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Gender differences in the creation of different types of social capital: A multilevel study

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Abstract

This study examined gender differences in the creation of hard and soft social capital in a sample of 352 female and 486 male faculty members. Men were shown to be more effective in creating hard social capital, but, unexpectedly, women were not found to be the emotional specialists they often are thought to be. Moreover, multilevel analyses indicated that men were more effective in using emotional intensity of ties to create hard social capital, and they were also more effective using team-related resources to create both hard and soft social capital.

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Social resources are the building blocks of social capital and these resources can be accessed through one's social network (Raider and Burt, 1996; Sandefur and Laumann, 1998; Seibert et al., 2001). The importance of social resources for the creation of social capital has been demonstrated for various facets of working life, such as job search (Granovetter, 1973), exposure to stress and access to social support (Haines and Hurlbert, 1992), status attainment (Lai et al., 1998), and income differences (Carroll and Teo, 1996).

The network position of employees has also been related to specific career advantages (e.g. career success, promotions) that can be obtained by high quality resources (Burt, 1998; McGuire, 2000; Sparrowe et al., 2001). However, it is increasingly acknowledged that social networks may allocate resources differentially (Haines and Hurlbert, 1992; Raider and Burt, 1996) and thus may result in different career outcomes (Burt, 1998; Cianni and

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Romberger, 1995; Ibarra, 1993, 1995; McGuire, 2000). Much has been said about the existence of old boys networks and achieving specific career outcomes of men and women (e.g. Campbell, 1988; Lyness and Thompson, 2000; Sheridan, 2002), but few studies actually compare the network characteristics of men and women, although the use of social ties appears to be particularly important to women's advancement to higher hierarchical levels (Metz and Tharenou, 2001). Most of previous research on gender differences in network characteristics tends to concentrate on more general comparisons of the social networks of men and women (e.g. Moore, 1990), or examines specific groups, such as the unemployed or disadvantaged groups (e.g. Stoloff et al., 1999). Moreover, social capital seems to be far from homogenous, some forms of social capital are good for some things and not for others (Putnam, 2001) and this assumption may be useful to explain differential career outcomes of men and women. Hence, in the present study it is proposed that different types of social resources are beneficial for the development of different types of social capital, namely hard and soft social capital. A terminology that can be carried back to the distinction that is often made to signify different kind of skills, e.g. hard and soft skills (e.g. McWilliam et al., 1999). Further, it is reasonable to suspect that men and women may specialize in the creation of different types of social capital. The following research question will be addressed: Which types of resources, i.e., personal and team-related, can account for differences in accumulation of hard and soft social capital of men and women? Using multilevel analyses, this will be tested on a sample of faculty members, because especially within academia the successful development of professional social capital is of critical importance for a variety of work outcomes (Poole and Bornholt, 1998; Quinlan, 1999).

1. Gender differences in the creation of social capital

Social resources embedded in networks may provide various benefits, such as information, influence, and control. Social capital reflects the access to these resources (Burt, 1997; Lin et al., 1981; Seibert et al., 2001). A central focus of the social networks perspective is on the structure of social interactions and how this structure enhances or constrains access to valued resources (Lin et al., 1981; Sandefur and Laumann, 1998; Seibert et al., 2001). The social network of each person can be described in terms of his or her ties with other people in their network at work, i.e., the set of job-related contacts, that ego relies on to provide access to task-related, career, or emotional coping resources in the work place (Ibarra, 1995).

Since there is no single form of social capital, Putnam argues (2001) that, to some extent, both functional specificity of resources and social capital may be assumed (Putnam, 2001; Sandefur and Laumann, 1998). That is, different types of resources are thought to be useful to attain different types of social capital and to achieve different goals. In the present study, two broad categories of social capital are suggested: hard versus soft social capital. Hard social capital refers to accumulated task-oriented resources that can be used to achieve valued career outcomes. Hard social capital develops from instrumental ties that arise in the course of work role performance and involve the exchange of job-related resources (Ibarra, 1993). For instance, hard social capital may provide employees with advice, contacts, coaching,

and protection (Gersick et al., 2000) or help to get challenging and visible assignments (Ibarra, 1993).

