a sense of involvement and belonging within a social group (French & Chadwick, 1956; McAdams, 1980; Sokolowski, 2008). Finally, *motivation for achievement* reflects a desire for significant accomplishments, improved performance, and high standards of excellence. It is associated with intense, repeated and prolonged efforts to master new skills and accomplish complex goals, and characterized by a tendency to seek challenges (Campbell, 1982; McClelland, Atkinson, Clark, & Lowell, 1953; Wallace, Goldstein, & Nathan, 1987).

In the following sub-sections, I formulate hypotheses regarding the connection between those different psychological motives and different networking behaviors.

Motivation for Power and Networking Behaviors

An individual with a strong need for power is likely to focus on the means allowing him or her to increase the degree of influence he or she can exert on others, the level of control over resources, and the prestige and status he or she can get through others (Kalish, 2008). From this perspective, the number of persons this individual can reach, the development of relationships

with key organizational members, as well as the capacity to access valuable resources could be particularly important for this individual. For example, past research has shown that people who aim to improve their structural positions typically search for novel information (Ahuja, 2000; Burt, 1992) and try to increase their influence by managing interdependencies with others (Aiken & Hage, 1968; Brass, 1984; Galaskiewicz, 1982; Gulati & Gargiulo, 1999; Pfeffer & Salancik, 1978). Similarly, those who want to make a career and climb the corporate ladder explicitly seek relationships with others who can give them access to useful resources (Adler & Kwon, 2002; Forret & Dougherty, 2004; Higgins & Kram, 2001; Kram, 1988). In turn, having connections to many others in a network increases the centrality and therefore the power of the individual occupying such position (Brass & Burkhardt, 1993; Landis, 2016): Those central actors can coordinate or limit the flow of information between disconnected individuals (Cook & Whitmeyer, 1992; Yamagishi, Gillmore, & Cook, 1988), and access alternative contacts who can provide them with novel and therefore strategic information (Burt, 1992). Finally, Bensaou and colleagues (2014) observed that employees who were power-oriented and focused on their career advancement were active networkers, and engaged across the entire range of networking actions. For example, they dedicated a lot of time, thought and energy to the expansion of their relationships: They explored their social environment a lot, deepened relationships with key organizational members, and did not hesitate to make bold asks. From those various pieces of evidence, I hypothesize that people motivated by power would be likely to search for new ties, maintain relationships, and leverage contacts to satisfy their needs.

Hypothesis 1: Motivation for power will be positively related to search, maintenance, and leverage activity.

Motivation for Affiliation and Networking Behaviors

A person with a strong need for affiliation is likely to devote a significant part of his or her time and energy to search for new ties and strengthen relationships. Past research has indeed

shown that people with interpersonal affiliation goals seek connections with others (Shea & Fitzsimons, 2016): They want to begin new relationships or maintain and improve the quality of existing relationships (Bleidorn et al., 2010; Cantor, Norem, Niedenthal, Langston, & Brower, 1987; Kumashiro, Rusbult, & Finkel, 2008). It has also been shown that the pursuit of affective ties can influence the pattern of organizational networks (Baker, Cross, & Wooten, 2003; Casciaro & Lobo, 2008; Westphal, Boivie, & Ming Chng, 2006), and in turn some specific patterns of networks can provide such relational benefits (Landis, 2016; Shea & Fitzsimons, 2016). For example, dense cliques and closed networks are likely to satisfy people's need for affiliation by increasing support (Durkheim, 1897), trust (Burt, 1992, 2005; Gelfand et al., 2011; Uzzi, 1997), cooperation (Burt, 1992, 2005; Walker, Kogut, & Shan, 1997), loyalty (Burt, 2005), and by providing individuals with positive identities (Menon & Smith, 2014). Finally, people high in need for affiliation should "view others in terms of friendship and companionship, […] as ends in themselves, rather than means to other goals" (Shea & Fitzsimons, 2016, p. 47). This way of considering others might in turn make difficult to leverage relationships in order to obtain valuable resources.

These various pieces of evidence echo the observations made by Bensaou and colleagues (2014): Employees who saw their work environment as an "extended family" liked meeting new people and building interpersonal relationships through maintenance activities. On the contrary, they avoided disingenuous networking attempts. If they were willing to leverage useful relationships, they did it with care and moderation, and avoided pushy tactics, bold asks, and aggressiveness.

In such a framework, I therefore hypothesize that motivation for affiliation will be associated with search and maintenance activities. However, I do not predict that motivation for affiliation will be associated with leverage: Since people high in need for affiliation view

others as meaningful connections rather than as means to an end, they should not be more likely to extract resources from their contacts.

Hypothesis 2: *Motivation for affiliation will be positively related to search and maintenance.*

Motivation for Achievement and Networking Behaviors

People with a strong need for achievement strive for success through the accomplishment of challenging tasks. Such individuals are likely to focus on the means to accomplish their goals (Casciaro, 1998). As such, they might be particularly willing to leverage people with specific expertise, skills, or competence likely to help them achieve their complex goals.

On the contrary, they might perceive search and maintenance activities as a costly distraction. When people search for new ties, they incur initiation costs (Bala & Goyal, 2000; Gargiulo & Benassi, 1999; Portes & Sensenbrenner, 1993). When people maintain ties, they incur maintenance costs (Bala & Goyal, 2000; Burt, 2002; Feld, 1981). Those costs refer to the time, energy, affect, attention, and other resources invested in the formation and maintenance of ties (Shipilov et al., 2014). In other words, when people engage in networking activities, they incur opportunity costs: They prevent themselves from devoting time and efforts to other activities that would be more useful to the satisfaction of their goals. Given that people with a strong need for achievement focus on the development of expertise allowing them to achieve complex goals, and value their independence, they might perceive search and maintenance activities not only as a hindrance to their independence but also as an obstacle to their goals.

The present argument again echoes the observations made by Bensaou and colleagues (2014). Employees who cared most about developing their expertise and acquiring new skills were the least likely to network: They did not believe that relationships could be forced, and therefore made little effort to broaden or deepen relationships within the organization. However,

they were proud of their expertise, and interested in opportunities that would allow them to further it. As such, they kept track of others' expertise to leverage it and acquire new skills. In this framework, I therefore hypothesize that motivation for achievement will be mainly associated with leverage activities.

Hypothesis 3: *Motivation for achievement will be positively related to leverage activity.*

Consequences of Networking Behaviors

The relative weight of agency (versus structure) in network dynamics has been debated for long time (Bourdieu, 1986; Giddens, 1984; Sewell, 1992). However, conceptual and empirical work have favored structural determinism over human agency (Emirbayer & Mische, 1998; Wellman, 1983; Wellman & Berkowitz, 1988; White, Boorman, & Breiger, 1976). While network scholars have kept calling for a better understanding of the role of human agency in the formation of networks (Bensaou et al., 2014; Emirbayer, 1997; Emirbayer & Goodwin, 1994; Ibarra et al., 2005; Shipilov et al., 2014; Vissa, 2012), limited attention has been devoted to how actors create, maintain, and change structure through their actions (Gulati & Srivastava, 2014).

According to the structural determinism perspective, actors occupying advantageous network positions are supposed to possess the skills, abilities, and motivations to optimally use the resources in their network (Khattab, van Knippenberg, Pieterse, & Hernandez, 2020). In other words, opportunities, and the motivation to seize them, are determined by one's structural position (Burt, 1992): Network structure affects people's views of their social world and their ability to exert agency. In this framework, networking is viewed as mechanistic: It happens because an individual occupies a strategic position (Bensaou et al., 2014).

The goal of the present paper is not to determine whether structure shapes actions (Burt, 1992; Coleman, 1990) or actions shape structure (Bensaou et al., 2014; Khattab et al., 2020;

Shipilov et al., 2014). Instead, I seek to understand whether and how agentic actions, such as various networking behaviors, correlate with different network characteristics.

