

Master Thesis Strategic Human Resource Leadership

*How do the Members of In-company and Professional Women Networks Perceive Their
Networks?*

Study: Strategic Human Resource Leadership

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Preface

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I hope everyone enjoys reading this thesis!

Carolin Schmidt

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Abstract

Prior research focuses on the concept of in-company women networks in organizations. Less was known about the concept of professional women networks. This qualitative research project investigated three women networks. Two networks carried characteristics of both in-company women networks and professional networks and were located within one organization. The six interviewees of these two networks were only board members. One network only entails elements of professional networks. The six interviewed respondents of this network were rather members with board functions or members without board functions. Based on prior theory of network characteristics, the perceptions of the network members on their networks were explored. The characteristics of the women networks were: reasons for entry, goals of networks, strategy of networks, structure and culture, activities and perceived results. Regarding the specific concept of in-company and professional women networks, some elements were not theoretically described. This research helped to fill the theoretical gap. Furthermore, theory about the three developmental stadia by Donnellon and Langowitz (2009) served as analytical lens for analyzing the developmental stadia of the three networks. First, the three networks were analyzed based on prior theory, which filled the theoretical gap. Second, the two concepts were compared with each other. At last, recommendations were made for each network individually.

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1. Introduction

The present study concerns women's social networks. In this section, the background, aim, and research questions of the study are explained.

According to Bogatti and Foster (2003), social networks consist of a set of actors, who are connected to each other by ties. The actors can be represented by individuals, a group, or an entire organization. The ties through which they are connected can be strongly or weakly connected, depending on the duration of the relationship between the actors, the interaction between actors, and the frequency of the contact (Haythornthwaite, 2005). According to Uzzi (1997), ties are characterized by how people interact with each other. In organizations, connections between employees form the basis for their networks (Brass, Galaskiewicz, Greve & Tsai, 2004). The way employees are connected with each other in an organization has an impact on them. New employees, for instance, can reach a higher position faster when they are weakly connected with their colleagues (Granovetter, 1983). Furthermore, Brass et al. (2004) defined networks as the connection between actors and organizations. They analyzed the effect of networks on the interpersonal level, the inter-unit level and the inter-organizational level. They found that networks in organizations result in several benefits for the network members such as: shared information, shared attitudes, communication and collaboration between network members as well as increased access to resources. However, the outcomes of networks differ per group in organizations. Groups with similar demographic backgrounds, for instance, can create social barriers for groups with dissimilar demographic backgrounds (Westphal & Milton, 2000). The social barriers in turn, lead to a restriction for minority members on their influence on decision-making processes in these groups. Female employees in organizations are a case in point. They are a minority group at the management level (Due Billing, 2011). Nowadays, the top leadership positions are still more often occupied by men than by women. Although the percentage of women in higher positions is growing (Acker 2009), women still occupy lower positions in organizations than men (Ibarra, Carter & Silva, 2010). There is evidence that women have less access to and are excluded from men's networks (Burke, Rothstein & Bristor, 1995). Moreover, women have different career paths from and earn less for the same jobs than men (Ibarra, 1992).

Such discrepancies between women and men are based on gender stereotypes, traditional power hierarchies, and group identities (Burke, 1999). Potential explanations for the differences between women and men in organizations are embedded in the assumption that managerial jobs are associated with stereotypically masculine characteristics like instrumentality, autonomy and result-orientation (Due Billing & Alvesson, 2000). The powerful men in higher positions tend to hire men. As a result, the process of exclusion of

women in higher positions is perpetuated and the men-dominated culture in organizations is maintained through the networking behavior of men's (Campbell, 1988). Forret and Dougherty (2004) investigated the relationship between the involvement in networking behaviors and both the perceived and objective career success outcomes and how this relationship differs between women and men. They found that some forms of network behavior have a relationship with career outcomes. The involvement in these network behaviors had more advantages for men's than for women's career development (Forret and Dougherty, 2004). Women and minority groups in organizations have fewer connections in organizations compared to men (Forret & Dougherty, 2001). Men have more influential connections and invest little time and effort is desired to maintain these connections. Similar networking behaviors have different impacts for women and men in organizations (Forret & Dougherty, 2001).

Due to the circumstances described above, female employees in organizations have created their own internal networks in order to reduce the inequalities between men and women. The concept of women networks has been recognized for more than 30 years (Donnellon & Langowitz, 2009).

The concept of women networks can be further divided into different forms networks. According to Travers, Steven, and Pemberton (1997), the three following distinctive forms of women networks have developed: Professional networks, in-company networks, and training networks. Through professional networks, women with comparable occupational categories are connected in order to share information and guide their careers. In-company networks are located within organizations and can be categorized into formal and informal arrangements. Training networks, the third form of networks, provide groups of women with similar trainings. This research focuses only on two of those network forms: in-company networks and professional networks. Trainings networks are excluded from this research because these networks have a greater focus on the coaching character.

Women networks are perceived in various ways: Women networks are perceived as a helpful instrument for women to improve the way how they work (Cross & Armstrong, 2008). Furthermore, in a collective sense, the group also benefits from networks because within groups knowledge is shared amongst the members (Cross et al., 2008). In addition, some organizations perceive the implementation of women networks as a tool for them to increase internal opportunities (Donbellon & Langowitz, 2009) for a gender-diverse organization. An advantage of a gender-diverse constellation of individuals, for example in the board of an organization, is that this can lead to solving of difficulties from different points of views

(Hillman, Shropshire & Cannella, 2007). Women networks within organizations support personal development for individual female employees which in turn promotes the overall success of a company (Donnellon & Langowitz, 2009). This means that both companies and women benefit from the implementation of women networks.

This study focusses on two forms of women network. First, in-company women networks, which are, according to Bierema (2005), formally structured groups that arrange networking events and establish advice plans for women employees in organizations (Bierema, 2005). Prior literature described elements of in-company networks, as for instance the goals, the structure, and the perceived results of these networks (O'Neill, Hopkins & Sullivan, 2011). The second focus lies on professional women networks. The members of professional networks are connected through a specific discipline they belong to (Galaskiewicz, 1985). According to Galaskiewicz (1985), the internal regulation within professional networks is not fixed (Galaskiewicz, 1985). However, in literature, less is known about the elements and characteristics of professional women networks than about the elements and characteristics of in-company women networks. This leads to several aims of this study. First, to contribute to the literature on professional women networks by exploring in what respects the characteristics of in-company women networks agree with the characteristics of professional networks. This study tries to use the characteristics of in-company women networks as an orientation to examine elements of professional networks. Second, this research leaves also room for new findings to contribute to the definition of elements of in-company women networks.

Earlier findings on the elements and characteristics of in-company women networks are mainly based on the perceptions of leading members of the networks under study (Vinnicombe, Singh & Kumra, 2003). As a consequence, the first step to compare the characteristics of professional women networks to those of in-company women networks is to compare the findings on in-company women networks with the perceptions of (leading) members of professional women networks. This leads to the main research question of the current study: *How do members of in-company and professional women networks perceive their networks?* To answer this question, members of the women networks were chosen as interview partners, because prior insights about the elements of in-company women networks in organizations are based on research about the perceptions of members of those networks. This way, the perceptions of members of the three professional networks are important to make a comparison with the theory of the elements of in-company women networks. Three women networks were chosen as research cases. The first two of these networks represented

characteristics of both professional networks and in-company women networks. The last network represents elements of professional networks. This simplifies the process of making a comparison between prior theories about two network forms with the networks in practice. Further descriptions of the three networks will follow in the methodological part of this research.

According to Donnellon and Langowitz (2009) women network are located in one or two of three developmental stadia. The three developmental stadia are the connective, developmental and strategic network stadia. Women networks that operate in the connective stadium, for instance, are expected to entertain and engage employees by organizing network events. Networks in the developmental stadium operate as the advising role in order to assist individual employees with their careers. Women networks in the strategic stadium organize events for customers to advance organizational processes (Donnellon & Langowitz, 2009). The theory of Donnellon and Langowitz (2009) is used as an analytical lens to explore the developmental stadia of women networks, in order to contribute in yet another way to future theory on in-company and professional women networks. In this research three networks are explored as the research object in this study. This leads to the sub-question: In which stadia do the three women networks operate? Analyzing the three networks with this theory also serves the goal of finding suggestions for the three networks to establish themselves in higher developmental stadia and have more influential effects.

In the theoretical part of this research, characteristics of in-company women networks and professional networks are defined. In addition, the theory of developmental stadia is further illustrated. In the methodological part, the applied analytical process of this research will be explained. Furthermore, the exploration of cases, the collection of data and the qualitative analysis of this data will be explained. The results section will then present the findings of the twelve interviews. Finally, the conclusion of the study is summarized, and the results of the study will be discussed as to their theoretical and methodological as well as practical implications.

2.Theory

The following concepts are discussed in the theoretical part: Women/men networks in organizations and women networks. Both network concepts are described according to the following structure: The reasons for entering the network; the goals the network intends to reach, the strategy of the network explaining how the goals are reached; the structure and culture within the networks; the activities planned by the networks; and the results of the networks demonstrating the achievements of networks. This structure is inferred from the

analysis by Donnellon and Langowitz (2009) of in-company women networks and the review of in-company women networks by Vinnicombe, Singh and Kumra (2003).

Furthermore, the concept of women networks is further categorized: different developmental stadia of women networks are distinguished, and a distinction is made between in-company women networks and professional networks. Again, the description of in-company women networks and professional networks is divided into reasons for entry, goals of the network, strategy of the network, structure and culture of the network, activities of the networks and the results of the networks. It was not possible to find literature for every characteristic used for categorizing networks in organizations. For instance, it was not possible to find a generally agreed-upon definition of in-company and professional networks. The results of the interviews should contribute to definitions of this characteristic of networks with specific focus on professional networks. The focus lies more on professional networks, because all three networks examined in this research have characteristics of professional networks, although only the women network 3 is defined as strictly a professional network. Furthermore, little is known about the concept of professional women networks, therefore this research contributes to the conceptualization of such women networks. The interview questions of this research are structured according to the characteristics of networks. The various aspects of the networks are measured by summarizing the perceptions of the members of the network.

2.1 Networks in Organizations (women/men networks)

Reasons for entry

Men tend to form more same-sex networking relationships across multiple networks than women, who prefer more condensed network patterns in order to acquire social support, friendships and access to instrumental benefits (Ibarra, 1992). The similarity aspect between members of a group increases the communication flow and increases the exchange of information and interactions (Ibarra, 1993). According to O'Neil (2011), women and men have the same motivation to join networks in organizations: both enter networks in organizations with the intention to increase their career opportunities and also to improve their work (O'Neil et al., 2011)

Goals

Networks in organizations are more voluntarily constructed instead of emerged as a network, which is permeant embedded in the work environment (Ibarra, 1993). The networks

support their members in fulfilling their interests and they create an appropriate environment for members to reach their goals (Ibarra, 1993). These informal groups aim to create relations with groups and persons which go further than directly created relationships (Ibarra, 1993). Networks within organizations aim to improve access to resources, where information and power are shared (Van Emmerik, 2006).

Strategy

Men tend to apply instrumental network constellations whereas women prefer emotional-social tie constellations (Bakker, 2002). These tendencies are based on social expectations (Van Emmerik, 2006) and their influence on the gender ratios associated with different positions within an organization. Scott (1996) found that the use of instrumental ties is frequently correlated with higher positions in organizations and with career improvement. In general, men exhibit more interaction with higher layers in organizations whereas women interact more with employees of the same layer and consider social interaction important (Scott, 1996).

How the goals of networks can be accomplished is explained by Forret and Dougherty (2001). They defined five dimensions of effective career-oriented network behavior: staying in contact with counterparts outside the formal business, being engaged outside and inside of the organization, taking a responsible part for professional events like for instance leading a workshop, engage in church and community projects and improvement of their own visible presence. They found that men are more active in socializing behavior than women (Forret et al., 2001).

Gremmen, Akkerman and Benschop (2013) made a distinction between women and men networking behavior. First, they defined networking behavior as the effort of individuals to cultivate and retain contact with important actors in order to improve their work or career. This kind of behavior is expressed in the form of approaching behavior, integrating into a social setting and showing their presence. Women represent more social networking behavior compared to men who behave more dominantly and autonomously. Additionally, they found the following seven kinds of networking behaviors: Accountable (explaining and giving good reasons), authoritative (based on achieved expertise), motivational (drive other actors by, for instance, sharing information about customers), strategic personal (communicate on a personal level with other parties), loyal personal (building up an exchange relationship), considerate (taking the perspective of one's counterpart into account before acting) and co-operative networking behavior (sharing information and supporting each other) (Gremmen et al., 2013). Gremmen et al. (2013) found that men and women use different networking

behaviors and that networking behavior of men increases the chance of reaching higher positions in organizations.

Structure and Culture of Networks

Members of networks are connected by ties which lead to better resource access. The connection of ties can be strong or weak and as a result, different constellations of networks emerge (Van Emmerik, 2006), such as instrumental ties where members of networks trade resources (Van Emmerik, 2006). Success based on instrumental ties is measured through work role performance facts (Van Emmerik, 2006). Also, ties can improve the exchange of emotional and social support and proximity (Van Emmerik, 2006). Confidence is also one of the main characteristics of such ties (Van Emmerik, 2006). Scott (1996) critically examined the assumption that ties can be subdivided into instrumental and expressive forms of ties and women and men use different forms of ties. She found the following assumptions in prior research: Women tend to adopt more expressive ties and they build more “social” and “friendship” ties than men. Men, on the other hand, use instrumental ties which seem to be more task-oriented. Furthermore, men interact more often with managers at the top level than women do. Yet, Scott (1996) also showed that women are comparable to men regarding their ability to interact with managers at the top level.