Soft social capital refers to emotional support resources that can be used to achieve socio-emotional support. It refers to expressive ties that involve the exchange of friendship and social support and it is characterized by high levels of closeness and trust (Ibarra, 1993). Soft social capital, such as counseling, friendship, and modeling, helps ego to develop self-esteem and professional identity (Gersick et al., 2000) and reflects the socio-emotional side of social capital.

According to Bem (1974) the masculine role endorses more instrumental qualities and the feminine role endorses more communal and socio-emotional traits. Gender role socialization theory departs from the assumption that men and women learn gendered attitudes and behaviors about what it means to be men and women (Addis and Mahalik, 2003). For instance, within this theoretical perspective, it has been argued that men hold more instrumental attitudes, whereas women hold more emotional responsive attitudes, and seem to disclose emotions more easily (Bakker et al., 2002; Ogun et al., 1990). Such gender differences are thought to arise from gender-specific socialization experiences. That is, the feminine role is thought to encourage the display of emotional dependence on others, whereas the masculine gender role puts a premium on strength and individuality. Accordingly, women are expected to be more sensitive to others, to place more value on interpersonal relationships and to seek social support for a greater extent than does the masculine gender role for men (Greenglass, 2002). These gender differences may not be large but when differences do occur, they often map onto gender stereotypes, with women behaving in traditionally feminine ways and with men behaving in traditionally masculine ways (Vogel et al., 2003). Thus, societal expectations of gender appropriateness may emphasize that women are expected to display communal (nurturing, interpersonally sensitive) and that men are expected to display agentic (independent, assertive, ambitious) qualities and behavior (Wood and Lindorff, 2001). Consequently, it seems likely that, as in other areas, men may specialize in the creation of more instrumental, hard, social capital and that women may specialize in the creation of more socio-emotional oriented, soft, and social capital. Previous studies indeed have revealed gender differences that may be related to differential creation of hard and soft social capital by men and women (Burt, 1998; Ibarra, 1993, 1995; Moore, 1990; Pugliesi, 1998). Women professionals generally lack resources that assist professional advancement (West and Smith, 1998). Networks of women are likely to consist of more socio-emotional oriented non-work contacts (Moore, 1990). It also has been argued that women seek to be socially connected to a higher degree than men and therefore they may profit more from emotional intense ties (Umberson et al., 1996). In professional environments, women are more likely to be embedded in networks that are limited with opportunities to mobilize valued resources compared to the networks of men (Gillespie et al., 2001; Ibarra, 1995; Kanter, 1977; McGuire, 2000). Further, although it has been shown that it is more beneficial to rely on social capital, it seems that professional women tend to rely more on 'what they know, not on whom they know' (Poole and Bornholt, 1998). Hence, in the present study, we expect that due to these societal expectations that men will be more likely to specialize in the creation of instrumentally oriented and career enhancing hard social capital, whereas women are expected to be more likely to specialize in the creation of the more socio-emotional oriented soft social capital.

Hypothesis 1. All else being equal, women will create more soft social capital than men, whereas men will create more hard social capital than women.

2. Resources: individual linked strong ties and team-related resources

Within organizations, social capital resources are rather diverse and can be found within different structural locations. The present study will distinguish between social resources that can be characterized as strong ties and as team-related characteristics. Strong ties are properties of the personal network of employees; team resources are derived from the working context. The two next sections will elaborate how (1) strong ties and (2) team-related resources may affect the creation of both hard and soft social capital of men and women.

2.1. Hard and soft social capital created by strong ties

According to Granovetter (1973) strength of ties refers to network relationships that are close, stable, and binding, and he termed these *strong ties*, relative to weak ties, relationships lacking in emotional investment. Because strong ties resemble close relationships that fulfill essential psychosocial functions, such as sense of competence and effectiveness in a professional role (Ibarra, 1995), they may be particularly salient for the creation of social capital within one's job (Nelson, 1989). Further, as job tenure increases, employees may rely more on strong ties to create social capital than on weak ties (Lin et al., 1981).