Few studies have investigated the impact of networking behaviors implemented by individuals on the kind of network they develop. For example, Kuwabara and colleagues (2018) have theoretically conceptualized the link between each type of networking behaviors and different network characteristics. Bensaou and colleagues (2014) have examined in a qualitative study the link between various networking strategies and the size and density of the resulting networks. Shipilov and colleagues (2014) have investigated the impact of "structured-foci networking" (i.e., networking occurring within formal groups designed to encourage members to form personal bonds) and "individually-driven networking" (i.e., networking occurring outside of structured foci) on the diversity of networks. In this paper, I propose to empirically relate each type of networking behaviors (i.e., search, maintenance, and leverage) to specific network characteristics (i.e., size, diversity, and density) that have previously been shown to be core properties of network effectiveness (Reagans & Zuckerman, 2001).

Network Size

Network size represents the number of ties to which an individual is connected. A network with many connections can give people access to multiple sources of tangible and intangible resources necessary for their work performance and career success (Brass & Burkhardt, 1993). In friendship networks, people with many connections can benefit from multiple sources of social support and other psychological resources (Gibbons, 2004). In advice networks, people with many connections can benefit from multiple sources of knowledge, expertise, and information (Baldwin, Bedell, & Johnson, 1997).

From an agentic perspective, engagement in search activities could positively correlate with network size. Indeed, the more time individuals spend searching for new ties, the more people they will meet and add to their network. However, search activity will translate into

increased network size only if, above and beyond meeting new people, those who search for new ties make sure that they remember the people they met (and are remembered by those people). Indeed, search activity does not only consist of meeting new people by participating to every social event or taking any opportunity to introduce oneself. The potential benefit in search activities is not only in the number of people met, but also in the ability to contact them in the future when necessary (e.g., to find a job), or to be contacted by them (e.g., if they have opportunities or resources to offer). For example, McGinn and Tempest (2000) described how Heidi Roizen, a venture capitalist particularly skilled at networking, knew to turn brief conversations with unknown people into memorable ones, and established the communication flow with these new people by sending e-mails after the meeting to let them know she had enjoyed the conversation.

In other words, people who seriously and efficiently engage in search activities will be able to activate an extended network when necessary and will join the network of many others likely to contact them in the future.

Hypothesis 4: *Search activity will be positively related to network size.*

Network Diversity

Network diversity refers to the number of connections that a person has and that are different from him or her on certain characteristics (e.g., gender, nationality, age, expertise, personality, attitude, values, socio-economic background, …). A diverse network is effective insofar as it allows individuals to obtain non-redundant and novel information (Burt, 1992). However, past research has shown that people have a tendency toward homophily (i.e., interacting with people similar to them): They perceive similarity as facilitating communication and social integration, since it makes others' behaviors more predictable, and fosters reciprocity and trust (Brass et al., 2004; Tsui & O'Reilly, 1989; Wagner, Pfeffer, & O'Reilly, 1984). In addition, they are less likely to feel a sense of connection with those who are dissimilar (Rivera,

2012). In other words, because building and maintaining ties with dissimilar (as opposed to more similar) others require a conscious, deliberate, and purposeful effort, people tend to spontaneously create and maintain relationships with others who are more similar to them (Ibarra, 1993; McPherson, Smith-Lovin, & Cook, 2001).

Even people motivated to network tend to find easier to connect with similar others instead of meeting and developing relationships with diverse others (Ingram & Morris, 2007). Given the difficulty people may experience when networking (e.g., emotional discomfort under the form of guilt, or cognitive discomfort under the form of objectification or image risk as shown in Essay 1 and 2), people may renounce connecting with diverse others.

However, networking happens when people make a conscious and deliberate effort to establish connections beyond spontaneous, passive, forced or affective interactions (Bourdieu, 1985; Ingram & Zou, 2008; Kuwabara et al., 2018; Wellman & Berkowitz, 1988). Ties born from networking activities do not emerge naturally or effortlessly (Kuwabara et al., 2018). When people search for new ties, they spend time and efforts developing ties located beyond their usual social circles and therefore increase their chance to meet diverse people. Similarly, people who spend time and effort in maintaining relationships try to convert diverse, and therefore weak relationships, into strong relationships, characterized by high frequency of contact, emotional closeness, and durability (Granovetter, 1973; Kuwabara et al., 2018). I therefore expect search and maintenance activity to be positively related to network diversity.

Hypothesis 5: *Search and maintenance activity will be positively related to network diversity.*

Network Density

Network density refers to the extent to which a person's ties are themselves connected. When a person's ties are disconnected from one another, then this person is said to occupy a brokerage position, which offers multiple advantages (Burt, 1992; Burt et al., 2013; Fang et al., 2015). First, brokers have access to non-redundant information from their diverse contacts.

Second, they can quickly access new information, since there is no intermediary between the source and themselves. Third, they can engage in a brokerage strategy, and decide to either bring together the disconnected groups to which they have access or keep them separate.

The decision to keep a triad open (vs. close it) depends on the type of resources that the broker seeks (Grosser, Obstfeld, Labianca, & Borgatti, 2019; Kuwabara et al., 2018; Lingo & O'Mahony, 2010; Soda, Tortoriello, & Iorio, 2018). For example, people can play a strategy of union (Obstfeld, 2005) to increase trust, cooperation and coordination (Coleman, 1990), or a strategy of disunion (Burt, 1992) to exploit strategic information. Since both strategies have their own advantages, people may flexibly use them depending on the resources they look for.

In any case, past research has shown that brokers are greatly rewarded (e.g., high performance evaluations, generous compensations, early promotions: Burt et al., 2013) for their ability to bring unknown or misunderstood information where it has value (Fang et al., 2015). However, the three types of networking actions (i.e., search, maintenance, and leverage) that the literature describes do not capture those different brokerage strategies and so cannot clarify how different types of networking behavior would generate denser (vs. sparser) network structures. In particular, the concept of "leveraging" (under which brokerage strategies would fall) does not distinguish between the different brokerage strategies that people can implement, as a function of the situation in which they are and the benefits that they seek.

However, one possible prediction is that, since people who seek to build new ties will increase the size and diversity of their network, they could develop sparser networks. Similarly, since people engaged in maintenance activities will maintain relationships with diverse people, above and beyond their usual social circles, their network could be sparser. I therefore expect that both search and maintenance will be negatively associated with network density.

Hypothesis 6: *Search and maintenance activity will be negatively related to network density.*

METHOD

Sample

To test the previous hypotheses, I used a cohort of 126 EMBA students in a Dutch business school. Eighteen participants either did not participate into the survey or did not consent to the use of their data for research purpose. As such those participants were removed from the data before analysis. The final sample included 108 participants (age: $M = 34$, $SD = 4.67$; gender: 34% women; nationality: 42% Dutch, 30% Non-Dutch Europeans, 13% Indian, 8% Chinese).

Procedure

The full network of the cohort was obtained with a roaster containing the names of all students in the cohort. Participants first saw a list containing the names of their classmates, and were then asked to select, from this list, the names of the persons with whom they have had meaningful interactions since the beginning of their training program. Meaningful interactions were explicitly defined as substantial interactions having significant consequences on one's study, work, or social life. In a second step, participants were asked to reflect upon the names they had previously selected. For each name, they indicated the frequency at which they sought advice from this contact on a three-point scale (1 = a few times, but less than once a month; 2 = once or twice a month; 3 = weekly). They repeated the same procedure for their friendship network: They indicated the frequency at which they had socialized with this contact on the same three-point scale.

Those two sets of responses were used to construct two types of networks: The advice (i.e., instrumental) and friendship (i.e., expressive) network. The network literature defines instrumental ties as connections through which work-related resources, information, professional advice, material resources, expertise, or political access are exchanged (Fombrun,

1982; Hill, 1992; Ibarra, 1993; Kanter, 1984; Kotter, 1982; Lincoln & Miller, 1979; Pettigrew, 1973; Tichy, Tushman, & Fombrun, 1979). On the other side, expressive ties refer to friendships and social support, and are characterized by proximity and trust (Ibarra, 1993). However, many relationships are in fact both instrumental and expressive (Kram, 1988; Thomas, 1990). In particular, in the context of an EMBA cohort, a friendship network is not merely a group of friends but also a social system in which decisions are made, resources mobilized, information transmitted or retained, and all sorts of functions performed (Ibarra, 1993; Lincoln & Miller, 1979). As such, all the analysis reported in the paper are based on the aggregate of both networks, and exploratory analyses were conducted on each of the two sub-networks.