Ibarra (1993) made a distinction between formal and informal networks. Formal networks are mostly pre-defined and contain a particularized constellation between superiors and subordinates on the one hand and representatives on the other hand, who work together to accomplish a certain task. Formal networks are structured as committees or teams which are usually imposed by management and should function fluidly. This contrasts with informal networks which can be both professionally constellated or socially constellated (Ibarra, 1993).

Moore (1990) made a differentiation between the structure of men and women networks. Women have a greater number of ties and a greater diversification of their ties in comparison to men. The gender difference appears due to dissimilar social structures for women and men in organizations. The social structures are foundational to the pattern of opportunities and restraints that emerges for women and men (Moore, 1990). Women have unequal access to social networks which are meaningful to obtain influential power positions (Timberlake, 2005).

When speaking about informal networks, two aspects should be considered: on the one hand the aspect of instrumental networking relationship and on the other the aspect of expressive networking relationship. Instrumental networking relationships include more job and career-related features like the access to and the exchange of resources. Expressive

networking relationships involve more relational aspects between the individuals where friendship and social support are important (Ibarra, 1993).

Activities of networks

Yet, little is known about concrete meeting or events that are arranged by organizational networks. This element of networks was added in this research.

Results of Networks

Timberlake (2005) gave a summary of which results networks can have. By being a member of a network, individuals develop an individual identity and a self-concept (Timberlake, 2005). According to Podolny and Page (1998), networks connect actors who have an exchange relationship with each other. Here, the principle of reciprocity guides networks. The network members feel obligated to other members of the network. Within networks, information, resources, skills, and practices are shared (Timberlake, 2005). Furthermore, trust between the members is a crucial element for the exchange relationship (Podolny et al., 1998).

Members of networks who have a central position in the network show more in-role and extra-role performance (Sparrow et al., 2001). Managers, who are engaged in networking behavior are more successful (Luthans, Hodgetts & Rosenkrantz, 1988). Positive career outcomes can be predicted by successful networking of managers (Singh, Vinnicombe & Kumra, 2006).

Brass (1985) analyzed the interaction of women and men in organizations and how interactions are related to the perception of influence and promotion. They interrogated both men and women. Women were rated as less influential than men and women were less integrated into men's network (Brass, 1985).

Brass, Galaskiewicz, Greve and Tsai (2004) researched the effects of networks in organizations on the interpersonal, the inter-unit and the inter-organizational level. There are several effects of networks for the individual employee: Individuals can increase their power positions in the organization, they have a greater amount of access to job opportunities due to strong network ties and they have decreased turnover intentions. The effects of groups of networks are better for group performance, sharing of practices and improvement of innovation. On the inter-organizational level, the networks which connect companies with each other have the following consequences: productive practices of an organization are imitated by other organizations, development of new products, and the survival of the

company and improvement of performance (Brass et al., 2004). The knowledge sharing process of individuals within an organization can also be beneficial to the entire organization (Reagans & McEvily, 2003). The possible benefits which are experienced within the company are the following: Transmission of best activities, inventions and improvement of new products, increment of learning processes within the organization and continuity of the company (Reagans et al., 2003).

Networks might also have a negative impact on minority groups in organizations (McGuire, 2000). McGuire (2000) analyzed the relationship between minority groups in organizations, which include women and ethnic minorities, and networks. McGuire (2000) focused on informal mechanisms which contribute to inequalities in organizations. It was found that women and people of color tend to interact more with lower status members than men do. This again explained their lower occupational position.

2.2 Women Networks

Above, the concept of networks in organizations has been described according to several elements. The definitions of the elements of these networks are now used as guideline to define elements of the in-company and the professional women networks, as found in the literature. Travers, Steven and Pemberton (1997) deliver the basis for the definition of women networks. In-company women networks are embedded in organizations and support women, increasing their role in the company (Vinnicombe, Singh & Kumra, 2004). Professional women networks connect women within one occupational field with each other (Galaskiewicz, 1985). The developmental stadia of women networks by Donnellon and Langowitz (2009) consider the specific forms of women networks. Below, the literature on in-company women networks and professional women networks is reviewed following the elements of networks in organizations. When no results are found, the type of network is not mentioned.

Reasons for entry

In-Company Women Networks

Due to prosocial and career motivational aspects women in companies decide to join an in-company women network in their organization (Singh et al., 2006).

Goals of the Network

In-Company Women Networks

According to Bierema (2005), in-company women networks are intended for female employees in organizations to support them by improving their competences and increase their access to organizational resources. Furthermore, the formal in-company networks aim to guide female employees, develop plans for career improvement of female employees and organize meetings for female employees (Bierema, 2005).

Structure and Culture of the network

In-Company Women Networks

These networks are embedded in organizations and are financially supported by the organizations (Bierema, 2005). According to Bierema (2005) in-company women's network are constructed through the formation of weak ties for fulfilling the purpose of information sharing and social support. Women networks are less embedded in the organization than men networks are (Linehan, 2001). Vinnicombe, Singh and Kumra (2004) stated how important it is that the in-company women networks have experienced members. Furthermore, it is important for in-company women networks to have a board, wherein the board members have different tasks (Vinnicombe, Singh & Kumra, 2004).

Professional Women Networks

According to Galaskiewicz (1985) professional networks are not regulated by administrative effort. Generally, the professional networks are weakly structured and not formally constellated, but they deliver support for their members when needed (Galaskiewicz, 1985). To keep up with, for instance, technological developments, professional experts within this occupational field need to share information about innovative developments within the professional network (Newell & Clark, 1990). Especially women are underrepresented in the technological area (Tapia & Kvasny, 2004). Thus, membership in a professional network creates opportunities to share information about potentials within a certain field.

Activities

Professional Women Networks

Occupational professionals mostly meet outside the work environment, during for instance conventions, to extend the professional communities (Pickering & King, 1995).

Results of Women Networks

In-Company Women Networks

Bierema (2005) tested in a case-study which effects the implementation of an in-company women network have on the outcomes of both women's opportunity to reach higher positions in organizations and on the organization itself. The internal women network in the organization Bierema studied only adapted to the patriarchal organizational structure and culture but was unable to change the structure and culture in a way that it would also be advantageous for women. Bierema (2005) concluded that effective in-company women's networks are dependent on the organizational context (Bierma, 2005). In their study, Singh, Vinnicombe and Kumra (2006) measured how in-company women networks are structured and which benefits the membership has for the women in these networks. Having the chance to meet women in the same company in order to share pieces of advice for improving one's own career is perceived as beneficial. In-company women networks increase the awareness of diversity topics in organizations, with an explicit focus on the gender dimension (Singh et al., 2006).

2.3 Analytical Perspective

In this research, the study by Donnellon and Langowitz (2009) serves as an analytical lens. The theory by Donnellon and Langowitz (2009) distinguished three different developmental stadia of women networks. This theory is applied while analyzing the three different women networks in order to categorize their developmental stadia. As explained in the introduction, this analysis not only contributes to further theory development on the elements and characteristics of in-company and professional women networks, but also enables to deliver recommendations for improvement to the networks involved. Donnellon and Langowitz (2009) differentiated between the connective, developmental and strategic network stadia. Networks can be located in just one stadium, as well as in three stadia at the same time.

The first stadium is the connective stadium. These networks are financed by collective capital. They organize, for instance, charity events or workshops to achieve a better work-life balance. These networks have a surviving mission for individual female members in male-dominated organizations and set recruitment and retention as their business core principle. The expected business outcomes are satisfied employees. All female employees can be members of the networks. Women networks which operate in the developmental stadium are characterized by a mixed membership. These networks have survival and thriving as their mission. The programs which are managed by networks in this stadium have mentoring, leading, negotiation and time management as their aim. The networks are financially supported by some corporate funding. The development of the individual and his or her career

and leadership are business principles. They strive for more talent retention and improvement of leadership channels. The form of sponsorship differs between none or executive.

Networks, which act in the last stadium, the strategic stadium, have development of the business, improvement of the position of women in the business and diversity in the executive team as business principles. Actions are focused on the advancement of the business and the general benefit for organizations. Women from all organizational levels are included in these networks. The sponsorship has an executive form. These networks organize client events, professional selling programs, senior leadership panels, problem-analyzing programs and problem-solving programs. Networks in this stadium always cooperate for their funding and are functionally supported by the entire business (Donnellon & Langowitz, 2009).

Using Donnellon & Langowitz (2009) as an analytical lens, it can be explored in which developmental stadia the three women's networks are situated. Through analyzing the networks with this analytical lens, the following aim should be accomplished: delivering a theoretical contribution to the definitions of professional networks and adding recommendations for the networks of how they can develop in a higher stadia. This is desirable because, according to Donnellon and Langowitz (2009), networks which operate in the strategic stadia have more influence on the business than networks in other stadia. It has been proven that women's networks situated in higher stadia contribute to the overall functioning of the entire organization. Donnellon and Langowitz (2009) state that companies need to think about investing in women networks, because it could deliver a broad organizational advantage. According to Vinnicombe, Singh and Kumra (2004), the networks in the strategic developmental stage aim to modify the masculine culture in organizations.

In addition, because this theory focusses on in-company women networks, it is of further interest to investigate in how far the developmental stadia can be applied to the professional network, the women network 3 and which recommendation can be adjusted to it. The professional networks may also gain advantage by utilizing certain elements of higher stadia to be more successful in supporting women. The networks in the strategic developmental stage aim to modify the masculine culture in organizations (Vinnicombe, Singh & Kumra, 2004).

3. Methodology

3.1 Epistemology

This abstract follows the definition of philosophical debates in Easterby-Smith, Thorpe and Jackson (2012), with additional explanation by Symon & Casell (2012). For research it is relevant to look at philosophical topics, because they deliver explanations for the used research design. Furthermore, an advantage of using philosophical directions is the increase the quality of this research. In this research two philosophical direction are discussed: ontology and epistemology. Ontology discusses the essence of the real world and life, epistemology explores the best method of how to analyze the reality (Easterby-Smith et al., 2012).

Ontology is distinguished in four streams, however, here only two of them are used to improve the quality of this research. The first stream, which is used, is relativism, which points out that there is no 'best' truth but there are many truths. What is being estimated as the truth depends on the perspective of the spectator. The perspective of the observer again is influenced by his or her own background. Nominalism assumes that there even exists no best truth, but different views on a certain subject matter. The truth changes according to time and location (Easterby-Smith et al., 2012).

Epistemology is divided into two streams: positivism and social constructionism. The positivist perspective focuses on directly observable phenomena. Theories are viewed as end products waiting to be discovered. The generalization of knowledge based on prior theories is the aim of positivistic approaches. The positivist perspective assumes that strict experimental procedures and values avoid research biases, immeasurable results are insignificant. This stream is also called the normative approach. The truth of a theory is explored by replicable findings (Symon & Casell, 2012).

One stream of epistemology is social construction, which means that the real world is created by human beings due to interaction between them. How these human beings create their reality is again dependent on their experiences. The different views of people should be taken into account for the explanation of phenomena instead of using external variables as explanations (Easterby-Smith et al., 2012). This research focuses more on social constructionism. It explores how the members perceive the elements of their women networks in order to contribute to further understanding of women networks.

3.2 Research Design

3.2.1 Qualitative Research

The data of this research are collected and analyzed with the aid of the concept of social constructionism. The socially constructed nature of reality is explored by a qualitative

research design. It implies an emphasis on qualities of entities and on processes and meanings, which cannot be measured experimentally (Symon et al., 2012).

Twelve interviews with twelve different interviewees were conducted in this research, enabling the concept of professional networks to be explored from different perspectives within the networks (Denzin & Lincoln, 2008). In the interviews, the members of the networks explain how they perceive the elements of their networks. Measuring the perception of the interviewees is not optimally possible by using a quantitative research design, because perceptions are subjective constructs which include for instance elements of evaluations. In a qualitative design, interviewees can elaborate in their own words on their perceptions, providing the researcher with more complete or rich data.

Furthermore, three women networks, which serve as cases in this study, were analyzed. This means, that a multiple case study is used. By using a multiple case study, differences between and within cases can be explored (Baxter & Jack, 2008). The goal of multiple-case studies is the replication of findings across cases. The cases should be carefully selected based on similarities in order to compare them with each other (Baxter & Jack, 2008). All three networks showing characteristics of professional networks, only two of them show also characteristics of in-company women networks.

In accordance with the case study design (Baxter & Jack, 2008), three different methods of data collection were used in this study: interviews with members of the women networks, observing the settings of the women networks and using document form their internet websites. Using these three methods is called triangulation (Noor, 2008). The semi-structured-interview data served as main source for analyzing the concept of in-company and professional women networks. The data which are based on the participant observation and the document analysis, served as additional data to analyze the women networks more in detail. Comparing the data from the different methods with each other was meant to produce a complete picture of the researched phenomenon, in this case in-company women networks and professional women networks, to supplement the theory of in-company and professional women networks..

3.2.2 Deduction and Induction

A top-down deductive approach is used in this study. Theories of networks in organizations, in-company women networks, professional women networks and the theoretical framework of Donnellon and Langowitz (2009) about developmental stadia of women networks are taken as the starting point of the data collection and analysis.

In this study, working deductively implies that data collection and data analysis are guided by prior theory in a semi-structured way, leaving room for further theories to emerge during the research process. Several elements of previous theories are replenished by data from the interviews, in doing so, an inductive research approach is applied. The inductive approach provides additional information to the prior theories of women networks. New and further developed elements of in-company and professional women networks can be defined for further research.

3.2.3 Case Description

The three chosen women's networks show characteristics of professional women's networks as prior described by Galaskiewicz (1985). The three professional occupational networks include women with the same occupational background, where they have the opportunity to share essential information and resources (Galaskiewicz, 1985). In the first women networks women, who work in the academic field at a University are connected with each other. Being a student or employee in the computer science field at one University connects the members of the second women network with each other. It is located in the same University, too. The women in the third women network are connected by their educational level, which had to be a minimum of 'University of applied science' level.