Several dimensions of resources provided by strong ties can be expected to affect the creation of both hard and soft social capital. First, stability of relationships refers to the length of relationships or their temporal embeddedness. Stable relationships within one's network may signify more opportunities for employees to mobilize resources. Second, emotional intensity emphasizes the importance of close informal ties of trust and loyalty to ensure reliability within relationships (Ibarra, 1995). Third, social proximity or homophily (Ibarra, 1993), refers to the degree to which pairs of individuals who interact are similar in background characteristics. The proximity argument suggests that people will benefit more from people with the same social and/or background characteristics because interpersonal similarity fosters reciprocal relationships (Ibarra, 1993; Kanter, 1977; Moore, 1990). The pre-eminent attribute of social proximity is gender and it has been shown that employees take each others' gender into account when forming networks (McGuire, 2000). Finally, multiplexity refers to the exchange of multiple resources within one strong tie (Ibarra, 1993). For example, job-related relationships that are also personal friendships are multiplex ties. Multiplex relationships are associated with high trust and reliability since both employees had the opportunity to interact and get to know each other in a variety of contexts (Ibarra, 1995). Other things being equal, it is expected that strong ties are positively associated with the creation of social capital.

Hypothesis 2. (a) Strong ties will be positively associated with the creation of soft social capital, and (b) with the creation of hard social capital, (c) women will be more effective in

creating soft social capital from strong ties, and (d) men will be more effective in creating hard social capital from strong ties.

2.2. *Hard and soft social capital created by team-related resources*

Team-related resources may be fostered by a cooperative organizational culture. West and Smith (1998) showed in their study on the departmental climate in universities in Great Britain that faculty members perceived departments as becoming more formalized and less supportive. They suggested that these are all changes that existing theory would argue are detrimental to maintain a supportive climate and the subsequent provision of resources. Further, within the professional working environment, the importance of social support to moderate adverse work conditions has been emphasized (Gillespie et al., 2001) and potential benefits of socio-emotional aid from the supervisor and co-workers have received considerable attention (Cianni and Romberger, 1995; Gillespie et al., 2001; Posner and Powell, 1985). Also, the actual provision of help from colleagues within the team may facilitate the creation of social capital. Studies concerning gender differences in beneficial effects of resources in the immediate working environment are not really conclusive. Some studies report cooperative climate may be more beneficial for female faculty members than for male faculty members (Van Emmerik, 2002). However, other studies show the opposite, for instance, men are more likely to benefit from support in their environment than women (Cianni and Romberger, 1995). Within academia, it may hold that especially men benefit from cooperative climate, because women may face pressures that block such a beneficial relationship between cooperative climate and the creations of social capital (Thomas, 2002). Also, women in professional environments may be more likely to be embedded in environments that limit opportunities to mobilize valued resources compared to the networks of men (Kanter, 1977; McGuire, 2000).

Hypothesis 3. Team-related resources will positively affect the creation of (a) soft social capital, and (b) of social capital, (c) women will be more effective to use these resources to create soft social capital, and (d) men will be more effective to use these resources to create hard social capital.

3. Method

3.1. *Population and sample*

This study was comprised of a sample of faculty members from a larger survey on careers of faculty members within the Netherlands. All faculty members received a questionnaire at their home address with a free return envelope. Anonymity was guaranteed and a letter of introduction from the board of the university supported the study. Finally, 1232 (40%) questionnaires were returned. Because of the length of the questionnaire and the additional lengthy inventory of social network variables, respondents were given the choice to skip the questions concerning the network variables, but were explicitly asked to return the questionnaire even if they did not fill in the inventory of their network. For the present study,

only the information of respondents that had filled in the social network variables was used. For the present study, after deleting respondents with missing data on the network variables, the information of 352 female and 486 male faculty members was used. The response with respect to gender and age was compared with data from the personnel information system of the university. According to this database, 57% is male and 43% is female. In the sample, the distribution is 58% male and 42% female faculty members. Further, the personnel database showed that the mean age is 41.7 years (S.D. = 3.1) versus 37.8 years (S.D. = 9.9) in the sample.