After completing this network survey, participants answered questions about their motivation and networking behaviors. They also provided information about their age, gender, nationality, expertise, and attitude toward networking.

Measures

The descriptive statistics of each measure are reported in Table 1. The scales, the operationalization of the network measures as well as the correlations between all variables can be found in the Appendix.

Motivations. The different motivations were measured using the Unified Motive Scale developed by Schönbrodt and Gerstenberg (2012) in which each motive (power, achievement, and affiliation) is captured with three items measured on a 6-point scale going from (1) Strongly disagree to (6) Strongly agree (power: α[1] = 0.76; affiliation: α = 0.72; achievement: α = 0.75). Examples of items include: "I like to have the final say" for power, "Personally, producing

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[1] All Cronbach's alphas are standardized.

work of high quality is important for me" for achievement, and "Encounters with other people make me happy" for affiliation.

Networking Behaviors. Participants were asked how frequently they engaged in different networking behaviors during the previous twelve months on a 7-point scale from (1) Never to (7) Always. Their search and maintenance activities were both measured with four items (search: $\alpha = 0.86$, maintenance: $\alpha = 0.76$), and their leverage activities with five items ($\alpha = 0.84$). To measure these three networking behaviors, I used established scales developed to measure different types of networking behaviors (Forret & Dougherty, 2001; Michael & Yukl, 1993; Shipilov et al., 2014; Vissa, 2012; Wolff, Schneider-Rahm, & Forret, 2011), selected some of their items and adapted them with qualitative descriptions of networking behaviors (Bensaou et al., 2014; McGinn & Tempest, 2000). I then run an exploratory factor analysis in a pilot study to verify the presence of a factor for each networking behavior and reduce the number of items per factor. I finally run a confirmatory factor analysis on the final scale with the sample of the main study to confirm the fit of the three-factor model. Details of these analyses can be found in the Appendix. Examples of items include: "I consciously set aside time for meeting new people" for search, "I take actions to build friendships with my professional contacts" for maintenance, and "When I know that a professional contact has resources I need at her disposal, I ask her for it" for leverage.

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TABLE 1

Descriptive Statistics

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Measures	Mean	Std. Dev.	Min.	Max.
Motivations				
Power	4.29	0.86	2	6
Affiliation	4.32	0.9	2.33	6
Achievement	5.16	0.7	3	6
Networking Behaviors				
Search	4.11	1.28	1.5	7
Maintenance	4.44	1.15	2	6.75
Leverage	4.82	1.16	1.6	7
Network Properties				
Network size				
Out-degree centrality *	0.12	0.08	0	0.35
Reciprocal degree centrality *	0.07	0.04	0	0.25
Network diversity				
Gender	0.02	0.33	-1	1
Nationality	0.7	0.15	0	0.88
Expertise	0.79	0.14	0	0.91
Network density				
Effective size	6.06	5.88	-2.6	24.47
Constraint	0.14	0.07	0.06	0.38
Betweenness *	0.01	0.01	0	0.07

Note. * normalized score

Network Size[2]. Network size can be captured through centrality (Wasserman & Faust, 1994). In particular, I used two measures of centrality: out-degree centrality and reciprocal degree centrality. The first measure, out-degree centrality, counts the number of outgoing ties, and is an indicator of social agency (i.e., how proactive people are in forming ties with others: Brands & Kilduff, 2014). The second measure, reciprocal degree centrality, is the number of reciprocal ties a node has: A tie between nodes i and j exists only if both i and j mention the existence of the relationship. As such, reciprocal degree centrality captures the existence of mutually acknowledged ties. Both measures were normalized (i.e., divided by the highest

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[2] Except for the reciprocal degree centrality, each network measure was computed on a directed network.

possible degree centrality score in the network), and expressed as a percentage of that amount (Borgatti, Everett, & Johnson, 2013).

Network Diversity. Network diversity was captured though three dimensions: expertise, nationality, and gender. To capture diversity in expertise and nationality, I used a measure of variety (Harrison & Klein, 2007): I applied Blau index to the egos' networks based on the two demographic questions about participants' expertise and nationality. A Blau index of zero indicates that all alters of ego belong to the same category (i.e., same nationality or same expertise). To capture gender diversity, I used a coefficient of association (Yule, 1912): I applied Yule's Q to the egos' networks based on the demographic question about participants' gender. Yules's Q takes into account the proportion of alters who share the gender of ego in ego's network, while controlling for the proportion of nodes who share the gender of ego in the whole network (Borgatti et al., 2013). As a correlation coefficient, Q is bounded between -1 and +1: A Q close to -1 indicates that ego tends to connect with people of the opposite gender, whereas a Q close to +1 indicates that ego tends to connect with people of the same gender. A Q close to 0 indicates that ego's gender is not associated with the alters' gender.

Network Density. The three common ways to measure brokerage, or closure around a person, (Brands & Kilduff, 2014; Fang et al., 2015; Landis, 2016) are effective size (Wasserman & Faust, 1994), constraint (Burt, 2005), and betweenness centrality (Freeman, 1977). When a same concept can be captured with different specifications and that the theory does not provide clear answer on a preferred measure, it is important to test them all to avoid type I error (Simonsohn, Simmons, & Nelson, 2019). Effective size is a measure of redundancy in ego's network. It refers to the number of alters an ego has, minus the average number of ties among those alters (Borgatti, 1997). Effective size is maximum when it equals the ego's network size: In this case, none of the alters of the ego is redundant since they are not connected to each other. On the contrary, effective size is minimum when all the ego's alters are connected to each other.

Constraint is a local measure representing the extent to which individual's relationships are connected to each other. As individuals are more constrained, the number of structural holes to which they have access to among their immediate contacts diminishes, and they therefore have fewer brokerage opportunities (Burt, 2005). Thus, low constraints scores represent opportunities for local brokerage. In technical terms, the measure developed by Burt (1992) is a function of size, density, and hierarchy (Landis, 2016). Finally, betweenness centrality is a global measure capturing, across the whole network, the extent to which interactions between disconnected individuals depend on ego (Freeman, 1978). When interactions between disconnected individuals frequently depend on a specific person, then this person has a high betweenness centrality with more brokerage opportunities. In technical terms, betweenness centrality refers to the number of times ego falls on the geodesic path (i.e., the shortest path) connecting two individuals in the network for every pair of nodes (Landis, 2016; Wasserman & Faust, 1994). While constraint is a local measure of brokerage that only captures the direct ties around ego, betweenness is a global measure of brokerage that includes both direct and indirect ties to ego (Landis, 2016). I used the normalized betweenness centrality in which the betweenness score is divided by the maximum possible betweenness and expressed as a percentage.

ANALYSIS & RESULTS

Motivations to Networking Behaviors

I first analyzed the relationships between motivations and networking behaviors. To test hypotheses 1 to 3, I developed a single model in which I treated each motivation and each networking behavior as a latent variable (measured by the survey items that participants answered) and regressed the three types of networking behaviors on the three types of motivations.

To analyze this model, I used a multivariate structural model (Edwards, 2001), also called latent multivariate regression analysis that I estimated through structural equation modeling. For each model, I examined whether the structural coefficients aligned with my predictions. Variables' intercorrelations are reported in Table 2, structural coefficients are reported in Table 3 and graphically represented in Figure 1.

Test of H1: Association between Motivation for Power and Networking Behaviors

I first predicted a positive relationship between motivation for power and each networking behavior. The inspection of the structural coefficients indicates a positive and significant coefficient for search (β = 0.45, p = .010), a non-significant coefficient for maintenance (β = -0.07, p = .37), and a non-significant coefficient for leverage (β = 0.18, p = .36). Hypothesis 1 is therefore only partially supported since motivation for power seems to be positively related to search activities, but neither to maintenance nor to leverage.