Further case descriptions are following:

Women Network 1

The information of this network is examined by the website of the network. It was named after the first female professor at the University. She was the chair of 'Feminism and Christianity' in 1983 and discussed the role of women in Catholicism. This women network regard to the role of women and intends to connect female researchers and other interested women with each other. The target group of this network network mostly consists of female researchers at the University, but it also welcomes male researchers and students who are interested in joining their meetings. During the meetings, the members have the opportunities to discuss topics related to women in the university, share their experiences with each other and explore what kind of developmental opportunities there are for women in academic field. This network works together to reach the main target to contribute to the advancement of women faculty to the higher ranks of the university. While doing so, it focuses on the following domains: First, connect women from different levels and disciplines with each other

in order to give them the opportunity to share their knowledge with each other and learn from each other. Second, offer women different specializations to help them improve their careers. Third, give women in science from all levels more power and increase their visibility. At last, discuss issues in the University work environment responsible for creating the possibility for women to work optimally. This network receives funding's from different parties, like the University and the LNVH (national women professors network) and is supported by STAGES projects to achieve gender equality at the University. Furthermore, it is engaged in various research projects. For this research project, four board members of this network were interviewed.

Women Network 2

The second women network connects women who are students or working in computer science with each other and organizes events for them to meet. It focuses on women, who are active in computer science and keep them motivated to improve their careers and stay active in this field. During meetings or events, women can share their experiences, but everyone is welcome to join these meetings. For this study, two board members of this network were interviewed.

Women Network 3

The members of the third women network focus on the topic of equality and diversity of women. The active women are professionals in their work, who seek challenges and have the intention to share their experience on the basis of equality. The meetings help women to take steps for their career improvement and explore new working environments. Diversity is an important topic in this network. They assume that the greater the diversity of the network is, the greater the opportunities are for all members of the network. To attain a high level of diversity, women employed in several sectors and different positions are connected with each other. Highly educated women are invited to the network to have the opportunity to share experiences, knowledge and wisdom with each other. Members of this network share tips, advice, network contacts or other support with women, aiming to get stronger positions in their working environment. The members meet, inspire, support and connect each other. For this study, two board members and four members of this network were interviewed.

Women network 1 and 2 are also in-company women's networks. This is interesting for this research, because here it can be analyzed to what extent professional women networks

differ or show same characteristics like in-company women networks. Two networks were used for this study with professional and in-company networks characteristics. The second women network is a professional network existing within an organization, and the first women network is an in-company network, with members working in similar functions. This could indicate that these two networks differ in stress put on occupational and organizational focus respectively. Furthermore, to date, the literature lacks the definition of professional women's networks. Therefore, interviewing members of this form of women networks might add definition of certain elements, like the reasons for entry, goal of the network, strategy, structure, culture, activities and results of the networks.

3.3 Data Collection

In this research, three types of data collection (triangulation) were applied in order to explore the research questions. The data gained from the interviews served as main data while the data from the two other sources, participatory observation and the document analysis, offer additional information on the one hand and the opportunity to compare the findings of different data collection methods with each other on the other hand. In the following sections, the three methods and the data sources are described.

3.3.1 Interviews, Participatory Observation, Document Analysis

The first data source, which was used for collecting the data, were twelve interviews with women of the three different women networks. Four members of the women network 1 two members of women network 2 and six members of the women network 3 were interviewed.

Before beginning the interviews, the interviewees received a short explanation of the research topic and about the confidentiality treatment of the interview material. Furthermore, the interviewees were asked for permission to voice-record the interviews.

The interview questions were open and semi-structured. The structure of the interview led to the following advantages: first, in every interview, the same standardized set of questions were asked. This simplified a comparison between the data based on the different interviews. Second, the open questions were appropriate for exploring sensitive topics, in this case exploring the perception of the interviewees regarding the concepts of women networks (Fylan, 2005). The follow-up questions, which occurred with regards to the answers of the respondents, were used to investigate deeper explanations of given answers of the attitudes and the perception on women networks (Fylan, 2005). The interview sessions lasted between

twenty and more than sixty minutes.

As the second method of data collection, the participatory observation was used. According to Clark, Holland, Katz and Peace (2009), participatory observation has the following advantages: first, it enables the researcher to observe behavioral responses. Second, it allows the researcher to understand the context of the researched phenomenon and at last, it delivers information about the live world of the research participants. The women networks 3 offered the opportunity to observe a monthly meeting of this network. During the monthly meeting of four hours, field notes were made to summarize the event. The participatory observation is used for further understanding of the context of the women networks and enabled a comparison with the data from the interviews.

The last method of data collection chosen was the document analysis. For this purpose, the data were obtained from the internet websites of the three women networks. All three types of data were compared with each other in the analysis.

3.4 Operationalization

In the present study, the concepts of networks in organizations, in-company women networks, and professional networks serve as basis for the operationalization. Furthermore, consistent with the three developmental stadia of women's networks by Donnellon and Langowitz (2009), the women's networks are analyzed. The networks in organizations in this study are operationalized as follows: Individual reasons for entry as a member in the women networks; perceived goals of the networks; perceived strategy of the women networks; perceived formal structure of the women networks and the perceived informal culture of the women networks by the networks members organized activities and the perceived results of the networks. To date, in the literature, there is no precise definition of the in-company and the professional women networks. Therefore, the aim of the study is to fill this gap in the literature and contribute to the missing elements of the theory of in-company women networks and professional women networks.

A reason for the entrance in the networks (*For what reason did you decide to be a member of the network?*), can be, for instance, the desire of social support (Ibarra, 1992). The explanation for the entrance in the women network was individually defined by each interviewee. The aim of in-company women networks is, according to Van Emmerik (2006), the expectation to have better access to resources. Networks within organizations aim to improve the access to resources through a process of sharing information and power. (Van Emmerik, 2006). Former theories do not consider reasons for entry in professional networks,

hence the results of the interviews should deliver an answer to this theoretical gap.

The perceived goals of in-company women networks (*How do you perceive the goal of the women network?*) is the supportive character for women in organization, while improving their competences and their access to resources (Bierema, 2005). Yet, there is no literature about the goal of professional women networks. For this reason, the present study also attempts to contribute to the literature about the goals of professional women networks.

The perceived strategy of the professional women networks (*How do you perceive the strategy of the women network?*) is the exchange of information (Galaskiewicz, 1985). The strategy of in-company women networks is not adequately defined in current theories; thus, the answers of the interviewees might contribute to this element of in-company women networks.

The perceived formal structure (*How is the network internally constructed?*) of in-company women networks is, according to Bierema (2005), characterized by weak ties. The structure of the professional networks is not formally constellated and weakly structured, either (Galaskiewicz, 1985). The interview questions inquire, for example, an integrated board within the networks. For both networks, literature on the perceived culture does not exist (*How do you perceive the culture within the network?*).

The theory of in-company women networks does not define which activities are organized by this network form (*Which events are organized by the network?*), also therefore, the interviewee results add this definition. According to Pickering and King (1995), professional networks also organize events outside the work environment. According to Bierema (2005), the improvement of the position within the organization can be a possible outcome of the in-company women network (*What are the results of the network.* Which results professional women networks accomplish is not defined in theory and should be added as well by the findings of this research.

The approach by Donnellon & Langowitz (2009) serves as an analytical lens, by which the different developmental stadia of networks are analyzed. The developmental stadia of women networks serve as concept. According to Donnellon and Langowitz (2009) the concept of developmental stadia of women's networks can be further distinguished into the three dimensions: connective, developmental and strategic network stadia. Furthermore, the three dimensions can be further distinguished into the following items: expected outcomes (*What outcomes are expected with regard to women's networks?*), membership (*Who is allowed to join the women's networks?*) and programming (*What activities are planned by the*

networks?) (Donnellon & Langowitz, 2009). The items of the expected outcomes and the programming are approved by analyzing the two concepts of women networks.

The first stadium, the connective stadium shows the following indicators: pleased women, inclusion of all women and meetings. The second stadium contains the indicators improvement of the leadership layer, diverse members and coaching. The last stadium, the strategic developmental stadia, contains the indicators benefits for the organization, inclusion of women in the senior level and problem analysis and problem solving, (Donnellon & Langowitz 2009).

Donnellon & Langowitz, 2009) mainly focus on in-company women networks. In this research it is also interesting to analyze to what extent these definitions of the developmental stadia might also be applicable for professional women networks.

3.5 Data Analysis

The data of this research are deductively analyzed. Deductive analysis means that prior literature created a theory about a concept, in this case about networks in organizations, in-company women networks, professional women networks and the developmental stadia by Donnellon and Langowitz (2009). Based on the themes and indicators from prior theory, codes for the data analysis were created. By means of labelling paragraphs in the data with the codes, it was explored whether the themes and indicators were represented in the data or not. In this case, the elements of the networks were compared with three women networks in practice. Furthermore, data about important elements are supplemented to prior theories in an inductive way. Elements which were not found in prior theory were added by results of the different data sources (Hyde, 2000).

3.6 Research Ethics

In order to guarantee transparency for the interviewees, the researcher shared information about the research topic and the intention of this research with the interviewees at the beginning of the interviews (Lincoln, 2009). Giving information before conducting the interviews also enabled the interviewees to give informed consent to participate (Lincoln, 2009). The participants were asked via e-mail whether they wanted to participate voluntarily in the present study. In total, twelve respondents participated. They also agreed that the interviews were voice-recorded and transcribed after completion.

The interviews were performed in safe settings, dependent on the preferences of the interviewees. They took place either at the homes of the interviewees, in reserved rooms in

the university library or in public cafés. During the interviews, the participants were asked about their women networks with the aid of semi-structured questions. In order to create an open environment for the participants to report honestly about their state of mind, the interviewer occasionally took breaks during the interviews (Cottrell, 2014). After transcription of the interviews, the manuscripts were shared with each interviewee to add comments if needed.

To ensure anonymity, the data were treated confidentially during the analysis and further treatment of the interview transcripts. The names of the interviewees were left out. Furthermore, every personal information about the interviewees was removed. Apart from the interviewees, who had access to the transcript of their own interview, only the process tutor of this research had access to the interview data. In addition, the researcher reflected, during the entire research process, on the potential influence of biases. For example, the researcher of this project is, like the interviewees of the research, a woman. This may lead to a biased analysis of the research material due to a solely female perspective, instead of a neutral perspective.

In the end, after finishing the thesis, the results of the research were shared with the interviewees who had indicated that they were interested in the research results.

3.7 Reliability and Validity

The criteria of reliability and validity refer to the capacity of the researcher and the process of the research. Criteria of a good research are, for instance, the researcher's comprehension of the research situation, a good application of the research methods or the fact that the research results can be repeated (Golafshani, 2003; Leung, 2015). The criteria of reliability refer to both the entire research process or to how the results of the research were analyzed and further applied (Golafshani, 2003). Important for the reliability of a qualitative research is the element of trustworthiness. This can be explored by retesting certain definitions using new empirical data and, if necessary, adapting the definitions based on the new findings (Golafshani, 2003). For example, the research questions can be explored repeatedly. In this research, female members of three different women networks and their perceptions on their networks were explored empirically. Furthermore, applying semi-structured interviews also increased the reliability of this research, because every interviewee was asked the same set of questions. Using three different methods of data collection (methods triangulation) enables testing truthfulness of the data (Leung, 2015). In this research, the interviews with the women network members provided the main data for

answering the research question. The data from the participatory observation and documents offered additional information for analyzing the research problem and contributing to prior theoretical definitions. Last, the researcher described at length the procedures of data collection and data analysis that followed in this research, in order to enhance the reliability of the research (trustworthiness, controllability).

The criteria of internal validity refer to the research method and to whether the chosen method is suitable for exploring the research question. Working deductively on the basis of prior literature enhances the internal validity of this research. The findings of the three cases can be compared with each other due to the use of semi-structured interviews, which also increases the internal validity of this research. Internal validity is also enhanced by using three different methods of data collection (Leung, 2015).

External validity refers to the generalizability of the findings to a broader population based on the selection of the sample, the triangulation and contrasting of the data from different methods, and the integration of multiple theories (Finfgeld-Connett, 2010). In this research, the generalization of the research findings to a broader population is almost impossible because of a limited amount of cases and a limited amount of interview partners per case (twelve interviewees in total), resulting in a low external validity of this research. However, the insights resulting from this study may be theoretically generalizable (Yin, 2013). They may provide useful theoretical starting points for further research.

4. Analysis

This part contains the analysis part of this research. The results of the interviews are presented per element of networks.

4.1 History of the Network

Women Network 1

This network was founded after finishing a research project, which was sponsored by the European Union. Women in leadership positions were the target group of the research project (*'And it actually originated from a research project. So, research project about, I think, women in leadership positions or something in that direction. And they got that from the EU money for this project.'*, Respondent 3).

Women Network 2

According to the interviewees is the history quite young compared to the other networks (*'It does not exist that long'*, Respondent 1). The network was founded by a female information science expert at the University, about five years ago, with the primary reason of supporting the position of women within informatics and protecting them (*'So that was the main reason to set up and try to involve more women in computer science and to give a sort of safe base for, if women have problems and also want to discuss that with other women.'*, Respondent 5).

Women Network 3

In the 1980's the national network of professional female entrepreneurs, which existed at the time disbanded. Female entrepreneurs continued networking on a local level, which was the foundation of this network and other local networks (*' I think in the mid-90s, I was still in disagreement with someone, it was always so much hassle in the national administration and then that had fallen apart and the different networks have continued as a foundation'*, Respondent 2). This network will celebrate its thirty-year anniversary next year. Women, who were the founders of the first network were participants of the first women's movements. In the beginning women had different reasons for joining a women network that the women nowadays have (*'... the first wave or perhaps the first feminist wave or the second. Ehm, and so they suddenly became eh, somewhere a leader, they got into a leading position and ehm that was all pretty new to women of course. Ehm so, they also looked for each other on eh, for very different reasons that we are now looking for each other.'*, Respondent 8). The members of this network in the beginning phase shared their experiences of being in a leadership position with each other.