3.2. Measures

3.2.1. Dimensions of strong ties

Ego networks were inventoried by the use of a name generator to elicit employees network members (Marsden, 1990). First, respondents were asked to list five alters according to the extent they contribute to ego's valued resources in the following domains: (a) informal social contacts, (b) important personal contacts, (c) working together, and (e) receipt of advice, i.e., sharing resources, such as information, assistance, and guidance. This question was: "Finally, we have some questions about your contacts at work. Can you indicate with which people you have a relationship by filling in the following table? You can use their name or initials, as long as these people are identifiable for yourself in the next questions". From this information, *multiplexity* was computed by counting how many times ego mentioned the same alters for the five domains. After that, ego's contacts were inventoried for the following characteristics: number of years that ego is acquainted with alter, emotional strength of the relationships, and gender. This was preceded with the question: "Will you now fill in the first people you mentioned at the preceding page and complete the following information?" From this information, the following dimensions of relational embeddedness were computed. *Stability of relationships*, by taking the average number of years that ego is acquainted with the listed contacts; *emotional intensity*, by the summation of the emotional bonding of ego with each of his or her alters from the question 'how close are you to this person' rate on a four point scale with (1) none, (2) not so strong, (3) reasonably strong, and (4) very strong.

3.2.2. Hard and soft social capital

Activities undertaken with these alters in 11 different areas were inventoried, and this information was used to create the two measures of social capital by counting the occurrences of these activities. Factor analysis of these summed activities resulted in two factors. Factor 1, labeled as *soft social capital*, with an eigenvalue of 4.83 and 44% explained variance was comprised of the following eight activities: emotional support when problems in work encountered, thinking along with ego's completion of work, being helpful, emotional support for personal problems, collegiate consulting about career, emotional support and debating work, emotional support to advance in science, and emotional support when attending training programs. Factor 2, labeled as *hard social capital* with an eigenvalue of 1.45 and 13% explained variance was comprised of the following three activities: Writing research proposals together, assisting with tapping funding and grants, and coauthoring publications. In the analyses, the standardized values (z -scores) of the rotated factors were used.

3.2.3. Team-related resources

A *cooperative climate* was measured with four items from the Hofstede's organizational culture scales (Hofstede et al., 1990). One of items is 'cooperation within this department is common practice'. Cronbach's alpha was .84. *Team citizenship* was measured by three items from the MacKenzie and Podsakoff (1993) survey on organizational citizenship behavior. An example of these items is: 'In my job I always think constructively about possible organizational changes which could be implemented in my work-unit'. Items were scored on a five-point scale, and Cronbach's alpha .76. These items were aggregated to the work group level, i.e., the immediate working environment. The classification of the work group to which employees belonged to was based on the classification by the respondents themselves: 76 work groups were identified, with a maximum size of 25 respondents, mean size was 11.1 (S.D. = 5.5) respondents.

3.2.4. Background

Gender was measured with (0) male and (1) female. Several control variables were included in the analyses to eliminate alternative explanations for the creation of social capital. Higher level positions may lead to more opportunities to form ties than do lower hierarchical positions (Moore, 1990). *Hierarchical level* was classified into five categories (1) junior faculty members, (2) post-doctorates, (3) assistant professor, (4) associate professor, and (5) full professor. Similarly, the higher tenure, the more opportunities to form ties that resemble both emotional and social close relationships. Thus, *tenure in the present job*, measured in years, was included in the analyses. *Self-assessment* of own capabilities, as an indicator of self-esteem, was inventoried with three items concerning qualities as a researcher, experience as a researcher, and number of publications. Items were scored on a five-point scale, Cronbach's alpha .82. *Support from the supervisor*, i.e., social support, may affect the creation of social capital and was measured with two items concerning support and appreciation from respondents' supervisor. Items were scored on a five-point scale, Cronbach's alpha .93. Finally, *team size* may be important because larger team size may signify more opportunities to collaborate with each other and thereby will be associated with more opportunities to create social capital.

4. Data analysis

Team-related resources are essentially measures at the aggregate level. According to Bliese and Jex (1999), the use of aggregated variables may shed light on relationships between such variables and employees outcomes that would be missed if one was restricted to individual level analyses. Assessing whether team-related resources are associated with the accumulation of both hard and soft social capital therefore necessitates multilevel analysis (Snijders and Bosker, 1999). *F*-values for group effects derived from separate ANOVAs for soft social capital ($F = 1.81, p \leq .05$) and hard social capital ($F = 1.59, p \leq .05$) showed the appropriateness of using multilevel analysis. The scores on the team-related scores were aggregated to the team level and separate random-effects GLS regression analyses with Stata (Stata Corporation, 1999) were performed for hard and soft social capital by men and women.