Test of H2: Association between Motivation for Affiliation and Networking Behaviors

I then predicted a positive relationship between motivation for affiliation and both search and maintenance. The inspection of the structural coefficients indicates a positive and significant coefficient for both search (β = 0.93, p = .007) and maintenance (β = 0.38, p = .030), and a non-significant coefficient for leverage (β = 0.27, p = .40). Hypothesis 2 is therefore supported.

Test of H3: Association between Motivation for Achievement and Networking Behaviors

Finally, I predicted a positive relationship between motivation for achievement and leverage. The inspection of the structural coefficients indicates a non-significant coefficient for each networking behavior (search: β = -0.07, p = .63; maintenance: β = 0.07, p = .26; leverage: β = 0.17, p = .28). Hypothesis 3 is therefore not supported.

TABLE 2
Correlation Coefficients between Motivations and Networking Behaviors

	1	2	3	4	5
1. Motivation for power	-				
2. Motivation for affiliation	0.23 *	-			
3. Motivation for achievement	0.18 +	0.23 *	-		
4. Search	0.33 ***	0.33 ***	0.08	-	
5. Maintenance	0.07	0.36 ***	0.21 *	0.36 ***	-
6. Leverage	0.16	0.12	0.19 *	0.33 ***	0.37 ***

Note. + $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

TABLE 3
Structural Coefficients (SD) between Motivations and Behaviors

	Networking behaviors		
	Search	Maintain	Leverage
Motivation for power	0.45 * (0.18)	-0.07 (0.08)	0.18 (0.20)
Motivation for affiliation	0.93 ** (0.34)	0.38 * (0.18)	0.27 (0.32)
Motivation for achievement	-0.07 (0.14)	0.07 (0.07)	0.17 (0.16)

Note. * $p < 0.05$, ** $p < 0.01$
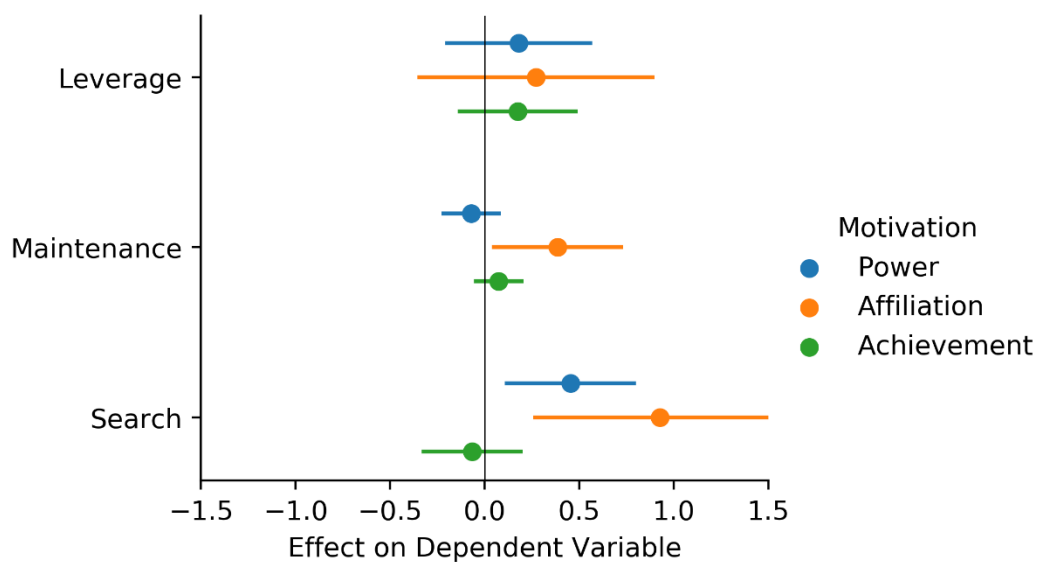
Figure 1. Overview of the effects of Motivations on Networking Behaviors
Note. Each point represents a structural coefficient and its 95% confidence interval.

Networking Behaviors to Network Properties

To analyze the relationship between networking behaviors and different properties of the network, I treated each networking behavior as a latent variable (captured by the individual scores on the survey items answered by participants) and regressed each network characteristic on the three networking behaviors. The eight network characteristics were estimated in separate models[3]. Each model therefore included four variables: The three latent variables describing the networking behaviors, and the one observed variable describing the network property (e.g., out-degree centrality). Variables' intercorrelations are reported in Table 4, structural coefficients are reported in Table 5 and graphically represented in Figure 2.

Test of H4: Association between Networking Behaviors and Network Size

I first predicted a positive relationship between search activity and network size. I captured network size through two variables: out-degree centrality to capture people's ability to extend their network through their networking actions and reciprocal degree centrality to capture reciprocity in the formation of those relationships (i.e., "do the people I consider as making part of my contacts also acknowledge me as such?").

For out-degree centrality, the inspection of the structural coefficients indicates a positive and significant coefficient for both search ($\beta = 0.02$, $p = .008$) and maintenance ($\beta = 0.05$, $p = .028$), and a non-significant coefficient for leverage ($\beta = -0.01$, $p = .27$). For reciprocal degree centrality, the same pattern of results was found (search: $\beta = 0.01$, $p = .016$; maintenance: $\beta =$

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[3] The eight network characteristics were estimated in separate models for several reasons. First, it would be incorrect to assume that those different network characteristics are factor loadings of a latent "network" variable: They do not correspond to a theoretically identified higher-order construct and are not linked together by a linear relationship. Second, it would also be inaccurate to jointly estimate the eight variables as separate responses: This model would seek to estimate participant-specific variance (reflected in the correlation of the responses at the participant level), but the scores on the variables are not independent across participants. Indeed, the network scores of the different participants on one variable are not only a function of their own responses to other variables, but also of the responses of others. This problem is observed in analysis of dyadic responses, or more generally in any setting in which the errors are not independent across participants and cannot be decomposed in systematic and non-systematic variance.

0.03, p = .023; leverage: β = 0.001, p = .67). These results confirm hypothesis 4, but also indicate that maintenance might be positively related to network size as well.

Test of H5: Association between Networking Behaviors and Network Diversity

Next, I predicted a positive relationship between both search and maintenance activity and network diversity. More precisely, I expected that people engaged in search and maintenance activities would have less gender homophile networks and more variety in terms of nationality and expertise in their networks.

The inspection of the structural coefficients indicates that neither search nor maintenance were related to gender heterophily (search: β = -0.004, p = .91; maintenance: β = 0.04, p = .62). However, leverage was positively though marginally related to gender heterophily (β = -0.05, p = .074). Similarly, neither search nor maintenance were related to diversity in terms of nationality (search: β = 0.02, p = .10; maintenance: β = 0.04, p = .29) or expertise (search: β = 0.01, p = .25; maintenance: β = 0.03, p = .46). However, leverage was significantly related to reduced diversity in terms of nationality (β = -0.03, p = .019), but not in terms of expertise (β = -0.01, p = .34). Hypothesis 5 is therefore not supported.

Test of H6: Association between Networking Behaviors and Network Density

Then, I predicted that both search and maintenance activities would decrease network density. Density was captured through three measures: effective size, constraint, and betweenness centrality.

The inspection of the structural coefficients indicates that search and maintenance were indeed positively associated with effective size and so reduced network density (search: β = 1.04, p = .050; maintenance: β = 4.31, p = .022). However, this effect was not stable across measures. When measuring network density with constraint, only search activities were negatively and marginally related to constraint and so reduced density (β = -0.01, p = .066). Similarly, when measuring network density with betweenness centrality, only maintenance

activities were positively and significantly related to betweenness and so reduced density (β = 0.01, p = .025). I then concluded that hypothesis 6 was only partially supported: Only maintenance activities seem to be associated with a lower network density.