One of the two in-company networks, women network 2, is compared to the other two networks young. One woman from the computer science field grounded the network, with the goal of protecting the women in academic computer science. The other in-company network, the women network 1, was founded based on a research project. The network has the goal of connecting academic women within the University and implementing changes at the University to create an equal work environment for women and men. The professional network, women network 3, is the oldest examined network in this research. It is in existence almost thirty years by now. It has also been founded to connect women with each other, who work in higher levels.

4.2 Perception of the Network Elements

Reason for Entry

Women Network 1

Here as well, the motivation for entering this network was the uneven distribution of higher positions between men and women in the academic field at the university (*'But also at other departments at the University, there are many female PhD students, more than men You see that at the next step, there are postdocs assistant professor, the women become fewer and fewer. And the higher you go, the fewer women will remain'*; Respondent 3). In the academic field, where employees have a work week with a workload of more than forty hours, it is, according to Respondent 3, difficult for women to integrate professional and private responsibilities (*'Or maybe, yes, it is also always difficult for women to combine children and work, that is the case in every job. But the science field requires a lot, and a lot of people work more than 40 hours a week.'*; Respondent 3). The unequal treatment of women and men in different circumstances was a motivator for one woman: *I myself always see clearly that it happens, even in a country like the Netherlands, which you might not expect. But if you really pay attention then you just see that there are differences between men and women. And that is very important to me.*' (Respondent 3). Furthermore, one woman participated in a meeting organized by this network before and decided, after this meeting, to enter the board of the network (*'Because I was at a meeting once ...'*; Respondent 11). Personal interest, personal experiences to with this topic and a gender-aware education were reasons for joining the board as well: *I have grown up with an awareness of the position of women and the differences between genders and how you are looked at; how you are being considered. And that a lot of things, they are not very explicit ... And I think it is important that there is more, eh, attention and more understanding (of differences). Because that is the only way to create authentic equality (between women and men. So not only the say, explicit sexist discrimination but also the subtle things.*' (Respondent 6). Respondent 6 mentioned implicit examples for unequal treatment of women and of men in the science field. One example is the following: *'But what I mainly notice is more in science, somewhat the implicit examples. Things that, I think, the people who do something do not really understand it either. So, for example things so they assume that women cannot program.'* (Respondent 6). Furthermore, Respondent 6 explained that more female PhD candidates are asked by their supervisors to perform additional tasks than male candidates (*'... another example is when I look at, you know in science, we all have our own research and that is actually our work. But there are many other jobs, our supervisors are all very busy, so they all have other jobs that must be done. And sometimes they s ask PhD students if you would like to do that? And what I*

see very much in my environment is that the people who are going to solve the work for their supervisors who are asked to do are mainly the female PhD students, who are asked to actually be a lab manager, while they are actually not paid for performing certain functions (additionally).’; Respondent 6). One further example of gender differences is the following: ‘(A female PHD candidate) approached her male supervisor for a letter of recommendation for a postdoc position and his answer was: No, because you are 27 and you will have children soon and I will not do that to your next employer.’ (Respondent 6). Being aware of the topic increased her attention to subtle gender-related differences. Respondent 12 also referred to the evidence-based mental bias, which leads to adverse outcomes for women: ‘So, there are all these studies that show, you know, if you have exactly the same exact CV and you just change the names from Johan to Johanna, ah and you send them to different, you know, groups of people, for evaluation, then the Johanna gets much less valued than the Johan. Even though it is the same CV. And that is done by both, by men and women. So, it is not like only men are against women. It’s just mental bias, of which few people are really aware, really acts against us.’ (Respondent 12). The women saw the inequity between women and men, which motivated them to participate actively in this topic.

Women Network 2

Both interviewed women work in computer science, a field which is dominated by men. More men are active in the computer science field than women. The members of this network decided to enter the network based on an underrepresented influence of women in this area. They explained it as follow: *‘The network exists to stimulate more women to work or to study in IT, because there are not so many women in IT. I think myself, IT has a bad image. What prevents (women) from doing something in IT or something in technology, is that they think it’s something for boys. Yes, I think that this is a shame because it is just an interesting field’* (Respondent 1). Respondent 1 prefers groups with an equal male to female ratio (*‘so, yes, to draw the same thing between men and women is then a way in which you have a chance that you get different people. That just gives a nicer dynamic.’*; Respondent 1). She was asked to enter the network: *‘And the former chairwomen of () invited ..., then I started to participate.’* The second interviewed woman was one of the only women in her cohort during her course of study. She asked herself why there was a tendency of fewer women than men in the IT field. She demonstrated an interest in this topic and was invited to participate in this network as well (*‘... when I started my studies, I was one of the two women in my year. Ehm, so yes I always wondered about why are there so much fewer women in this field of study? And that is why I saw that (...) board, I thought, yes, that is actually*

interesting, maybe we can do something to make sure that more women come (to computer science) or see where the problem lies (of the current situation).'; Respondent 5). For both women the main motivational factor for entering this network was the fact that the field of study computer science is understaffed by women. Both have the intention to, first, find the cause for this and second, motivate women for computer science as much as possible (*'We have the vision to stimulate women to study computer science as much as possible.'*; Respondent 1). Both represent a proactive approach to this problem.

Women Network 3

The members of this network had personal reasons for entering the network. One woman mentioned that she expected to get to know other professional women: *'In 1990, eh, I got a new job and that was at an employment agency and my assignment was to set up an eh, a new office, specifically for HBO (university of applied science graduate) and academic job seekers. And, well, I had not lived in () at the time and, yes, I looked forward to connecting with other professionals, yes.'* (Respondent 2). Two women entered the network to increase their power and position at the workplace by connecting with other professional women. The mutual support and the sense of inspiration was for one women the main drive for entering the network: *'... I like it if we can do something for each other and be an example and be inspiration for each other. And if everything is right, yes, also help without jealousy and that is my experience with that...'* (Respondent 4). The sense of companionship and connectedness between the members of the network and the intention of the women to support each other in the work environment, were also specified as reasons for entering the network: *'... it's all about camaraderie and connection (with each other). And secondly, that you can also do business (/interact) with each other.'* (Respondent 4). Another woman was advised by a prior member of the network to join it: *'Someone from the network, who was taking care of an evening and who liked to talk about profession ... so she asked me if I wanted to come to a lecture there'*. (Respondent 7). Respondent 7 also mentioned that through the network, she had the opportunity to have contact with women who are on the same intellectual e level (*'... (the) main reason was at that moment that I noticed that when I talk to people from the network they had the same speed of thinking as I did.'*; Respondent 7). After moving (), Respondent 8 saw the network as opportunity to increase the network for her work with other women (*'I came to live in (). Uh, of course, I quit my job. And eh, I actually wanted to meet people again in a very short time ... also for business reasons.'*; *' So I had something like that, I need a network where I (now) live.'*; Respondent 8). Respondent 9 mentioned the solidarity and approach of the women in this network motivated her to enter the network:

‘...[the] notion of *solidarity*, you have to help each other and I think that it is a nice idea, eh, that is what I clearly felt then and, eh, nowadays it is, I think, more like, we know how to find each other but if I need someone, hea, an expert then, first I look them up in my network but it doesn’t (feel) like an obligation to me...’ (Respondent 9). Respondent 10 quoted that she appreciates the opportunity to gain a network with a diverse occupation (‘...getting to know more people from all other disciplines.’).

The women from the women network 2 were all women, who work or study in computer science at the University. They all felt lonely as a woman in their field and welcomed the concept of a network for women in computer science at the University. This is a characteristic of a network which operates in the connective stage. The women network 2 also wants to excite more women for computer science. Having a mission follows the developmental stage of women networks. The other in-company women network as also has a mission. The mission of this network relates to women, who work in the academic field at the University. Here, meeting and events are organized to increase the role of the women in the academic field at the University. The mission of the network was the main reason for the interviewed members to join this network. This network also operates in two stages: The first connective stage offers the opportunity for women in the academic field at the University to get to know each other, while networks, which operates in the second stage, have a mission. The members of the professional network, the women network 3, also decided for connective reasons to join the network (characteristics of the connective developmental stage). Furthermore, they expected reciprocal support within this network.

Goal Network

Women Network 1

The goal of this network, as perceived by the board members, is to connected women in academia from different backgrounds, through organizing events for the free exchange of experiences, etc. (‘I think that women from different disciplines and departments can come together, share (their) experiences and network (with each other)... a bit like the old boys’ network. That you can make contact and support each other. And, eh, regular lunches are organized by the women’s network. Sometimes we have a theme, for example, combining work and family. And sometimes it’s just open, so then you have lunch’; Respondent 3). The network raises awareness for the position of women in academia. Here, women facing current issues discuss them. The experiences are reported to the highest board of the University (‘...to strengthen the position of the women within the university. And because of the problems that

women, women, and female scientific employees at the university experience. And then do things with it. They (members of the highest board of the university and members from this women network) are always in deliberation with the board of the university. So once a year we give them a report of what we have been doing,...'; Respondent 6); 'So, they are (once per year)in discussions about topics that are related to ah the fact that you are women...'; Respondent 11). The women from this network intend to change the work circumstances at the University (...talk about certain issues that are taking place at the University or, yes, to do something with it.; Respondent 11). The women network also focused on the supporting women. It is intended to specifically protect the women within this organization. And it is also connected with other academic women networks to share information ('... we are in contact with the board of, for example, the network of female professors (at the University). (We are in contact with each other to) see if there are still things going on at the university where we need to do something. '; Respondent 11).

Women Network 2

The two interviewed women perceived the goal of the network as stimulating women to enter the IT field ('... encourage more women to (study) computer science and remain there because sometimes they just leave, then they will do something else. '; Respondent 1). Respondent 1 mentioned members of their network visiting schools to show young students, how appealing computer science can be, for both girls and boys (...yes girls, but also the boys, who are in class, to interest them in computer science. Show that it's fun. '; Respondent 1). The network offers safety and integration of women in the IT field ('...protect and also that eh, actively involve. '; Respondent 5). The women network offers women the opportunity to meet other women in by men dominated field (And then it is nice to know that more women exist within the field of study. '; Respondent 5). The goal of this network has external and collectivistic characters. The women of this network intend to support the role of women in computer science at the University. Furthermore, it is more adjusted and connected to the outside world, in that the members are active in increase the interest of young women for computer science.

Women Network 3

Advertising women for higher positions is perceived as one of the main goals of this network. Support is delivered by cooperating with each other ('...promote, hea, that women come to influential positions, hea, by strengthening each other and supporting each other and also roll the ball to each other. ', Respondent 2). The network's goals are perceived as

creating an opportunity for members to enlarge their horizons (...*for me personally, my goal is to expand my, um, perspective...*; Respondent 2). A woman in this network should offer her skills to the other members of the network in case of necessity. In return she can also expect help from the other women when she needs support (*'Well, this women's network, what they say about that is that you come to (give something), you come to get something.'*; Respondent 4). The women inform each other about vacancies (*'So you try to play each other too, if there are vacancies you put them, you mail them in the network or you ask people directly to apply, that's all possible.'*; Respondent 7). The chairwoman sees the goal of the network as an opportunity for the women to demonstrate their individual strengths (*'... we create a safe atmosphere with each other, in which everyone can show their own talents.'*; Respondent 8). She considers the goal more from a reciprocal dependency perspective than a financial perspective (*'I (think to get to know you is) more interesting than to go home with a big salary.'*; Respondent 8). The goals are not intended to imitate the style of men networks the intention is instead to give the women the opportunity to develop their own way to lead a networking (*'But why should we behave just like them or why should we want the same (as men)?'*; Respondent 8). The helpful character of the network is especially beneficial for self-employed women, who need a widespread network in the free market (*'...that group of self-employed people, who know each other very well...'*; Respondent 9). The goal of this network is perceived as advantageous for the all the internal members. These women support each other in the external labor market.

One goal is the stimulation of young women's interests for computer science. Furthermore, the network intended to connect and to protect women in computer science at the University. The goal of the women network 2 is to focus on an external mission which stands in contrast to the women network 1 where the goal is to focus on both an external and on an internal mission. The goal of the other network within the University, the women network 1, is to also bring women in the academic field at the University together and support them. It stays in contact with other academic women networks, in which women have the chance to share experiences with other women at other institutes. Also, the women network 3 has as goal to support women. The women network 3 pursues mainly an internal goal. The women do not work within one organization, but they are all occupied in a certain region in the work market. The women inform each other about developments within their work fields to support women who, for instance, need a new job. All three networks operate in the connective stage by Donellon and Langowitz (2009).

Strategy Network

Women Network 1

The board of this woman network organizes events for all women who are academic employees at the University. During the events, the women have the chance to exchange their experiences with each other or they invite lecturers to inspire women with their own success story (*'... for example, I think that networking is done by eating lunch around tables and that is where you can specify a topic and let people talk about how do I get work and family or how do I deal with the pressure to publish? Then you can really share your experiences (with each other) ... And, ehm, lecture are sometimes given or workshops (are organized), for example, a lecture by a successful woman in science or beyond.'*; Respondent 3). Respondent 3 mentioned three strategic aspects of this network: first, collect information about gender-related topics in the current environment, second, present the collected information during events and have a discussion after the presentation. Finally, introduce the collected information to the board of the university to deliberate over possible gender-related issues and potentials to overcome these issues (*'...three things, which are actually important, so the first requirement is to gather information, I do not know if we ourselves do surveys for example but that could be something, you can just ask around what's going on...The second is then organizing the event, so also transfer the information to people. Ehm and, eh, to give workshops. And to enter discussion with people.... to keep in touch with the board of the University, with the board, the director....'*; Respondent 6). Respondent 11 also mentions two strategic aspects, first, to strengthen women in the academic field and second, to give tips during the events about how to have a stronger position as a woman (*'... I think the two ways of organizing meetings for women in science and thus a bit of empowerment, exchanges of experiences, yes, how you tackle certain things, for example that you have to negotiate during a salary interview, ...'*; Respondent 11). Respondent 12 experiences the strategy as a mechanism for creating consciousness for gender-related problems (*So, it's not like we can really solve the problems. But we can raise awareness that the problems exist.'*; Respondent 12).

