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The more you can get the better

Mentoring constellations and intrinsic career success

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Received March 2004
Revised March 2004
Accepted April 2004

Keywords *Mentoring, Social networks, Careers, Career satisfaction, Job satisfaction*

Abstract *This study focused on the relationship between mentoring constellations and intrinsic career success. Hierarchical regression analyses on the data of 416 female and 594 male university members showed that mentoring was positively associated with intrinsic career success (i.e., career satisfaction and intrinsic job satisfaction). Several characteristics of developmental networking appeared to be associated with intrinsic career success, e.g. size of the advice network, range, emotional intensity, frequency of the contacts, and years acquainted. Moreover, some moderating effects of gender on the relationship between mentoring constellations and intrinsic career success were found, e.g. for size of the advice network, emotional intensity, and stability of the relationship. Implications of results and directions for future research are discussed.*

Over the years, the benefits of having a mentor have received ample attention (e.g., Fagenson, 1989; Godshalk and Sosik, 2003; Higgins, 2001; Hunt and Michael, 1983; Lankau and Scandura, 2002; Scandura and Williams, 2001). For instance, employees with a mentor report more promotions, higher incomes, and more work satisfaction than employees without a mentor (Baugh and Scandura, 1999; Dreher and Ash, 1990; Ragins *et al.*, 2000; Scandura, 1992; Scandura and Schriesheim, 1994; Turban and Dougherty, 1994; Whitely and Coetsier, 1993). However, it is increasingly acknowledged that not only having a mentor, but especially a network of developmental relationships may be essential to achieving intrinsic career success (Baugh and Scandura, 1999; De Janasz and Sullivan, 2004; Higgins, 2000, 2001). In today's dynamic career environment, having a variety of different types of mentoring relationships is perhaps indispensable, and mentoring researchers agree that having diverse mentoring constellations, i.e. constellations of relationships from a variety of sources, such as more traditionally defined mentoring relationships, but also developmental networking relationships with peers or supervisors (Kram, 1985), is probably most beneficial for protégés (Bozionelos, 2004; De Janasz and Sullivan, 2004; Ensher *et al.*, 2003; Higgins and Thomas, 2001; Kram, 1985). In the present study we will use the term mentoring constellations to refer to the combination of mentoring relationships and developmental networking relationships.

Yet, although much of the current mentoring research has the underlying assumption that effectiveness of mentoring lies in the amount of mentoring provided (De Janasz and Sullivan, 2002; Higgins, 2001; Seibert *et al.*, 2001) this has not received much empirical attention yet. To date, few studies explicitly address this issue empirically (Higgins, 2000; Higgins and Thomas, 2001; Seibert *et al.*, 2001). The results of the study of Higgins suggest that the more developmental relationships employees have, the greater their work satisfaction. This study measured amount of help (i.e., career and psychological assistance provided), but specific dimensions of developmental relationships that account for better intrinsic



career success were not included. The study of Seibert *et al.* showed that weak ties (less emotional, less intimate, less enduring, and more distant relationships as opposed to strong ties, see Granovetter, 1973) and structural holes (absence of a relationship between two contacts within an individual's social network, this places the individual in the potentially advantageous entrepreneurial position of brokering resources between them, see Sparrowe and Liden, 1997) are positively related number of developmental contacts. Access to information, access to resources, and career sponsorship were positively related to current salary, number of promotions over the career, and career satisfaction. However, this study did not differentiate between the effects of benefits of mentoring versus developmental relationships. Furthermore, both studies do not take gender differences into account, whereas it is increasingly acknowledged that social networks may allocate resources differentially (Raider and Burt, 1996; Thomas and Higgins, 1996) and it is likely that gender of the protégé is likely to affect career success (e.g., Ragins and Cotton, 1999; Scandura and Williams, 2001). Consequently, the present study concentrates on additional questions raised by these studies: Are employees who successfully invest in developmental relationships, in addition to having a mentor, more satisfied with their careers? Which specific dimensions of developmental relationships can account for more intrinsic career success? And, are there gender differences in the relationships between mentoring and developmental relationships on the one hand and intrinsic career success on the other hand?