TABLE 4

**Correlation Coefficients between Networking Behaviors and Network Properties**

	1	2	3	4	5	6	7	8	9	10
1. Search	-									
2. Maintenance	0.36 ***	-								
3. Leverage	0.33 ***	0.37 ***	-							
4. Out-degree centrality	0.34 ***	0.31 **	0.12	-						
5. Reciprocal degree centrality	0.36 ***	0.4 ***	0.28 **	0.83 ***	-					
6. Gender diversity	-0.07	-0.02	-0.2 *	0.08	-0.02	-				
7. Nationality diversity	0.13	0.11	-0.12	0.35 ***	0.38 ***	0.01	-			
8. Expertise diversity	0.12	0.09	-0.01	0.53 ***	0.46 ***	0.06	0.63 ***	-		
9. Effective size	0.27 **	0.31 **	0.07	0.95 ***	0.73 ***	0.1	0.27 **	0.46 ***	-	
10. Constraint	-0.21 *	-0.18 +	-0.05	-0.68 ***	-0.59 ***	-0.17 +	-0.26 **	-0.47 ***	-0.69 ***	-
11. Betweenness centrality	0.24 *	0.36 ***	0.23 *	0.73 ***	0.81 ***	-0.02	0.24 *	0.36 ***	0.77 ***	-0.56 ***

Note. + p < .1, * p < .05, ** p < .01, *** p < .001

TABLE 5

Structural Coefficients (SD) between Behaviors and Structure

| Networking Behaviors | Network Structure | | | | | | | |
| | Network Size | | Network Diversity | | | Network Density | | |
	Out-degree centrality	Reciprocal degree centrality	Gender	Nationality	Expertise	Effective size	Constraint	Betweenness centrality
Search	0.017 ** (0.007)	0.008 * (0.003)	-0.004 (0.031)	0.023 (0.014)	0.015 (0.013)	1.039 + (0.529)	-0.011 + (0.006)	0.001 (0.001)
Maintain	0.050 * (0.023)	0.026 * (0.011)	0.044 (0.087)	0.043 (0.04)	0.027 (0.036)	4.312 * (1.888)	-0.027 (0.018)	0.008 * (0.004)
Leverage	-0.007 (0.006)	0.001 (0.003)	-0.055 + (0.031)	-0.032 * (0.014)	-0.012 (0.013)	-0.741 (0.499)	0.006 (0.006)	0.000 (0.001)

Note. + p < .1, * p < .05, ** p < .01
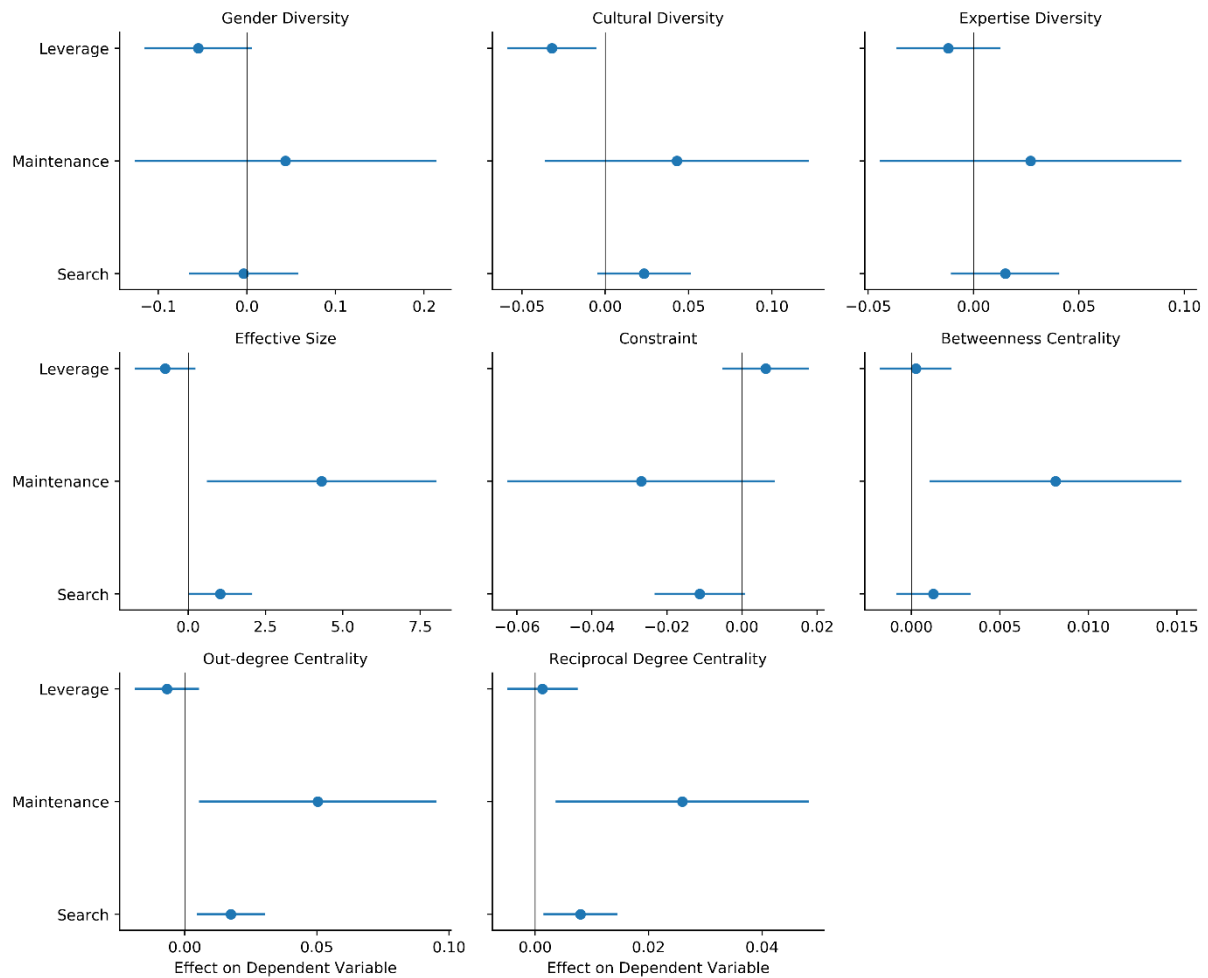
Figure 2. Overview of the effects of Networking Behaviors on Network Properties
Note. Each point represents a structural coefficient and its 95% confidence interval.

Exploratory Analyses

In an exploratory analysis, I re-ran the second part of the model on the friendship network on one side, and on the advice network on the other side. The structural coefficients for each network are reported in Table 6. The results show that both search and maintenance were positively associated with an increase in network size in the friendship network (ODC: search: $\beta = 0.02$, $p = .006$, maintenance: $\beta = 0.04$, $p = .04$; RDC: search: $\beta = 0.01$, $p = .01$, maintenance: $\beta = 0.02$, $p = .03$) and that maintenance was positively associated with a reduced network density in the advice network (effective size: $\beta = 4.02$, $p = .03$; constraint: $\beta = -0.04$, $p = .07$; betweenness: $\beta = 0.01$, $p = .03$). It also seems that leverage activities reduce network

diversity in terms of nationality in both networks (friendship network: $\beta = -0.04$, $p = .04$, advice network: $\beta = -0.03$, $p = .049$).

I then verified whether networking behaviors were associated with relationships of different strength. The strength of relationships refers to the frequency, duration, and closeness of a relationship (Granovetter, 1973). Weak and strong ties present both advantages and disadvantages. Because weak ties are infrequent and distant relationships, they allow to reach distinct social circles, with distinct pockets of content, and so provide access to novel information by bridging otherwise disconnected groups (Granovetter, 1973; Hansen, 1999; Perry-Smith, 2014). In contrast, strong ties are likely to give access to redundant information because strong ties are typical of small groups in which everyone knows what everyone else knows (Hansen, 1999). However, and contrary to weak ties, strong ties favor the transfer of complex knowledge (Hansen, 1999), as well as the development of trust, reciprocity, cooperation and coordination (Coleman, 1990).