Women Network 2

The network has no clear strategy to stimulate women in the IT field. To create more awareness for women in the IT area, events are organized (*'... we do not have a very clear plan. We have, yes, it is the (plan) that we want to encourage more women to do computer science. But that is, yes, that is the general goal. (We) organize the events and we do not really have any further very clear strategy or something,'* Respondent 1).

Women Network 3

During monthly events, women can talk to each other and give each other updates (*'Meeting, networking, giving and taking, so keeping each other up to date, informing you of possibilities, eh, and supporting each other also to realize possibilities, to realize, yes, something like that.'*; Respondent 2). The different topics, presented at the meeting, can have an inspiring effect for women or offer them assistance for how to handle special situations (*'...organize sufficient and inspiring evenings, appropriate things and inspiring and relevant things. But (they are) also (organizing) sometimes something special, which you do not expect, which you do not immediately benefit from. But where you think, hey, that is possible. Sometimes it is (linked to the practice) such as inheritance law, or so of what you have to arrange and things like that.'*; Respondent 4). Ensuring variety in the network is perceived as strategy of the network (*'...the strategy is actually that we want a composition diverse as possible.'*; Respondent 9). Respondent 9 criticizes that the strategy of the network focusses more on supporting members within the network instead of also supporting the society outside of the network (*'...we do not have a network that really supports a good cause or something.'*; Respondent 9). The network strategy is unknown to Respondent 10 (*'We do not really have this, I think I do not feel that way... So, I do not really think it's a strategy.'*; Respondent 10).

The members of the women network 2 mentioned that they organize events to increase the awareness for women in computer science. Organizing events, is a characteristic for women networks operating in the connective stadium. The women network 1 also organizes events to increase the awareness of women in academic at the University. But they also discuss gender-related issues with the highest board of the University in order to strive for equal work conditions for women and men at the University. This is an element for women networks which resides in the strategic stadium. Here, the focus lies on the advancement of the entire organization. The women of the women network 1 explain to the board of University that this institute would benefit if women were treated equally. The members of the women network 3 reaches the goal by keeping each other updated and organizing meetings with inspiring effects. Having women from diverse work fields in the network is also a strategy of the women network 3. Offering support to improve the career of all women within network is a characteristic of the developmental stage by Donnellon and Langowitz (2009).

Structure Network & Network Culture

Network structure and network culture are combined in one section. The structure represents the intended and formal structure and is described first. The network culture on the other hand represents the perceived and informal structure of the network.

Structure

Women Network 1

The board of the women network 1 consists of six people. The board members of this network have the following positions: Chairwoman, secretary and treasurer. Furthermore, one member is responsible for the communication with the external environment of the network and one woman is responsible for updating the internet website. Organizing the events is spread over all members (*'We are now about six people on the board and then you have a chairwoman, secretary, someone who does the external communication, who takes care of the website and the e-mail and invitations to the events. And someone who does the financial aspect. And the other members, yes that is actually a task for everyone, that you organize events.'*; Respondent 3). The board members invite all female academic employees at the University to the events (*'It is more like the board and all female participants of the University get emails about our events, that they are invited and that they can come. These are not really (board)members, I think that they (can be called) participants.'*; Respondent 6). The women in the board of this network come from diverse academic fields and stand in different phases in their careers (*'... are women from all faculties, so from this faculty, the faculty of natural sciences, computer science and mathematics but also from literature, law, basically from everything, even on different levels. All (academical) levels under professor level, ...'*; Respondent 11). According to Respondent 3, the members are less connected with each other, the structure of a network is not clearly apparent (*'...I cannot say that there is a very strong connection (with each other), because all activities where I have been, sometimes you see familiar faces more often others (than they are more familiar to you). So, it is not that there is a very clear network of women among themselves or something.'*; Respondent 3). The contact between the members of the network is relatively formal. Outside the formal network setting, the board members have rarely contact with each other (*'... I am mainly formally connected to people. They are all people, whom I did not know about, for example, so I was really new to the group. And outside of the meetings and events, I have, sometimes, contact by e-mail about things which need to happen. But not really that we agree to have a drink. So, it is really professional on that basis.'*; Respondent 6). The board meetings offer space for sharing personal important topics with the members, which is perceived as informal (*'... I*

think that also with them, within our meeting there is room to discuss personal things, so in that sense it is informal. ... They were close colleagues and know each other very well and yes, friends, friendships have also arisen inside (the board).'; Respondent 11). Additionally, to the internal contact within the network, the members try to stay in contact with external networks as well (*'So, we are also really trying to strengthen those ties with other academic women networks. At the #metoo meeting, for example, there was a diversity officer of the () University in (), who was interested in our meeting to see if they wanted to organize a meeting in ().';* Respondent 11). The board members of this network send information for their next events to all academic female employees, from diverse faculties, via email. The women can decide if they want to participate in the events (*'... all activities, there is an email sent to all female employees.';* Respondent 3). The interested participants can sign in via a link included in the e-mail (*'...with a link from, here you can register.';* Respondent 3). This network does not excluded male academic employees from the events if they are interested in a certain topic, they can participate in meetings as well (*'... also people who are just interested in the subject but who are not women themselves... He thought it was an interesting subject, he wanted to learn more about it and be aware of it. And that is of course welcome.';* Respondent 6). If female academic staff are interested in the subject of the position of women in the scientific field, they can participate as a member in the board (*'...our target group (of possible) board members are women, who are really interested in the subject of promoting (the position of) women in science...';* Respondent 11). Two interviewed board members reported about how they recruit members for this network. They had contact with former board members and they had discussions with them over gender related topics. The former board members suggested them as possible new candidates for the board functions. (*'She was in the board and she knew, we had had discussions before about the position of women and feminist things. And apparently, she still knew that, she remembered. So, when the board positions became vacant, she asked me if I was interested in working with it.';* Respondent 6; *'I was recommended ... by one of the (senior) board members, who knew me and then they approached me and then they said, you know, would you like to become a member?';* Respondent 12).

Women Network 2

The women networks 2 have approximately seven board members in the network, both students and University employees (*'... but around 6/7 members and they are both employees as well as master students and bachelor students.';* Respondent 5). According to respondent 5, the network should be structured to include as broadly a group as possible (*'We*

always try to scale as widely as possible, with groups as wide as possible, so that you can network as much as possible.'; Respondent 5). The women here have all a computer science background. Diversity here means women from different years of the study program (*'They try to know as many people as possible from (for example) the second year, but also (women) like me, (and I am) almost finished.'*; Respondent 5). To inform female academic employees from computer science at the University about events, the board members send emails to all of them. The people who are responsible for organizing the events, have more contact with each other (*'I mean when you are on the mailing list you get emails, you can think of okay, take it or leave it.'*; *'... and often there are two people who then organize events so they have mutual contact'*; Respondent 1). Some board members work in the same building. This leads to unplanned additional meeting outside the board meeting. Frequent contact with each other leads to better knowledge of each other (*'... is also because we are mainly in the same building. You meet each other often and you can easily have a conversation with someone at the coffee maker or something. Eh yes, how strongly are we connected to each other? Yes, I think that everyone now knows each other especially of the members who are more active, well-known and say in enough contacts calling each other or something.'*; Respondent 5). The board members receive the email addresses of all female students or employees in computer science at the University. The information for new events is spread to all women on the list. The contacted women have the chance to subscribe to events (*'... we add people ourselves if they become employees or become students.'*; Respondent 1). If the network needs new board members, the current board members propose women within their own network in computer science (*'...mails that about events that basically go out to everyone. And if we see that people are more interested then we ask them if they want to,... So, I'm looking for the replacement, uh, and mostly because you already know people. It usually happens informally,...'*; Respondent 5).

Women Network 3

In this network are members who are board members with a specific function but also women, who join the monthly meeting but are no board members with special functions. In the board of this network are a chairwoman and the secretary. Furthermore, a woman is responsible for the communication, a few women have the responsibility for selecting new members (*'... of course we have a board, board of directors and that consists of the chairwoman, someone who does that communication, the secretary, someone who is a bit more involved than with the replacement and adoption of new members.'*; Respondent 2). In the network are between fifty and sixty members in total (*'Well, our average (of members) is*

between 50 and 60 members.’; Respondent 2). Diversity plays a role in this network. The new selected women should contribute to the diversity aspect in this network (*‘Different professional groups, fields of work, yes, look, and, er, diversity if that also means, hea, people with different ethnical ... backgrounds, would also be me. (there is only one woman with a different ethnical background), one woman with German background’*; Respondent 2). This network is attractive for women, who work in the free market (*‘...for self-employed is logical’*; Respondent 2). Dependent on the situation new subgroups can be developed (*‘And ehm, depending on what happens, other workgroups can be organized.’*; Respondent 7). The network has for example a book club. The women in this subgroup reading the same management books and they discuss the content of the book with each other (*And we still have a book club that discusses management books.*’; Respondent 10) or a group of women, who modernize the internet website (*‘...last year, a working group that worked on the renewal of the website, for example.’*; Respondent 7). This network is perceived by all members as less formal. One of the members with a long membership reports about the companionship between the members, some women also meet outside the official network meetings (*‘I myself am one of the longest, what do you call that, longest member. And I have a number of good friendships from that ...’*, Respondent 2). In case of special incident, for instance, a new job, the members send cards to congratulate them (*‘... someone else, who called me last week, who had a new job, so that's great fun to talk and pay attention, we also send a card to congratulate.’*; Respondent 8). This network requires from new members a certain educational level. New occupational directions, which implement the actual stock, are welcome (*‘... they choose people who have a certain level of professionalism and who bring some variation to the whole, so they do not want to have five notaries there, two are enough, you know.’*; Respondent 4). Also, the maturity of new aspirants plays a role, when recruiting new members. To increase the age span, the focus lies on attracting younger professional females (*‘... HBO-plus experience level in your work. Ehm, and then we also look at diversity, that is to say in age, we are looking for younger members eh, that works well, we get more and more younger attention that is very nice.’*; Respondent 8). Furthermore, the network would like to have a balanced distribution of women, who work on the one hand in companies as solid worker and on the other hand who work in the free market (*‘People who are employed and people who are independentand that you are also looking for a Balance.’*; Respondent 10). New members are often recommended by women, who are already members of this network. The website of the network provides access for interested women, so they can write an e-mail to the network, if they have the intention to enter it (*‘... it*

is actually via via always and look and now and again when you meet someone ... of course our website.’; Respondent 2). If the secretary sees a match with interested women, she will ask for more information (*‘... website and then you can sign up and then usually the secretary contacts and asks you for a motivation and resume.’*; Respondent 7).

The women network 2 has seven board members with different functions. The board members meet regularly to discuss topics or upcoming events, which are organized by the network. In principle, all students or employees work in computer science at the University and are members of this network. The participation at monthly meetings is voluntary, interested women can sign in for events. The principle of determining who is member of the women network 1 is similar to that of the women network 2. All women working in the academic field at the University are members of the women network 1. The range of the academic field is broader than the range of the women network 2 where only women from computer science can join the network. They can sign in if they are interested in meetings or workshops. The board of the women network 1 counts six people with several functions. The organization of the events is shared by all board members. The women network 3 has also a board, but also permanent members who have no other function but to participate at meetings every month. Furthermore, this network has also, like for instance the books club. Having a mixed membership within the network, represented by both the women network 1 (academic women from different faculties at the University) and the women network 3 (women from different occupational fields, with minimum educational level of ‘University of applied science’) is a core element of women networks in the developmental stage.

Culture (perceived)

Women Network 1

The members of this network perceive the culture as informal as well. The mutual support and interest are evaluated as positive (*‘... I experience it as very informal, pleasant; eh yes a kind of solidarity and, ehm, supported towards each other. So, it's all about the activities that you organize together, but also just about the interest in how are you doing and how are your work and what are you going to do your PhD? And you know, a lot of personal interest and supported in it, yes.’*; Respondent 3; *‘...we do try, too, to offer room for personal stories when we have meetings.’*; Respondent 11). All board members have the same interests, which connected them with each other (*‘I think yes people are, we really stand with the nose in the same direction. We all know, uh, we all think this is an important topic and we invest in that, so (we are) really investing in the same (goal).’*; Respondent 6). Different feministic

directions are combined within the network, Respondent 6 for example is an advocate of the intersectional feminism (*'...but I'm a bit in intersectional feminism. Do you know that flow, ...'*; Respondent 6). During dinner with all board members, the members can connect on a deeper level to each other (*'...we also go there, once or twice a year, with all of it out for dinner, so, yes to the team a bit and get to know each other a bit better. Yes, so it is a nice culture, I think, and we are all interested in the same goal, ...'*; Respondent 11). The culture is perceived as conscious and open to actual topics (*'... those, friendly, supportive. Ah, very aware of the, ah, you know, specificity of the topic. Ahm, ja, competent. I think people are really, you know, strong, they, they, know how to do things.'*; Respondent 12).

Women Network 2

One of the members perceives the culture of the network as both administratively regulated and as intimate (*'... to the point... and informal, I think. How, sometimes at meetings that (they talk) occasionally (with each other...'*; Respondent 5).