5. Results

Table 1 presents mean scores, standard deviations, and correlation coefficients. Differences between male and female faculty members on the research variables reflect current differences between male and female faculty members (Gillespie et al., 2001; West and Smith, 1998). For example, female faculty members are lower in hierarchical rank (mean 2.06 versus 2.65), work fewer hours (mean 39.99 versus 45.04), and assess their own capabilities less favorable than male faculty members (mean 8.89 versus 10.28).

Tables 2 and 3 show the results of random-effects GLS regression. Separate models were estimated for both types of hard social capital. Wald chi squared reaches significance for all models. However, only three of the models estimating hard social capital, rho—the proportion of variance that is accounted for by the team level—is greater than zero.

Hypothesis 1 predicted that all else being equal, women will create more soft social capital than men, whereas men will create more hard social capital than women. From Model 1 in Table 2 it can be seen that is not supported for the creation of soft social capital. But Model 5 in Table 3 reveals that men indeed create more hard social capital than women ($b = -.171$ and $-.282$, $p < .01$) as predicted by the second part of Hypothesis 1.

Hypothesis 2a predicted that strong ties affect the creation of soft social capital. From Model 1, it can be seen that both emotional intensity ($b = .036$, $p < .01$) and multiplexity ($b = .458$, $p < .01$) are significant, and thus Hypothesis 2a receives support. Hypothesis 2b predicted that strong ties also will be positively associated with the creation of hard social capital. This part of hypothesis 2 also receives support. From Model 5 it appears that emotional intensity ($b = .020$, $p < .01$) is related to hard social capital.

Hypothesis 2c predicted that women will be more effective in creating soft social capital from strong ties. From Model 2 it can be seen that there is the interaction term of gender \times emotional intensity is significant. From the coefficients in Model 3 (emotional intensity for men, $b = .024$, $p < .01$) and Model 4 (emotional intensity for women, $b = .94$, $p < .01$) it can be seen that this interaction is in the expected direction: the slope of the regression line of women is steeper than that of men. Hypothesis 2d predicted that men will be more effective in creating hard social capital from strong ties. As shown in Model 6 none of the interactions of gender with the dimensions of strong ties reaches significance. However, men ($b = .022$, $p < .01$) can use emotional intensity better than women ($b = .014$, ns) to create hard social capital (Models 7 and 8).

Hypothesis 3a predicted that team-related resources will positively affect the creation of soft social capital, but this is not supported (Model 1). Hypothesis 3b predicted that team-related resources will be positively related to the creation of hard social capital. From Model 5 it shows that a cooperative climate is positively related to the creation of soft social capital ($b = .330$, $p < .05$). Hypothesis 3c that women will be more effective to use these resources to create soft social capital does not receive support. Hypothesis 3d predicted that men will be more effective to use these resources to create hard social capital and this is not supported. Model 6 shows one significant interaction, namely gender \times cooperative climate. From Model 7 (cooperative climate for men, $b = .479$, $p < .01$) and Model 8 (cooperative climate for women, $b = .066$, ns) it can be seen that this is in the expected direction: the slope of the regression line is steeper for men than for women.