Relationships developed through networking are typically considered to be weak (Keele, 1986), and therefore a good source of information about strategic information, career tips or job opportunities (de Janasz & Forret, 2008). However, those "networking relationships may also evolve intro stronger ties […] if contact becomes more frequent, and the relationship becomes characterized by greater familiarity and comfort" (de Janasz & Forret, 2008, p. 632).

Since search activity consists of meeting new people, people strongly engaged in this activity should count more weak ties in their network. On the contrary, since maintaining relationships consists of deepening and strengthening relationships with selected others, people strongly engaged in this activity should count more strong ties in their network. I measured tie strength as the average strength of ties for each node in the general network. I then ran a structural equation model by regressing this dependent variable on the three networking behaviors (as captured by the survey items that participants answered). The inspection of the

structural coefficients indicates that search was indeed negatively related to the strength of relationships (β = -0.07, p = .047), but maintenance was not (β = -0.11, p = .25), and leverage was positively though marginally associated with tie strength (β = 0.05, p = .08).

TABLE 6

Structural Coefficients (SD) between Behaviors and Structure for FRIENDSHIP Network

Networking Behaviors	Network Structure							
	Network Size		Network Diversity			Network Density		
	Out-degree centrality	Reciprocal degree centrality	Gender	Nationality	Expertise	Effective size	Constraint	Betweenness centrality
Search	0.017 ** (0.006)	0.008 * (0.003)	0.01 (0.039)	0.028 (0.019)	0.034 + (0.019)	1.223 * (0.538)	-0.014 (0.011)	0.002 (0.001)
Maintain	0.042 * (0.021)	0.022 * (0.01)	-0.065 (0.109)	0.089 (0.057)	0.043 (0.052)	3.085 + (1.756)	-0.045 (0.034)	0.009 * (0.005)
Leverage	-0.004 (0.006)	0.002 (0.003)	-0.006 (0.037)	-0.036 * (0.018)	-0.019 (0.018)	-0.383 (0.498)	-0.006 (0.011)	0.000 (0.001)

Structural Coefficients (SD) between Behaviors and Structure for ADVICE Network

Networking Behaviors	Network Structure							
	Network Size		Network Diversity			Network Density		
	Out-degree centrality	Reciprocal degree centrality	Gender	Nationality	Expertise	Effective size	Constraint	Betweenness centrality
Search	0.01 + (0.006)	0.005 + (0.003)	0.02 (0.034)	0.021 (0.015)	0.008 (0.015)	0.633 (0.515)	-0.01 (0.006)	0.001 (0.001)
Maintain	0.035 + (0.018)	0.015 + (0.008)	0.139 (0.1)	0.049 (0.042)	0.063 (0.045)	4.024 * (1.809)	-0.036 + (0.02)	0.008 * (0.004)
Leverage	-0.005 (0.005)	0.001 (0.002)	-0.075 * (0.034)	-0.028 * (0.014)	-0.022 (0.015)	-0.909 + (0.497)	0.008 (0.006)	0.000 (0.001)

Note. + $p < .1$, * $p < .05$, ** $p < .01$

DISCUSSION

Summary

In this paper, I investigated the relative impact of three types of motivation (i.e., power, affiliation, and achievement) on three types of networking behaviors (i.e., search, maintenance, and leverage), and found partial support for the hypotheses. Motivation for power was positively related to search, but not to maintenance or leverage; motivation for affiliation was positively associated with both search and maintenance; motivation for achievement was not related to leverage.

A post-hoc explanation for the null results between motivation for power and both maintenance and leverage might be that people who have a strong motivation for power are motivated to network, but mainly see networking as efforts made to meet new people. People might not necessarily know that networking goes above and beyond search activities, and that those search actions by themselves might not be sufficient to help them benefit from their networks. People might indeed see meeting new people as a necessary and sufficient condition to the development of their network, and might believe that once they have met new people, the relationships with those new contacts will develop, grow, and strengthen and resources will naturally flow through the relationships without them needing to maintain or leverage the relationships.

Besides, motivation for achievement appears to be unrelated to leverage activity. Again, a post-hoc explanation justifying this null result can be found in previous research and in the definition of motivation for achievement. One of the characteristics of motivation for achievement is the tendency to look for a high degree of independence (Campbell, 1982; Wallace et al., 1987). If people with strong motivation for achievement tend to particularly value their independence towards others, they might then perceive leverage activities as a debt

owed to others. In consequence, they might see leveraging as a cost rather than as an opportunity to extract valuable resources such as expertise, knowledge, or information, which might in turn demotivate them to network.

I have also investigated the relative impact of those different network behaviors on chore properties of the network (Reagans & Zuckerman, 2001), such as size, diversity, or density. I found that both search and maintenance were related to an increase in network size. However, neither search nor maintenance were related to an increase in network diversity. Finally, maintenance, but not search, was associated with reduced network density.

Theoretical Implications

From a theoretical perspective, this paper is an additional step toward a better understanding of networking behaviors, their antecedents in term of motivation and consequences in term of network structure. The present essay complements the view of previous authors who have argued that networking behaviors find their roots in people's motivation (Bensaou et al., 2014; Gulati & Srivastava, 2014; Kuwabara et al., 2018) by developing a theoretical argument connecting different types of motivation to different types of networking behavior, and providing empirical evidence in support of this argument. The results show that while motivation might play a role, this role might be weaker than expected. Indeed, motivation for power seemed to be only associated with an increased engagement in search activities (but not in other types of networking behaviors), while motivation for achievement seemed to be unrelated to networking behaviors.

The present paper also develops a theoretical argument on the downstream consequences of each networking behavior in term of network structure, and empirically tests this model. As such, this essay may help us better understand the link between networking behaviors and outcomes such as pay raise, promotion, or career opportunities (Eddleston et al.,

2004; Forret & Dougherty, 2001, 2004; Gould & Penley, 1984; Hwang et al., 2004; Leeman & Whymark, 2001; Michael & Yukl, 1993; Shipilov et al., 2014; Sonnenberg, 1990; Vissa, 2012; Wanberg et al., 2000; Wolff & Moser, 2009). However, the results again show that the association of networking behaviors to specific network properties might be weaker than expected. Indeed, if search and maintenance were associated with increased network size, they were unrelated to network diversity, and only maintenance was related to reduced network density. However, those results should not be interpreted as evidence in favor of the structural determinism perspective: More research is indeed necessary to understand the link between networking behaviors and network properties, as well as the circumstances under which this link might be present (Stevenson & Greenberg, 2000).

Gulati and Srivastava (2014) have developed an argument that might explain the lack of significant results on the two parts of the hypothesized model (i.e., link between motivations and networking behaviors and link between networking behaviors and network properties). The motivation to network and the subsequent networking behaviors resulting from it might be conditional on the positions occupied in the network. People might be particularly motivated to network when they are embedded in structurally constrained networks that prevent them from satisfying their motivation for power, affiliation, or achievement (Khattab et al., 2020). Those constraints might push them to network and flexibly use different networking behaviors. Those networking behaviors might ultimately reduce the structural constraints in which people were initially embedded and translate into a more advantageous network position. On the contrary, when people are already embedded in an advantageous network structure, networking might not help them shape an even more favorable network, but might help them accumulate resources (e.g., access to strategic information, to key actors, to political support, increased visibility, fast promotion).

Practical Implications

One implication of the present paper is that it might be important to communicate to people that networking consists of a set of different behaviors, and that each behavior has its own logic and may satisfy specific goals. Distinguishing each networking behavior depending on individuals' motivations and its benefits in term of network structure might help people network by pinpointing exactly which behavior should be undertaken to help them reach their goal.

In addition, given the multiple costs people associate with networking (Agneessens & Wittek, 2012; Bala & Goyal, 2000; Bensaou et al., 2014; Burt, 2002; Feld, 1981; Gargiulo & Benassi, 1999, 2000; Kuwabara et al., 2018; Nebus, 2006; Wanberg et al., 2000, as well as Essay 1 and 2), giving them insights on the links between different motivations, different networking behaviors, and different network properties might help them network more efficiently by limiting costs they do not need or do not want to bear.