Women Network 3

The women in this network tend to behave humbly, the women must first be asked by other women of the network to report about their successes, before they would do it on their own. This is perceived as a weakness of the women, which needs to be improved (*'... that is really a lot implicit, so modesty. Sometimes you must say, well, you should try to dare, ask or say something more...'*; *'I think men are much clearer. I think that is something there, yes, I think that is something that we could develop even further.'*; Respondent 2). Respondent 2 remarks in which sense women behave different than men, women identify themselves less via their work: *'... and we certainly distinguish ourselves from men's networks. That women when they introduce themselves or say something, for example, not clarifying the company name.'*; Respondent 2). One woman perceived the culture as *'...friendly and lively.'* (Respondent 4). Someone else as *'...very open.'*, where new members with new ideas are appreciated (*'...ideas that they are very welcome...'*, Respondent 7). According to Respondent 7 is proactive behavior important (*'You have to do it on your own, you have to be yourself, yes you have to stand for yourself.'*; Respondent 7). The behavior of the women is perceived as competent (*'So, ehm, and professional, certainly very professional. I also notice how we work together, that is very good.'*; Respondent 8). The by Respondent 9 perceived culture is dominated by white women (*'...generally (they are) all white women.'*; Respondent 9). One woman perceives the network culture as warm and safe (*'...I think so, we have a very warm culture and ehm, and again quite safe.'*; Respondent 10), the women support each other also

in demanding times (*'For example, I have been in the hospital at a given time and I found it heart-warming how many people responded (to that),...'*; Respondent 10). But the culture is also perceived as more closed for newcomers (*'...very closed, at the beginning...'*; Respondent 10).

The members of the women network 2 perceive the network culture of their network as well regulated and friendly. The members of the women network 1 also perceive their network culture as friendly, connecting, supportive and as being up to date regarding gender topics and issues. The members of the women network 3 appreciate their network culture, in which a proactive attitude by every member is valued.

Activities

Women Network 1

The board members organize monthly events per year about gender related topics. All female academic employees are invited to the events. These events are explicitly intended for increasing the network (*'I think that kind of information can help people understand what are the dynamics that are playing there and what are perhaps subjects that need to be brought to the attention or that need improvement.'*; Respondent 6). Other board meetings are organized on a monthly base (*'... (we) have an board meeting once in the month.'*; Respondent 6). This network is financially sponsored by the University (*'And it is supported by the board of the university. And every year money is available to organize activities....'*; Respondent 3). Furthermore, the network communicates via internet about gender issues and informs interested parties (*'... we are also active on LinkedIn or Twitter, so if there is a certain event or communicate things, we also occasionally post something on it. But that is not very active. And via (our) website, yes we keep it up (to date) ...'* Respondent 3). The network also communicates with other University women network (*'...also to stay in contact with other networks.'*; Respondent 6). Organizing workshops or lunches for discussion topics, is one part of the responsibilities of the board members (*'...workshops and something solid, and network events, such as lunches, for example.'*; Respondent 6; *'They also always try to involve the board of directors in our activities.'* (Respondent 11). To summarize, the board members of this women network meet each other regularly, they try to organize monthly events and network events for all interested academically women from the University. They have once per year a meeting with the board of the University and stay in contact with women networks outside of the University.

Women Network 2

During the 'Girls day', which is an event, the women network 2 presents information about computer science to girls, with the intention of making it more attractive and inspire the girls ('...we gave small presentations and presentations about computer science.', Respondent 1). Furthermore, this network sends women from the computer science area to schools to teach children about this topic ('...not a very active one network, we try to organize something in the month once. Ehm, occasionally I also organize something, and we also arrange out-source projects at high school to give people guest lessons and then we try to send women or at least a woman to that.', Respondent 5). The network organizes events for women in the computer science department of the University, where the women can get to know each other ('..., to connect those with such an event. We also had such an event recently. '; Respondent 1). The board members of this network meet each other monthly and also try to organize monthly events for women in computer science but also for young women, who are not even have heard something about computer science. The meetings follow a certain topic, as for example the 'Impostor syndrome'. This phenomenon represents a negative line of thought; affected persons have the disbeliefs that they haven't accomplished their successes on their own. ('... imposter syndrome, we have had an event about it ... that is a syndrome where people and especially academics, have the feeling that everything they have achieved came to them by chance. '; Respondent 5).

Women Network 3

This women network organizes per month one meeting for all members of the network. Every meeting is comparably structured. They start with an update LinkedIn round, to ask for help from other women and to report about successful work combinations. After this, the evening meal starts. During the dinner, the women can discuss specific gender related topics. After this, the program starts, where some external experts share their experiences ('... just come in and have a drink and also (talk) to each other ... At eight (o'clock) we go to a (different) room, and at eight o'clock about start the (actual) program. And that usually takes one and a half hours, until half-past nine.... And that there is someone from outside who explains a particular subject or what comes before it. '; Respondent 2). The events differ from time to time and can also contain workshop elements ('... workshop-like format. '; Respondent 2). The program commission of this network meets once per year to consider the program for the next year ('...the program committee has a meeting almost every year ..., (they) write down what you'd like to see next year, you know. And then they have eh, 43 subjects, they are

going to (discuss) of what we can do, who can we put in and where and is it fun or what is it, ...'; Respondent 7). The program commission integrates preferences of the other members ('...sometimes input is asked of do you have any ideas...'; Respondent 9). Furthermore, once in the summer, a few women organized a separate meeting at the house of one of the members ('... in the summer, that is everyone on vacation then we are at a meeting ten or twelve and then we have once such a, eh, home round.'; Respondent 7). Sometimes the women of the network visit companies ('... sometimes a company visit, ...'; Respondent 9). This network also sometimes organizes connecting events with other networks ('...sometimes we have meetings with another network.'; '...we went together'; Respondent 10).

The women network 2 organizes workshops for only board members. But it focusses mainly on, first, organizing events for women, who study or who works in computer science at the University. These events outline mostly gender related topics. Secondly, they send women to schools to make computer science for young students more interesting or introduce computer science at public events. The members of the women network 1, meet regularly to organize events for all academic women at the University. During the events, the women discussing gender related topics and issues. Furthermore, all the information, which the women network 1 summarized about gender related topics is furthermore discussed with the board of the University during a yearly meeting (strategically developmental stage of women networks). Both networks, the women network 1 and 2, do not exclude interested men from their organized events. Within the women network 3 are events planned only female members of this network. The network meetings come off every month, the topic differs per month. The structure of the monthly meeting is mostly the same. Sometimes, the networks members meet additionally to the regular monthly meeting. When looking at the events organized by the networks, all the three networks operate in the developmental stage by Donnellon and Langowitz (2009). The events of all the three networks focus on mentoring women in their occupational field.

Perceived Outcome of the Network

Women Network 1

Women from all faculties at the University relate to each other, which makes them stronger to apply gender-related issues to the top board of the University ('And I think that in addition, ehm, important or easy to make contact between women from different departments.'; Respondent 3). Discuss gender-related issue, the easier it is to bring transformations in support of women ('... a women's network there, that has some influence

and can make smaller changes, which help. We prefer to have a lot of influence; a lot of people and we can make bigger changes... ’; Respondent 6).

Women Network 2

The network organizes events, which should inspire young girls at school to be interested in Informatics. Furthermore, awareness for women in the IT area is expected to increase (*‘...with the girls day, by standing there that we show more girls, go Informatics is also something for girls. So, I hope that they have inspired people as a little bit. And I hope that with the meeting about the subjects, that people can get something out of it.’; Respondent 5).*

Women Network 3

The women feel connected among themselves and they feel socially supported (*‘...it's a feeling of camaraderie among the women and that women feel supported and also feel socially supported.’; Respondent 4).*

The perceived result of the women network 2 is the increase of awareness of gender related topics and issues for women in computer science. The increase of awareness related to gender topics and issues is also perceived in the women network 1. The women mainly want the main board of the University to increase the awareness of these topics. This could lead to that the main board could implements changes, which are in favor for women and for men. The members of the women network 3 feel connected to each other.

Perceived Result for Members of the Network

Women Network 1

Spending time for this network is not experienced as a detriment (*‘Yes it takes time but it does not take me so much time that I find it disadvantageous.’; Respondent 3).* Respondent 3 perceives in some situation a labeling effect of the women network (*‘...but it does sound stigmatic. So, for example when I go to an activity and I say to my colleagues, men and women, oh we are now going to a lunch of the women's network. It sounds like, too self-posting or something. It can be pretty negative.’; Respondent 3).* The events of the network are perceived as beneficial, but according to Respondent 3, the network will be more beneficial if men would participate at the events as well (*‘So, I think it, eh, the activities are very useful but it would be useful if men were also there.’; Respondent 3).* Respondent 6 would also prefer to see more participant at the events (*‘...you would really want 400 people,*

say, to come after that. But then maybe 20, if you have it like that. Because it is difficult to get people sometimes at the table about this kind of subjects.’; Respondent 6). But the small achievements of the events are experienced as first step to reach a greater goal (‘And we also achieve small successes, that already helps.’; Respondent 6). For one woman of this network it is ‘... basically just a satisfaction of knowing that I am trying to do my best and improve things.’ (Respondent 12). But in general, she thinks ‘... that are the advantages, also to me personally, but, ah, I also see it a bit like a, like a service, putting things to the community.’ (Respondent 12). Getting to know academic employees from several faculties has a motivational and inspirational effect on the members (‘... I get to know new people and also (people who are not in my) own department or small world, and also their experiences, which are also instructive for me. So, they are women, who are further in their careers, ... It is also motivating or (it inspires me) how they did it.’; Respondent 3). Having contact with academic workers from different departments increases the scope of knowledge (‘Ehm, and I just like to be broader weather for my own research, yes it's just broadening.’; Respondent 3). The members gain personal satisfaction by constructing consciousness for this topic. Furthermore, the members report of their improved knowledge (‘I think that personal satisfaction, which I get from it, that it is mainly, that it does for me... and share experiences and things.’; Respondent 6). The members had the opportunity to gain more expertise in administrative work, gain more understanding related to the topic of gender and diversity. Overall the level of consciousness for inequality issues increased (‘... lots of experiences that you cannot do just by just sitting in front of the computer. So, yes, experiences with administrative work, ehm, but also a lot, yes, much more knowledge about gender diversity and gender inequality and ehm, yes, you also see it more and more once you know it then you will see it.’; Respondent 11). The attention to gender related topic increased by being member of the network (‘And yes, I became much more interested in the subject than I already was.’; Respondent 11). One member of the board perceived it as ‘...positive, it's a very nice experience.’ (Respondent 12). This network is perceived as useful for gender-sensitive topics. Furthermore, more participants for the events are wished by the board members (‘... the range is not always very big, so activities come from 30 to 40 women and I think it would be better, so that is difficult. But I think that the events and topics, that are being treated are just good and important.’, Respondent 3). Respondent 3 recommended to be more engaged in internet (‘And the only thing is, I think, what could be better, that the reaches greater and uhm, yes perhaps with social media, can be a bit more active, yes.’; Respondent 3). The board members indicate during board meetings mutual toleration and appreciation (‘... in terms of

organization it is pretty good... and that there is understanding for, the position for others and time pressure'; Respondent 6). One woman mentioned that she evaluates the network as '... very positive and I am also glad that it still exists yes.' (Respondent 11). One member mentioned that she appreciates being a member of this network. Exchanging guidelines for how to challenge situations is perceived as valuable ('I think it's very nice and very valuable to be a member of this... it makes me think more about women issues, ... how do you deal with some things, ...'; Respondent 3). Being united with women with the same opinions leads to satisfaction ('... it gives me satisfaction to do more with other people for the same purpose. '; Respondent 6). Feelings of pride are shared. It feels good for the members to commit to this subject ('I am proud, yes. It is also something I, ehm, like to call, say that apart from being a researcher, I can also contribute (in a practical way) here. And equality in science, so, yes I think it is also a piece of identity of myself, yes. '; Respondent 11).

Women Network 2

Respondent 1 values the contact with new people, with whom you would not talk usually, as a result of the network ('Yes, I think that is in the contacts again. That you can speak to a wider group of people once, while you normally would not. '; Respondent 1). While the other woman from this network inform other women about a free scholarship position, where Respondent 5 applied for it ('... I learned a lot better to organize something like that... I was on the board there was a scholarship of google, you could sign up for that ... I was talking about it with the person who organized it,... '; Respondent 5). The network offers new chances for new opportunities for the board members. Being member of the board, giving lessons for young children and organizing events have a satisfying effect ('Networking I think it's also normal, for example giving lessons and I like organizing an event, so I get satisfaction from that... board, so, you get there a bit more knowledge. '; Respondent 5). This network is in general perceived as good, with space for improvement ('...I mean there is always room for improvement but generally good, yes. '; Respondent 5). The challenge is to organize the events, without having overlap with events from other study federations ('... with study association it is, they always have a lot of events, I do not want to organize on the same day... '; Respondent 5). Being a member of this network gave a feeling of gladness and pride ('... I'm certainly glad that I've become a member and am very proud of it... '; Respondent 5). Respondent 5 is proud to contribute, slowly, but efficiently to the goal of this network ('...can slowly make a little change and that's the real goal... '; Respondent 5).