Table 1
Means, standard deviations and Pearson correlations

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	
1	Gender														
2	Soft social capital	−.09	.97	.11**											
3	Hard social capital	.17	1.03	−.20**	−.00										
4	Hierarchical level	2.65	1.24	−.25**	−.26**	.28**									
5	Job tenure	5.53	5.95	−.22**	−.12**	.02	.31**								
6	Self assessment	10.28	2.76	−.25**	−.07*	.39**	.38**	.17**							
7	Stability relationships	7.74	6.24	−.25**	−.17**	.17**	.57**	.40**	.26**						
8	Emotional intensity	7.64	5.68	−.04	−.43**	.17**	.02	.00	.04	−.02					
9	Social proximity	71.14	31.50	−.21**	−.06	−.04	.08*	.08	−.01	.11**	−.03				
10	Multiplexity	1.79	1.37	.15**	.71**	.05	−.08*	−.04	−.04	−.03	.39**	−.07*			
11	Size of team	11.07	5.40	.00	−.03	−.05	−.00	.01	−.00	.05	−.02	.01	−.04		
12	Support supervisor	1.58	.23	−.06	.04	.13**	−.08*	−.05	.07*	−.04	−.00	−.03	−.06	−.08*	
13	Cooperative climate	3.27	.36	−.09**	.04	.17**	−.07*	−.00	.05	−.09*	.03	−.00	−.04	−.25**	
14	Team citizenship	3.51	.29	−.03	.04	.02	.10	.08	.06	.04	.04	−.01	.06	−.13**	.47**
														−.18**	.16**

* $p < .05$.

** $p < .01$.

Table 2

Random-effects GLS regression for soft social capital for men ($N=486$) and women ($N=352$) (unstandardized coefficients)

	Soft social capital			
	Model 1	Model 2	Model 3 (men)	Model 4 (women)
Gender	-.074	-.923		
Hierarchical level	-.181**	-.190**	-.206**	-.140**
Job tenure	-.008	-.007	-.008	-.003
Support supervisor	.349*	.310	.331	.383*
Self-assessment	.011	-.012	.007	.021
Team size	.001	.001	.004	-.001
Stability relationships	-.003	-.001	.000	-.009
Emotional intensity	.036**	.024**	.024**	.094**
Social proximity	.000	.000	-.000	.001
Multiplexity	.458**	.430**	.428**	.423**
Cooperative climate	.004	.037	.035*	-.077
Team citizenship	.097	.028	.043	.153
Gender \times stability relationships		.001		
Gender \times emotional intensity		.071**		
Gender \times social proximity		.001		
Gender \times multiplexity		-.006		
Gender \times support supervisor		.069		
Gender \times cooperative climate		-.113		
Gender \times team citizenship		.147		
<i>R</i> -squared				
Within	.569	.590	.520	.667
Between	.708	.722	.598	.740
Overall	.585	.606	.547	.670
Rho	.000	.000	.000	.000
Wald chi squared	1025.13**	1107.72**	505.13**	606.96**

* $p < .05$.

** $p < .01$.

6. Discussion

Within the present sample of faculty members, men and women appeared to be both effective in using resources to create soft social capital. However, it was shown that male faculty members in this study were better able to create hard social capital than female faculty members. Unexpectedly, female faculty members were not better in the creation of soft social capital than male faculty members. Thus, at least in this professional context, women do not appear to be the emotional specialists they often are thought to be (e.g. Auster, 2000). The finding that women are not better in creating soft social capital is important because it tackles an old stereotype, and deserves attention in future studies. Further, future research would be especially helping when focusing on differential needs for social capital of men and women, since these results of the present study do not convey that perhaps women may actually need more social capital. Especially, the extra barriers for women within academia could warrant the need of extra social capital.

Table 3

Random-effects GLS regression for hard social capital for men (N = 486) and women (N = 352) (unstandardized coefficients)

	Hard social capital			
	Model 5	Model 6	Model 7 (men)	Model 8 (women)
Gender	-.171*	-.282		
Hierarchical level	.147**	.143**	.162**	.121*
Job tenure	-.026**	-.026**	-.028**	-.020
Support supervisor	.385	.237	.262	.635*
Self-assessment	.114**	.117**	.104**	.132**
Team size	-.000	-.000	-.000	.002
Stability relationships	.010	.011	.011	.003
Emotional intensity	.020**	.021**	.022**	.014
Social proximity	-.001	-.000	-.001	-.002
Multiplexity	.019	.027	.029	.007
Cooperative climate	.330*	.507**	.479**	.066
Team citizenship	.044	-.101	-.089	.221
Gender × stability relationships		-.006		
Gender × emotional intensity		-.009		
Gender × social proximity		-.002		
Gender × multiplexity		-.011		
Gender × support supervisor		.374		
Gender × cooperative climate		-.436**		
Gender × team citizenship		.332		
<i>R</i> -squared				
Within	.242	.248	.207	.250
Between	.320	.032	.261	.263
Overall	.254	.026	.218	.026
Rho	.053	.026	.050	.000
Wald chi squared	243.69**	251.28**	114.77**	104.42**

* $p < .05$.