Finally, employees with a strong need for achievement should be particularly targeted: While they can be both a source of knowledge and expertise for other organizational members, and a source of success for the organization through the challenging tasks they accomplish, those employees seem reluctant to network. Making them understand that relationships are not just a cost or a burden, but could in fact help them accomplish their goals, might facilitate their engagement in networking actions, and by extension the exchange of knowledge within organizations.

Limitations

The current study has multiple limitations. First, the study has limited internal validity: This study is indeed correlational and does not allow to infer causal links between the different variables. In particular, students had started the program six months before doing the survey

and had already a position in the network of their cohort when the survey was run, preventing from causally linking their networking behaviors to the structure of their network.

Second, networking behaviors were self-reported which may raise questions about the validity of responses. Participants were asked to recall the extent to which they networked in the past twelve months. Except for people who regularly network, such recall may not be easy. In addition, in a social context such as an EMBA program, in which networking is valued, people might overestimate the frequency with which they network. One solution to avoid such problem would be to ask participants to daily report their networking actions, but of course this diary on their networking activity could be done only on a short period of time (e.g., one to three weeks).

Third, the sample characteristics must be considered. First, a portion of students participated into the study but refused to have their data used for research purpose. I cannot exclude the possibility that this self-selection was not random, and that those students might share specific characteristics that bias the sample. For example, students who view their network as a tool to reach their goals might be more reluctant than others to give strangers access to their motivation, to the pattern of their networking behaviors, as well as to their network data. In addition, another portion of students simply did not participate into the study. The network to which I got access is therefore a truncated version of the real network of this cohort, and results inferred from it must be considered with caution. Second, the sample size (i.e., 108 participants) might have been too small to detect the hypothesized effects. As such, the null results should be interpreted accordingly.

Finally, the external validity of this sample is limited as well: The students were Executive MBA students which make them a very specific population to study networking behaviors. Indeed, those types of students have generally been largely exposed to the benefits of networks and networking and may even have learned some techniques to network effectively.

The findings obtained in this sample might therefore not generalize to less idiosyncratic populations. In addition, one of the motivations people generally have when they register to this kind of program is to meet new people, get access to a large pool of alumni, and benefit from a network of key actors in which flow strategic information for their career. In such social context, people might show a high degree of homogeneity in their perception of networking and their motivation to network, which in turn may be problematic to study networking behaviors and their impact in terms of network structure. The data confirmed this idea: Participants reported their attitude toward the morality and utility of networking on a 7-point scale, a high score indicating a negative attitude toward networking. The median score was 1.67, and the third quartile was 2.37, indicating that most students saw networking as useful and not immoral, or at least amoral, which indicates that they had positive attitude toward networking, tended to feel comfortable and motivated to network.

Directions for Future Research

An important progress would be to establish the causal link between networking behaviors and network structure. A longitudinal study run with a sample of individuals assigned to a new role or a new organization (e.g., a new department, a new business unit, or a new company branch) would provide for stronger causal evidence. Indeed, since people who have just joined an organization are not yet embedded in the organization, surveying them on their motivation at the time they join their position, three months later on their networking behaviors, and three months later on their organizational network would increase our ability to infer causality among those variables.

Past research has looked at the impact of different personality traits on the engagement in networking behaviors (Ashford & Black, 1996; Shipilov et al., 2014; Thompson, 2005; Wolff & Kim, 2012). The present essay studies the impact of different motivations on this engagement. Future research could investigate the role of cognition in people's engagement in

networking, and study how individuals' perception of their social networks could affect their engagement in networking actions (Brands, 2013).

The concept of "leverage" in networking would deserve more theoretical and empirical investigation. In its current form, leveraging behavior should foremost correlate with outcomes such as assignment to developmental missions, performance evaluations, payroll increase, or promotions, rather than with network structure. The theoretical definition and operationalization of this activity does not allow to connect the behavior to specific network structures. Indeed, leverage has been largely conceptualized and operationalized as attempts to extract valuable resources from relationships, without explicating the process used to do so. In other words, leveraging captures whether people extract resources from others but not how they do so. However, as soon as these leverage activities occur in a triad, leveraging may imply different brokerage processes, such as mediation, union or disunion (Obstfeld, Borgatti, & Davis, 2014), resulting in different network structures in terms of density and strength of relationships. For example, people willing to network and embedded in triads may decide to mediate the relationship between two disconnected alters: By playing the role of a conduit, they might increase their prestige and influence. Alternatively, they may decide to introduce the parties to each other, facilitate interactions, and pursue coordination for the success of a complex project for example. Finally, they may decide to actively maintain and exploit unfamiliarity or competition between parties for their personal benefit. A more comprehensive definition of leveraging activities should therefore integrate those different brokerage strategies.

If the present research investigates the relationships between motivations and networking behaviors, as well as the relationships between networking behaviors and network properties, other scholars could investigate the mediating role of networking behaviors in the relationship between motivations and network properties (Casciaro, 1998; Flynn, Reagans, & Guillory, 2010). Besides, if the present research gives insight on the link between networking

behaviors and network properties, investigating the mediating role of network properties in the relationship between networking behaviors and access to tangible outcomes (e.g., good performance evaluation, pay raise, promotion, assignments to developmental projects) would help us understand how networking helps people access valuable resources through better network configurations.

Another interesting venue would be to investigate how people combine different networking behaviors. On the one hand, those who network the most are probably using a combination of the three types of networking behaviors, which should in turn give them access to advantageous network structures. By searching for new contacts, they get access to new pockets of information. Among those new contacts, they can select individuals with whom to maintain relationships because they are key organizational actors (for example, a manager, an expert, a mentor). Then, they can flexibly decide whether to leverage weak ties obtained through their search activity, or strong ties obtained through their maintenance activity, depending on the type of resources they are looking for (e.g., job tips or codified knowledge through weak ties, mentoring or tacit knowledge through strong ties, Hansen, 1999). They can also decide, depending on their goals and the benefits they seek to obtain, how to broker structural holes (i.e., with a strategy of mediation, union or disunion).

On the other hand, those who network the least might be more constrained in what they can access: Someone only engaged in search or maintenance activity might have access to a lot of non-redundant information but might be unable to fully benefit from it if he or she never leverages those relationships. Similarly, someone who only leverages relationships might lack access to novel information: He or she would either reach out to close ties who would have redundant information, or to external ties that are so weak that they would not share what they know. Finally, people who only search and leverage without maintaining might also prevent

themselves from getting access to certain resources requiring time, trust, and proximity within the relationship.

Finally, understanding the evolution in the engagement in networking behaviors over time would be of interest. The relationships born from networking at time t might have various effects at time t+1: Those relationships will either constrain or facilitate individuals' actions and access to resources. Past research has also shown that instead of continuously engaging in brokering behaviors, people would be better of oscillating between intermittent and punctuated brokering actions to get access to new strategic information, and periods in which they retreat within cohesive networks to strengthen trust and cooperation with their relationships (Burt & Merluzzi, 2016). Similarly, efficient networking strategies could consist at alternating between periods of pursuit of individual advantages with periods of retreat within a close and dense network favoring support, trust, cooperation, and loyalty (Burt, 1992, 2005; Durkheim, 1897; Gelfand et al., 2011; Uzzi, 1997; Walker et al., 1997).