Women Network 3

One woman could find a new job with the input of other network members (*'I got this job five years ago through a member of this women's network.'*; Respondent 2). Another woman mentioned that she feels *'... sense of connection, camaraderie, inspiration and also support.'* (Respondent 4). Various events and activities open new perspectives to the members (*'...you will never get there otherwise. It is very nice, at least I think so, uh, very nice, so it brings me many different angles.'*; Respondent 7). One woman evaluates the contribution of the network as *'...an opportunity to profile (my)self in my work, I am absolutely not advertising but everyone knows what I do and sometimes I also ask for help from...'* (Respondent 9). Respondent 10 mentioned that she increased her network with women, who can support or advise her in several situations (*'...have much more contact now than before... And then there are people, whom you can call, and who advise and who help a contact somewhere.'*; Respondent 10). This network connects and integrates people from several backgrounds with each other, it offers the opportunity to learn about the Dutch culture (*'... it is mainly about the feeling of connection. I am actually, yes I am actually Dutch but I am actually a foreigner, who comes to visit...'*; Respondent 4). The members can increase their horizon while getting to know new people, which contributes to their individual growth (*'... it provides a lot of knowledge, a lot of knowledge. And, uh, I have a lot in my own personal development...'*, Respondent 7). For example, respondent 10 reported from a presentation of a woman, who has a high position in the Dutch Army (*'...in the last meeting was with, uh, someone who is high in the top of the army.'*; Respondent 10). Offering feedback to each other, is being valued and has according to Respondent 8 an collective effect for the women of the network (*'...that you also get feedback from the group, hea, there you can ask them...';'...through this way you can come further together.'*; Respondent 8). Respondent 4 evaluates the organization within the network as positive (*'I see it a very nice network. I think it's well organized, nice things that are organized, you know. Yes, it is just arranged, that people arrive on time, it is arranged on time, the location is good, the food is good, ...'*; Respondent 4). It is perceived as *'... a very nice social environment and inspiring...'* (Respondent 8). The members feel *'...at home, familiar.'* (Respondent 9), when they describe their network. The network broadcasts a warm atmosphere (*'...after a warm club...'*; Respondent 10). The members of this network also feel valued being a member because they contribute to gender-related topics. Being a member ensures for the collection of new knowledge (*'I think it's very nice and very valuable to be a member of this ... you hear more personal experiences and that is just interesting for me to know and I also think it prepares me for the future of how do you deal with some things.'*; Respondent 4). The feeling of pride

is mentioned by these members as well (*'I am proud, with the network, I feel, that is something I found important.'*; Respondent 7). One member mentioned that she *'feel(s) connected'* (Respondent 8), another woman feels *'appreciated within, eh, the network'* (Respondent 10).

Being member of the women network 2 has the advantage of being in touch with women in computer science. Here again, the results of women networks in the connective stage are also present in the women network 2. The members of this network appreciate their work within the network and are proud to contribute to the mission of the network. The members of the women network 1 consider their network results satisfactory. They would wish to gain more attention and are also open for male participants. The network events have an inspiring effect on the interviewed members. Leading and inspiring participants is an element of women networks that operate in the developmental stadia. The members of the women network 1 feel tolerated and respected by each other. Overall, they perceive their work as positive. The women within the women network 3 reported about positive experiences within the network. One woman stated that she could find a new job with the help of another member of this network. The members of the women network 3 appreciate the opportunity of meeting a lot different women, being connected with other women and learning about several topics. Also, in this network, women can inspire themselves being a sign of the developmental stage within women networks.

5. Conclusion and Discussion

5.1 Conclusion

This research explored the perception of twelve members of three women networks in order to contribute to the scarce theory on in-company and professional women networks. Secondly, the three networks were analyzed through the theoretical lens of developmental stadia by Donnellon and Langowitz (2009). In these two ways the study aimed to contribute to future theory on in-company and professional women networks. Two of three networks, the women network 1 and the women network 2, were defined as both in-company and professional networks. One of them, the women network 3, was defined as a professional network which was not located within an organization.

The theoretical part defined in-company and professional women networks, however, in the literature little was found about in-company women networks and even less about professional women networks. The interview questions were structured based on the literature of organizational and in-company women networks. The interview questions focused on

perceived characteristics of the women networks and evaluations of the networks by their members. As presented in chapter 3, all interviewed members of the two in-company women networks were board members. Of the interviewed women from the professional network, some had board function experiences, while others did not. During the analysis of this research, it was of interest if the perceptions of the women differed based on the network form. Another goal of this research was to explore the developmental stadia of women networks based on the theory by Donnellon and Langowitz (2009). While using the theory by Donnellon and Langowitz (2009) the following research questions was answered: In which stadia do the three women networks operate? Analyzing the three networks with this theory as the background led to the following goal: deliver suggestions for the three networks to establish themselves in higher developmental stadia and have more influential effects. Furthermore, it contributed to the theory of in-company and professional women networks.

The answer to the research question ‘How do the members of the women networks perceive these networks?’ can be summarized as follows:

The two networks within the University supported the role of female academics. The women network 2 concentrated on female students as well as academic staff in the computer science field. The two interviewed women of this network were both board members. Both women decided based on the unequal distribution of women within computer science to enter the women network 2. This network was proposed firstly to connect women in the computer science field and secondly to make computer science more appealing for young women. The goal of the other in-company women network, the women network 1, was, on the other hand, to connect women in the academic field at the University with each other and on the other hand to support them. The professional network women network 3 also aimed to connect and support women.

To reach the goals of the networks, both in-company women networks organized events to increase the awareness of gender-related issues. During the events gender related topics were discussed with other. One interviewed women of the women network 1 reported on her strategy that it can be divided into three stages: first, collecting more information and evidence of gender related topics, second, to use this information as the basis of discussion during events and third, to present the results of the discussion rounds to the highest board of the university in order to change the situation of the women at the university.

All three networks had board members. The interviewed women from the two in-company women networks were all board members. The six interviewed members of the professional networks, the women network 3, were both board members and members with no

board function. But the women network 3 also had subgroups within its network.

All interviewed women enjoyed being member of a women network and relating to other women. All three networks communicated a friendly culture to their members.

The women network 2 mainly focused on, first, organizing events for women, who study or who work in computer science at the University and second organizing outsource projects to increase the interest of students for computer science. The second in-company women network, the women network 1, organizes events regularly for all academic women at the University. Furthermore, they meet the main board of the University. In every meeting gender related topics and issues are discussed. The members of the women network 3 meet each other on a monthly basis. The meetings are organized similarly with different topics.

All members experienced the entry as generally positive. The network had beneficial effect on the women's' careers and also increased their social network, which again influenced their perceived well-being in their occupational field. The members of the women network 2 perceive the membership within the network as positive. They are proud to increase more awareness of and interest in computer science, especially for women. The members of the women network 1 are content to be a member of this network. The women feel that they contribute to the network goal. They would like to see more attention to gender related inequalities. Also, the interviewed women of the women network 3 are satisfied with being a member of the network. They reported positively about the experiences that come along with being member of the network.

Developmental stadia

According to Donnellon and Langowitz (2009), networks can be positioned in various developmental stadia. The three developmental stadia are the following: connective, developmental and strategic network stadia. The in-company women networks analyzed in this research, which are also defined as professional networks, are located in the connective and the developmental stadia. Both in-company networks have as their mission to connect women from specific fields with each other. The women network 2 presents its academic field to for instance students of schools, the women network 1 share information with the highest board of the University. Furthermore, the events are organized for inspiring women for computer science. This is evidence that the women network 2 also operates in the developmental stage.

By analyzing the women network 1 through the theoretical lens by Donnellon and Langowitz (2009), it is clear that this network operates in all three developmental stadia. It shows characteristics of the connective stage, because women in academic field within the

University are connected with each other. It organizes events and workshops for the women to inspire them and give them space to discuss gender related issues. This is an element of the developmental stage. Lastly, it has a strategy to implement changes at the University, which should create equal work circumstances for women and for men. This is an element of a women network which is located in the strategic stage by Donnellon and Langowitz (2009).

The women network 3 is located in both, the first stadium according to Donnellon and Langowitz (2009), the connectivity stadium and the developmental stage. The interviewed women of the women network 3 perceive their networks as an opportunity to connect with women, for which there is little potential in their regular working experience, this is a trade of the connectivity stadia. The events, which are organized by the women network 3 are intended to inspire women which is a characteristic of networks operating in the developmental stage.

This research aimed to contribute to existing theory of in-company women networks and professional network. Little is known about the strategy and the activities within in-company women networks. Furthermore, in prior literature, little was found about the reasons for entering the network, the goals and the results of professional women networks. Conducting interviews helped compare the literature about the two forms of women networks with three networks in practice and offers material to add the missing characteristics of the networks. Per element of the women network is listed, which elements are similar or dissimilar with descriptions about elements of the networks in theory. This way, the findings of this research contribute to prior theory.

5.2 Discussion

5.2.1 Theoretical Discussion

According to Bierema (2005) are in-company women networks a federation of women, with the intention of supporting women and increasing their access to resources. The interviewed members of the two in-company women networks showed that the pursued goals of the networks were both connecting women from a certain field with each other and supporting them with increasing their position. The members of the women network 2 referred to the long-term goal of the network: increase the interest, especially of women, in computer science. The experience of marginalization of women in the technical domain is supported by findings of Tapia et al. (2004). The members of the women network 3 perceived the network as an opportunity to expand their work-related network and to show their talents on an individualistic level. The women act reciprocally within this network: every woman

should contribute to the network and receive support by other women if necessary. The two in-company women networks focus on the giving aspects while the professional network, women network 3, also focuses on the receiving component.

According to Singh et al. (2006) in-company women networks are installed to support women in reaching higher positions at work. The women of this network seek to a lower degree to immediately reach higher positions based on being members of this network than expected by Singh et al. (2006). The interviewed women have the intention to eliminate gender related inequalities and to create equal conditions for women and men.

To reach its goal, the women network 2 organizes events for women in computer science at the University and participates in outreaching projects in order to introduce computer science students with special focus on female students while combating stereotypes about this field. The board members of the women network 1 categorize their strategy into three stages: collecting information about gender related issues, discussing it with women in similar situations and presenting the results to the board of the University in order to advance the issues. Bierema (2005) also mentions the aspect of organizing meetings as a facet of in-company women network's strategy. Also, the members of the professional women network reported that during the monthly meeting, the members of this network have the freedom to inform each other about vacancies, give advice and offer support to each other. The strategy of the professional women networks is similar to the strategy of the two in-company women networks. All members of the three networks are aware of the fact that they have to work together to achieve the aims of the networks.

In-company women networks have boards, wherein the board members have fragmented tasks (Vinnicombe, Singh & Kumra, 2004). Both in-company women networks had a board. Also, the professional networks had a board, which is not expected in theory (Galaskiewicz, 1985), since, according to Galaskiewicz (1985), professional networks have no administration. However, the organization of events of the professional network, like the monthly meetings requires the administrative work. Furthermore, Galaskiewicz (1985), poses that members of networks have the same work background. This is consistent with the two in-company women networks, whereas the professional network aimed to promote variety.

The interviewed members of the in-company women networks perceived their culture as friendly and supportive. The culture within the professional network is perceived by the members as warm, open and friendly. However, while the women behave proactively they are also shy when they report on their success. Newcomers of the network are welcomed, but they also must be proactive to integrate themselves, otherwise they will have the impression

of the network culture as closed. This example represents the receiving and giving effect: If the members behave openly, they are treated accordingly. All three networks reported on a supportive culture within the networks, this is consistent with the theory by Bierema (2005) according to which the members of the women networks share information and support each other.

As mentioned by Singh, Vinnicombe and Kumra (2006), women networks are built to increase the awareness of gender-related issues. Several interviewed board members of the in-company women networks perceived an increase in their awareness of gender issues. Furthermore, due to organizing events, the women aspire to increase consciousness of gender related topics outside their own networks as well. The women network 2 sends volunteers to schools in order to present computer science to students. The women networks 1 also communicated with other women networks. The professional networks organized events only for their members. The meetings of the women network 3 are less aligned with gender-related issues and focus more on improvement of the role of women in the work market.

The women of the women network 2 experience the network outcomes as follows: this is an opportunity to get to know a new person, which also increases the chance to be informed about for instance vacancies. The two women of the women network 2 gained experiences in administrative work, even though their organizational work could be improved. The goal of increasing the awareness of young women for computer science is perceived as being accomplished in the first instance. This is supported by findings of Sparrow et al. (2001), it is stated that network execute an inspiring effect. The women of this network also reported of the fact that also men are invited to events organized by them, which is important to prevent the development of inequality regimes, according to Acker (2006). The women of the women network 2 strive for equity between men and women and not for superiority of women. Excluding men as argued by McGuire (2000) can be disadvantageous, because women exclude themselves from male dominated networks and as a result are not connected to important persons.

Sparrow et al. (2001), established that network members in board functions perform additional tasks separate from their work, which is perceived as positive by members of the women network 1. Furthermore, the members of the women network 1, recognized the events as a useful for support women in academia, but more participants both male and female, are desired. The interviewees of the women network 1 are grateful about getting to know large number of women with diverse backgrounds. Here as well, the goal of creating more awareness for gender-related topics is perceived as being achieved. According to Brass

(2004), a group shares practices with each other and innovates on the inter-unit level, this is comparable with the fact that the board of this network meets on a yearly base with the main board of the University in order to achieve change.

The research of Singh et al. (2006) focused on the results of managers regarding their careers, the women of the women network 3 reported of successful exchange of information about job opportunities. According to Timberlake (2005) networks are a source for sharing information, assets and talents with each other. This is also supported by the perception of the members of the women network 3: They mention that this network is an opportunity for them to be introduced to diverse women, to gain knowledge to solve certain problem situations and to develop themselves on an individual level. A sense of connectivity between the members is perceived, the women give and receive support. This is consistent with the findings of Podolny and Page (1998), who stated that networks connect members and develop exchange relationships between members. The women within the women network 3 share honest feedback with each other and be proud to be member of the network.

The research confirmed several elements of the definitions of the in-company women networks and the professional networks and contributes with new insights. The differences and similarities, respectively, of the elements of the networks have been mentioned before. Furthermore, this research also showed that the in-company women networks' developmental stadia can also be applied while analyzing professional women networks.

This study made obvious that in-company woman networks operate with the intention of improving their organization. The professional women networks are more focused on support of the functioning of the members, this is less clear in prior literature. Based on the findings of this research, suggestions for further research follow. In this research three networks were analyzed, with two of them being categorized as both in-company and as professional networks. Future research could concentrate only on professional networks to deliver more insights in the concept on professional networks. As a side note, it would be interesting to analyze the 'Impostor syndrome' and which factors are responsible for this phenomenon. Further research could explore if this phenomenon is gender related or not.