** $p < .01$.

Gender differences with respect to emotional intensity of strong ties and the creation of hard social capital were found. That is, men were more effective in using emotional intensity of ties to create hard social capital. Moreover, gender differences were also found with respect to a cooperative climate and the production of both soft and hard social capital were found. Men appeared to be more effective to use this type of team-related resources to create both types of social capital. Since women are relative newcomers within academia, accordingly their stability of relationships was shown considerably lower than that of men. In addition, within the male-dominated environment of the university, it is not surprising that social proximity was shown to be lower for women than for men. Kanter (1977) already identified numerical strength as one of structural disadvantages of women in male-dominated working environments.

Multiplexity clearly turned out to be important to create soft social capital, but not for the production of hard social capital. Multiplex ties involve the exchange of multiple resources

and the more multiplex ties, the stronger the link (Granovetter, 1973). Ibarra (1993) argued that women have fewer multiplex ties than their male counterparts. Perhaps, the professional environment—notwithstanding the existence of structural constraints on women's network development—stimulates women to actively seek out supportive relationships and these ties may play an important role in providing the emotional, psychological, and social support that is so vital to survival in male-dominated workplaces (Quinlan, 1999).

Hierarchical level was included in the analyses from the idea that higher level positions may lead to more opportunities to create social capital than do lower hierarchical positions (Moore, 1990). However, the present study shows opposite effects for the creation of soft versus hard capital. For both men and women, higher hierarchical level is associated with less soft social capital and with more hard social capital. Perhaps, faculty members lower in the hierarchy, being in an early career phase, find it more important to create soft social capital because they are newcomers in academia, and they specialize themselves more to the development of socio-emotional bonds. Maybe, faculty members higher in the hierarchy judge the creation of hard social capital to be more important to achieve valued goals and tend to specialize in this form of social capital and tend to ignore the socio-emotional side somewhat more. In the light of this explanation, it is interesting that both faculty members in their early career phases and women are less able to create hard social capital than tenure-track male faculty members. Since this study is quite preliminary concerning the creation of different types of social capital, avenues for future research are numerous, especially in the area of effects of different types of social capital on career opportunities of men and women.

Some words of caution regarding the results of this study are necessary. The data were collected via self-report measures and common method variance easily can become a problem. However, these problems are at least partly remedied by the use of multilevel analyses using team-related resources at the aggregate level. One of these aggregate level measures, i.e., a cooperative climate, indeed showed significant gender differences. Further, the present findings suggest that social resources indicated by strong ties and team-related resources, influence the creation of hard and soft social capital, albeit somewhat weakly. Other research also has not always reported strong effects of network characteristics (Pugliesi, 1998). Perhaps, ego network measures are not sensitive enough to identify such effects. However, it is also possible that for the creation of social capital also measures are needed to identify power and influence processes in the environment of ego, and these measures could well be beyond the scope of current inventories of ego networks. In order to fully understand how social location ultimately affects the social capital, research is needed that will illuminate the significance of each network characteristic in the provision of both hard and soft social capital. Continued research is necessary both within and across different organizational contexts, because 'social integration may be one of the last areas of white male dominance to change in an organization striving to meet the multicultural ideal' (Gilbert and Ones, 1998).

Finally, within academia the successful development of professional networks is of critical importance for a variety of work outcomes (Poole and Bornholt, 1998; Quinlan, 1999). In such organizations, knowledge of why some individuals are more likely to engage in networking behaviors than others may represent valuable information for selection processes and training programs (Forrett and Dougherty, 2001). Also, human resource management may need to pay greater attention to possible barriers of women created by different accumulation of social capital (Cianni and Romberger, 1995). This study proposed that various

social resources promote the development of different types of social capital, namely hard and soft social capital. It was shown that men were more effective in using emotional intensity of ties to create hard social capital, and men also appeared to be more effective to use team-related resources to create both types of social capital. Although beyond the scope of the current study, this suggests that at least some of the differential career outcomes of men and women may be explained by differences in their effectiveness of creating social capital.

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