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APPENDIX

Measures

Attitude toward Networking scale

From Ko Kuwabara.
Please, indicate to which extent you agree with the following statements.
Measured on a 7-point scale from (1) Strongly disagree to (7) Strongly agree

- o Attitude toward the morality of networking:
    1. Networking is unfair
    2. Networking is inauthentic
    3. Networking is dirty
- o Attitude toward the utility of networking:
    4. Networking is useless
    5. Networking is unrewarding
    6. Networking is a waste of time

Motivations scale

From Schönbrodt and Gerstenberg (2012)
For each of the following items, please indicate to which extent you agree.
Measured on a 6-point scale from (1) Strongly disagree to (6) Strongly agree

- o Power:
    1. Having the opportunity to exercise control over an organization or group is important for me.
    2. Being able to exert influence is important for me.
    3. I like to have the final say.
- o Achievement:
    4. Maintaining high standards for the quality of my work is important for me.
    5. Personally, producing work of high quality is important for me.
    6. Working on projects that challenge me to the limits of my ability is important for me.
- o Affiliation:
    7. I try to be in the company of friends as much as possible.
    8. Being engaged in a lot of activities with other people is important for me.
    9. Encounters with other people make me happy.

Networking Behaviors scale

Based on a literature review of networking behaviors (Bensaou et al., 2014; Forret & Dougherty, 2001; McGinn & Tempest, 2000; Michael & Yukl, 1993; Shipilov et al., 2014; Vissa, 2012; Wolff et al., 2011), 30 items capturing each networking behavior (9 items for search, 12 items for maintenance, and 9 items for leverage) were generated. A pilot study run on Prolific with 166 participants was then used to test the factor structure of the items and develop shorter scales.

I first analyzed their response in an exploratory factor analysis using maximum-likelihood estimation and allowing for factor correlation, with direct oblimin rotation. Among the 12-maintenance items, 4 were reverse-coded (i.e., a high score indicated a low level of maintenance activity). Eliminating those four items produced the expected three-factor solution with eigen-vectors above 1 (4.22 for search, 3.61 for leverage, 1.92 for maintenance). Based on the item loadings on the hypothesized factor, on the reliability indices of various three-factor models, and on theoretical and logistic considerations, I selected 13 items in total: 4 items for search ($\alpha = 0.86$), 4 items for maintenance[4] ($\alpha = 0.76$), and 5 items for leverage ($\alpha = 0.84$), all measured by asking participants how frequently they engaged in the following actions during the previous twelve months on a 7-point scale from (1) Never to (7) Always.

Using the sample of my main study, I then verified in a confirmatory factor analysis that this scale had an adequate level of fit and that the three-factor model was better than a single-factor model or various two-factor models. The following fit indices indicate an acceptable level of fit with a CFI larger than 0.90 (0.94), and a RMSEA slightly smaller than 0.08 (0.076). Besides, the three-factor model fitted the data better than all more parsimonious models according to difference in multiple fit indices. For example, the difference in chi-square[5] between the three-factor model was significant when compared to a single-factor model ($\Delta\chi^2 = 242.19$; $\Delta df = 3$; $p < .001$) and to various two-factor models combining search and maintenance ($\Delta\chi^2 = 113.12$; $\Delta df = 2$; $p < .001$), search and leverage ($\Delta\chi^2 = 156.45$; $\Delta df = 2$; $p < .001$), or maintenance and leverage ($\Delta\chi^2 = 104.45$; $\Delta df = 2$; $p < .001$). Similarly, the SRMR of the three-factor model was below the recommended threshold of .08[6] (.07), while the SRMR of the single-factor model (.13) and of various two-factor models combining search and maintenance (0.11), search and leverage (.12), or maintenance and leverage (.10) was above this threshold. Finally, the three-factor model had the lowest BIC (4721.9) compared to a single-factor model (4950.02) and various two-factor models combining search and maintenance (4828.64), search and leverage (4868.96), or maintenance and leverage (4816.96), and this difference in BICs was stronger than 10[7].

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[4] One of the items, originally reverse-coded, was changed to a regular item.

[5] A significant difference in chi-square statistics indicates that the larger model with more estimated parameters and fewer degrees of freedom is better than the smaller model with less estimated parameters and more degrees of freedom (Werner & Schermelleh-Engel, 2010).

[6] To show evidence of a good fit, the SRMR must be below 0.08 (Hu & Bentler, 1999).

[7] A BIC difference of 10 is a strong evidence that the model with the lowest BIC fits best (Raftery, 1995).

How frequently did you engage in the following actions during the previous twelve months?
Measured on a 7-point scale from (1) Never to (7) Always

- o Search:
    1. When I attend social events (e.g., parties, networking events, alumni meetings, hobby associations etc.), I build connections with people I did not know before.
    2. I consciously set aside time for meeting new people.
    3. I seize as many opportunities as possible to meet new people.
    4. When I have the opportunity to establish contact with a new person, I go ahead and introduce myself.
- o Maintenance:
    5. I make an effort to stay in touch with former colleagues even when one of us moves jobs.
    6. I take actions to build friendships with my professional contacts.
    7. I socialize with my professional contacts.
    8. I organize events (e.g., drinks, parties, dinners, outdoor activities) to see my professional contacts outside of a work context.
- o Leverage:
    9. When I know that a professional contact could help me get in contact with someone else I'm interested in, I ask him/her to introduce me.
    10. When I know that a professional contact has resources I need at her/his disposal, I ask him/her for it.
    11. When I know that a professional contact could help me get a job position, I ask him/her to put in a good word for me.
    12. When I identify someone as competent, I seek opportunities to work with him/her.
    13. If a friend can be of use to me professionally, I ask him/her for what I need.

Operationalizations of Network Scores

Concept	Measure	Formula	Details		
Diversity	Blau index	$1 - \Sigma p_k^2$	k, number of categories p, proportion of ties per category		
Diversity	Yuel's Q	$\dfrac{ad - bc}{ad + bc}$		Same Gender	Different Gender
			Tie	a	b
			No tie	c	d
Density	Effective size	$n - \dfrac{2t}{n}$	n, the total number of nodes in the egocentric network (excluding ego) t, the number of ties among alters (excluding ties to ego)		
Density	Constraint	$c_{ij} = \left(p_{ij} + \Sigma_q\, p_{iq}\, p_{qj} \right)^2$	i, the ego j, the alter q, another alter between i and j p_{ij}, the proportion of edge weigths from i to j $p_{iq} p_{qj}$, the amount of resources the ego i and the alter j can indrectly share through q		
Density	Betweenness centrality	$b_j = \Sigma \dfrac{g_{ijk}}{g_{ik}}$	g_{ijk}, the number of geodesic paths connecting i and k through j g_{ik}, the total number of geodesic paths connecting i to k		

Correlations between Motivations, Networking Behaviors, and Network Properties

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Motivation for power	-												
2. Motivation for affiliation	0.23 *	-											
3. Motivation for achievement	0.18 +	0.23 *	-										
4. Search	0.33 ***	0.33 ***	0,08	-									
5. Maintenance	0,07	0.36 ***	0.21 *	0.36 ***	-								
6. Leverage	0,16	0,12	0.19 *	0.33 ***	0.37 ***	-							
7. Out-degree centrality	0,03	0.19 +	-0,04	0.34 ***	0.31 **	0.12	-						
8. Reciprocal degree centrality	0,02	0.22 *	-0,03	0.36 ***	0.4 ***	0.28 **	0.83 ***	-					
9. Gender diversity	-0,04	0,07	0,07	-0,07	-0,02	-0.2 *	0.08	-0.02	-				
10. Nationality diversity	0,00	0,15	-0,04	0,13	0.11	-0.12	0.35 ***	0.38 ***	0.01	-			
11. Expertise diversity	0,05	0,14	-0,08	0,12	0.09	-0.01	0.53 ***	0.46 ***	0.06	0.63 ***	-		
12. Effective size	0,04	0.19 *	-0,05	0.27 **	0.31 **	0.07	0.95 ***	0.73 ***	0.1	0.27 **	0.46 ***	-	
13. Constraint	-0,04	-0,11	0,01	-0.21 *	-0.18 +	-0.05	-0.68 ***	-0.59 ***	-0.17 +	-0.26 **	-0.47 ***	-0.69 ***	-
14. Betweenness centrality	-0,03	0.19 *	-0,08	0.24 *	0.36 ***	0.23 *	0.73 ***	0.81 ***	-0.02	0.24 *	0.36 ***	0.77 ***	-0.56 ***

Note. + p < .1, * p < .05, ** p < .01, *** p < .001