5.2.2 Practical Implications

Women Network 1

In order to improve the presence of the network on, for instance Facebook, the women from this network could ask women from computer science to improve their Internet website, in order to improve the network's connection to other networks. The women from the two

networks could share their experiences regarding gender related issues and could also inform each other about problem solutions. To gain more volunteer participants in this network it, the women could send an e-mail to the academic female staff of the University to ask them for their input about which topics could be interesting for them. By asking them, the women would be more interested in the discussed topics and would join more events. Furthermore, the network could consult women who are not members of the network to also gain insights in their perceptions. This could lead to a better dialogue between members of the network and non-members and could improve mutual understanding. The network could also involve men as discussion partners in order to discover their opinions about the network. This way, the members of the networks could gain more insights into the reasons for gender inequalities. To have more power to modify the work environment for female staff at the University, the network could work towards a woman of the women network 1 becoming a member of the main board of the University.

Women Network 2

This women network could have more contact with other women networks from computer science, in order to first share information with more women and second to organize events for a broader audience. With a broader audience the network could also increase the awareness of gender related issues in the social environment. It could organize introductory events for student from school who want to orientate for their future study, to focus especially on computer science. They could invite participants to their events and be more proactive. By being more proactive the events could have more participants. And again, it would increase the consciousness about gender related issues. The outreaching projects are successful, but perhaps they could send more students to schools to teach young students as a regular project, because then the students recognize computer science as an important topic, which develops over time. This could motivate students to follow this science direction. This can also be an opportunity for students from the University to gain experiences in teaching To develop more in the strategic developmental stage by Donnellon and Langowitz (2009), this network could communicate with the board of the University.

Women Network 3

This women network could promote itself by advertising on LinkedIn, because in order to extend the network, women from younger age (below the age average) would then be better informed about the existence of this network. For selecting new members of this network, it would be advisable to select women based on the same interest, like for instance

support each other, instead of the education level. This could lead to more diversification within the network.

To have more effect also on the social society, they could start a collective project, which could benefit different social groups. This network could also organize regular meetings with other women networks to share their experiences and to accomplish more insights. Both networks would profit by it, because they have faster and better pieces of advice to deal with certain problems.

This women network could also invite men to some of the meetings, to also discuss with men gender related issues. The discussion would offer more perspectives, which could develop mutual understanding between women and men.

5.2.3 Methodological Implications

In this research data were collected from three types of sources. The information on the Internet websites of the three networks was used as documents. The members of the network could not provide this research with additional documents. During the interviews, the respondents of the women network 1 and 3 reported that the websites should be more up to date, which means for this research, that the website could provide more additional information. In this research, only one meeting of the women network 3 was observed, thus the meetings and events of the other two networks could not be analyzed further. Further research could try to observe at least one meeting per observed network. The interviews were arranged in length from twenty-two minutes to more than an hour. Some interviews provided more detailed information. The research questions were semi-structured which increased the internal validity of this research. At the beginning of each interview, the participants were asked to tell about themselves their own person, this brightened the interview atmosphere and the interviewees felt freer to speak honestly about gender related issues. Further research would focus on the length of the interviews, to have more similar interview data. One interview was conducted via mobile phone and creating a personal connection to the respondent was difficult. To avoid this for future research, the interview should at least be face to face. For future research it could also be recommended that more interview respondents could be involved. This would increase reliability of a qualitative research and the generalization of the findings (Yin, 2013). However, the findings of this research provided starting points for the analysis of professional women networks and the elements of it.

References

Acker, J. (1990). Hierarchies, jobs, bodies: A theory of gendered organisations. *Gender & Society*, 4(2), 139-158.

- Acker, J. (2006). Inequality regimes: Gender, class, and race in organizations. *Gender & Society, 20*(4), 441-464.
- Acker, J. (2009). From glass ceiling to inequality regimes. *Sociologie du Travail, 51*(2), 199-217.
- Babbie, E. (2013). *The Practice of Social Research*. United States: Wadsworth.
- Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2002). Validation of the Maslach burnout inventory-general survey: an internet study. *Anxiety, Stress & Coping, 15*(3), 245-260.
- Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report, 13*(4), 544-559.
- Billing, Y. D. (2011). Are women in management victims of the phantom of the male norm?. *Gender, Work & Organization, 18*(3), 298-317.
- Bierema, L. L. (2005). Women's networks: a career development intervention or impediment?. *Human Resource Development International, 8*(2), 207-224.
- Bodin, Ö., & Crona, B. I. (2009). The role of social networks in natural resource governance: What relational patterns make a difference?. *Global Environmental Change, 19*(3), 366-374.
- Borgatti, S. P., & Foster, P. C. (2003). The network paradigm in organizational research: A review and typology. *Journal of Management, 29*(6), 991-1013.
- Brannan, M. J., & Oultram, T. (2012). Participant Observation 17. *Qualitative Organizational Research: Core Methods and Current Challenges, 296*.
- Brass, D.J. (1985), "Men's and women's networks: a study of interaction patterns and influence in an organization", *Academy of Management Journal, 327-43*.
- Brass, D. J., Galaskiewicz, J., Greve, H. R., & Tsai, W. (2004). Taking stock of networks and organizations: A multilevel perspective. *Academy of Management Journal, 47*(6), 795-817.
- Burke, R. J., Rothstein, M. G., & Bristor, J. M. (1995). Interpersonal networks of managerial and professional women and men: descriptive characteristics. *Women in Management Review, 10*(1), 21-27.
- Burke, R. J. (1999). Workaholism in organizations: Gender differences. *Sex Roles, 41*(5-6), 333-345.
- Campbell, K. E. (1988). Gender differences in job-related networks. *Work and Occupations, 15*(2), 179-200.C

- Clark, A., Holland, C., Katz, J., & Peace, S. (2009). Learning to see: lessons from a participatory observation research project in public spaces. *International Journal of Social Research Methodology*, 12(4), 345-360.
- Cottrell, R. C. (2014). Scientific integrity and the market for lemons. *Research Ethics*, 10 (1), 17- 28.
- Cross, C., & Armstrong, C. (2008). Understanding the role of networks in collective learning processes: The experiences of women. *Advances in Developing Human Resources*, 10(4), 600-613.
- Donnellon, A., & Langowitz, N. (2009). Leveraging women's networks for strategic value. *Strategy & Leadership*, 37(3), 29-36.
- Denzin, N. K., & Lincoln, Y. S. (2008). *Strategies of qualitative inquiry* (Vol. 2). Sage.
- Donnellon, A., & Langowitz, N. (2009). Leveraging women's networks for strategic value. *Strategy & Leadership*, 37(3), 29-36.
- Due Billing, Y., & Alvesson, M. (2000). Questioning the notion of feminine leadership: A critical perspective on the gender labelling of leadership. *Gender, Work & Organization*, 7(3), 144-157.
- Kvande, E., & Rasmussen, B. (1995). Women's careers in static and dynamic organizations. *Acta Sociologica*, 38(2), 115-130.
- Easterby-Smith, M., Thorpe, R., & Jackson, P. R. (2012). *Management Research*. Sage.
- Finfgeld-Connett, D. (2010). Generalizability and transferability of meta-synthesis research findings. *Journal of Advanced Nursing*, 66(2), 246-254.
- Forret, M. L., & Dougherty, T. W. (2001). Correlates of networking behavior for managerial and professional employees. *Group & Organization Management*, 26(3), 283-311.
- Forret, M. L., & Dougherty, T. W. (2004). Networking behaviors and career outcomes: differences for men and women?. *Journal of Organizational Behavior*, 25(3), 419-437.
- Fylan, F. (2005). Semi-structured interviewing. *A Handbook of Research Methods for Clinical and Health Psychology*, 65-78.
- Galaskiewicz, J. (1985). Professional networks and the institutionalization of a single mind set. *American Sociological Review*, 639-658.
- Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The Qualitative Report*, 8(4), 597-606.

- Granovetter, M. (1983). The strength of weak ties: A network theory revisited. *Sociological Theory*, 201-233.
- Gremmen, I., Akkerman, A. & Benschop, Y. (2013). Does where you stand depend on how you behave? Networking behavior as an alternative explanation for gender differences in network structure. *Journal of Management & Organization*, 19, 297-313.
- Haythornthwaite, C. (2005). Social networks and Internet connectivity effects. *Information, Community & Society*, 8(2), 125-147.
- Hillman, A. J., Shropshire, C., & Cannella Jr, A. A. (2007). Organizational predictors of women on corporate boards. *Academy of Management Journal*, 50(4), 941-952.
- Hyde, K. F. (2000). Recognising deductive processes in qualitative research. *Qualitative market research: An International Journal*, 3(2), 82-90.
- Ibarra, H. (1992). Homophily and differential returns: Sex differences in network structure and access in an advertising firm. *Administrative Science Quarterly*, 422-447.
- Ibarra, H. (1993). Personal networks of women and minorities in management: A conceptual framework. *Academy of Management Review*, 18(1), 56-87.
- Ibarra, H., Carter, N. M., & Silva, C. (2010). Why men still get more promotions than women. *Harvard Business Review*, 88(9), 80-85.
- Kvande, E., & Rasmussen, B. (1995). Women's careers in static and dynamic organizations. *Acta Sociologica*, 38(2), 115-130.
- Leung, L. (2015). Validity, reliability, and generalizability in qualitative research. *Journal of Family Medicine and Primary Care*, 4(3), 324.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.
- Lincoln, Y. S. (2009). Ethical Practices in Qualitative Research. In D. M. Mertens & P. E. Ginsberg (Eds.), *The Handbook of Social Research Ethics*. Washington D.C.: SAGE Publications, Inc.

- Linehan, M. (2001). Networking for female managers' career development: Empirical evidence. *Journal of Management Development*, 20 (10), 823-29.
- Luthans, F., Hodgetts, R.M. & Rosenkrantz, S.A. (1988). *Real Managers*. Cambridge, MA: Ballinger.
- McGuire, G. M. (2000). Gender, Race, Ethnicity and Networks: The Factors Affecting the Status of Employees' Network Members. *Work and Occupations*, 27(4), 501-23.
- Moore, G. (1990) Structural determinants of men's and women's personal networks. *American Sociological Review*, 55(5), pp. 726 – 35.
- Newell, S., & Clark, P. (1990). The importance of extra-organizational networks in the diffusion and appropriation of new technologies: The role of professional associations in the United States and Britain. *Knowledge*, 12(2), 199-212.
- O'Neil, D. A., Hopkins, M. M., & Sullivan, S. E. (2011). Do women's networks help advance women's careers? Differences in perceptions of female workers and top leadership. *Career Development International*, 16(7), 733-754.
- Perriton, L. (2006). Does woman + a network = career progression? *Leadership*, 2 (1), 101-13.
- Pickering, J. M., & King, J. L. (1995). Hardwiring weak ties: Interorganizational computer-mediated communication, occupational communities, and organizational change. *Organization Science*, 6(4), 479-486.
- Pini, B., Brown, K., & Ryan, C. (2004). Women-only networks as a strategy for change? A case study from local government. *Women in Management Review*, 19(6), 286-292.
- Podolny, J. M., & Page, K. L. (1998). Network forms of organization. *Annual Review of Sociology*, 24(1), 57-76.
- Reagans, R., & McEvily, B. (2003). Network structure and knowledge transfer: The effects of cohesion and range. *Administrative Science Quarterly*, 48(2), 240-267.
- Scott, D. B. (1996). Shattering the instrumental-expressive myth: The power of women's networks in corporate-government affairs. *Gender & Society*, 10(3), 232-247.
- Seibert, S.E., Kraimer, M.L. & Liden, R.C. (2001). A social capital theory of career success. *Academy of Management Journal*, 44 (2), 219-37.
- Singh, V., Vinnicombe, S., & Kumra, S. (2006). Women in formal corporate networks: an organisational citizenship perspective. *Women in Management Review*, 21(6), 458-482.

- Symon, G., & Cassell, C. (Eds.). (2012). *Qualitative Organizational Research: Core methods and Current Challenges*. Sage.
- Tapia, A. H., & Kvasny, L. (2004, April). Recruitment is never enough: retention of women and minorities in the IT workplace. In *Proceedings of the 2004 SIGMIS conference on Computer personnel research: Careers, culture, and ethics in a networked environment* (pp. 84-91). ACM.
- Timberlake, S. (2005). Social capital and gender in the workplace. *Journal of Management Development*, 24 (1), 34-44.
- Travers, C., Stevens, S., & Pemberton, C. (1997). Women's networking across boundaries: recognizing different cultural agendas. *Women in Management Review*, 12(2), 61-67.
- Uzzi, B. (1997). Social structure and competition in interfirm networks: The paradox of embeddedness. *Administrative Science Quarterly*, 35-67.
- Van Emmerik, I. H. (2006). Gender differences in the creation of different types of social capital: A multilevel study. *Social Networks*, 28(1), 24-37.
- Vinnicombe, S., Singh, V., & Kumra, S. (2004). Making good connections: Best practice for women's corporate networks. *Cranfield University School of Management*.
- Westphal, J. D., & Milton, L. P. (2000). How experience and network ties affect the influence of demographic minorities on corporate boards. *Administrative Science Quarterly*, 45(2), 366-398.

Appendix 1 – Operationalization

Operationalization in-company women networks and professional women networks

Operational definition	Dimension	Indicator
Reasons for entry	Individual reasons for entry	Desire for social support
		Desired access to resources
		Desire to build friendships
Goals of networks	Perceived goals of networks	Support between members
		Improvement of competences of members
		Fulfilling the interest of members
		Connecting members
Strategy of network	Perceived strategy network	exchange information
		Contact with several stakeholders
		Integrative behavior
Structure of network	Elements of structure	Board within network
		Connection between ties
Culture of network	Form of connection between members	formal
		informal
Activities	Forms of activities planned by network	Discussion rounds
		Workshops
		Meetings
Results of network	Network results	Accomplishment of network goal
	Individual result	Development of identity
		Career outcomes
		Kind of relationship between members

Developmental stadia

Operational definition	Dimension	Indicator
Developmental stadia of networks	connective	pleasured women
		inclusion of all women
		meetings
	developmental	improvement of leadership layer
		diverse members
		coaching
	strategic	benefits for the organization
		inclusion of women in senior level
		problem analysis/problem solving