Generally, career success can be assumed to comprise objective or extrinsic (e.g., pay) and subjective or intrinsic (e.g., intrinsic work or job satisfaction and career satisfaction) elements, and the variables that lead to objective career success often are quite different from those that lead to subjectively defined success (Judge *et al.*, 1995). In the present study, we will focus specifically on the subjective elements of intrinsic career success and their relationship with mentoring constellations. In the next section we will first view at mentoring and developmental networks from a social capital perspective (Nahapiet and Ghoshal, 1998; Seibert *et al.*, 2001; Thomas and Lankau, 2003). After that, the relationship of mentoring and developmental relationships with intrinsic career success (i.e. intrinsic work satisfaction and career satisfaction) and gender differences will be elaborated upon.

The hypotheses will be tested on a sample of university faculty members. The academic career system has unique features, which have made it different from conventional bureaucratic model of careers and which now make it a kind of leading indicator of changes in the career systems in other sectors (Baruch and Hall, 2004b). However, although at the one hand it can be observed that recent boundaryless or protean career models represent a move towards the original view of academics as autonomous professionals (Baruch and Hall, 2004a). At the same time, working within universities has changed dramatically, large changes in resource allocation took place, substantial and rapid decline in funding, an ongoing emphasis on more efficiency, and faculty members are increasingly pressured to be productive (Altbach, 1995).

Dissatisfaction of faculty members is intensified by heightened work pressure and role conflict and we will control for these influences (Viswesvaran *et al.*, 1999).

Whereas initially nearly all new faculty members report high levels of satisfaction with their careers, they do not maintain such satisfaction and enthusiasm over time (Sorcinielli, 1994). Therefore, it gains in importance to study how intrinsic job and

career satisfaction can be facilitated by different mentoring constellations. Ultimately, stimulating intrinsic job and career satisfaction can be endorsed by supportive relationships, such as mentoring and networking. And because of before-mentioned threats to employees' levels of satisfaction within academia, we will specifically focus on the association of mentoring constellations and two types of satisfaction that are commonly combined in to one intrinsic career success construct (Judge *et al.*, 1995).

Mentoring and developmental networking

Within the social networks perspective, social capital refers to the sum of the actual and potential resources embedded within, available through, and derived from the network of social relationships of an employee (Nahapiet and Ghoshal, 1998). Central focus of the social networks perspective is the structure of social interactions and how this structure enhances or constrains access to valued resources (Seibert *et al.*, 2001). For instance, an actor's network of social ties creates opportunities for social capital transactions and examples for such opportunities are created by mentoring relationships and developmental networking (Adler and Kwon, 2002; Arthur and Rousseau, 1996; Metz and Tharenou, 2001).

Mentoring

Originally, a mentor referred to an influential individual with advanced experience and knowledge providing support and mobility to their protégé's careers (Fagenson, 1989; Hunt and Michael, 1983; Kram, 1983; Kram, 1985; Noe, 1988). Nowadays, many researchers use the term mentor interchangeably with coach, sponsor and colleague, although these roles may involve different types of relationships (De Janasz and Sullivan, 2004). Often, a distinction is made between informal and formal mentoring. Informal mentoring relationships –focus of this study– are the spontaneous relationships that occur without external involvement from the organization. In contrast, formal mentorships are programs that are managed and sanctioned by the organization (Chao and Walz, 1992).

Existing theory predicts mentoring to be associated with positive employee outcomes (Kram, 1985; Ragins *et al.*, 2000). Mentoring relationships are thought to be beneficial by providing career development aid – which facilitates the protégé's advancement in the organization – and psychosocial functions – which contribute to the protégé's personal growth and professional development (Ragins and Cotton, 1999). For instance, protégés indicate to be more satisfied with their jobs (Whitely and Coetsier, 1993) and show more commitment (Baugh and Scandura, 1999). Moreover, protégés do not only report more perceived career success (Turban and Dougherty, 1994), but actually receive more promotions (Dreher and Ash, 1990), and make more money (Scandura, 1992). In the present study, as point of departure, we express this direct relationship between mentoring and intrinsic career success in the first hypothesis:

- H1.* Mentoring will be positively associated with intrinsic career success (i.e., intrinsic job satisfaction and career satisfaction).

Developmental networks

An individual's developmental network consist of the people a protégé refers to as taking an active interest in and action to advance the protégé's career by providing

developmental assistance (Higgins, 2000, 2001). Hence, the developmental network of employees can be described in terms of their social network relationships, i.e. the set of job-related contacts that employees rely upon for developmental relationships (Ibarra, 1995). The network position of employees has been related to specific career advantages by the accumulation of social capital (Seibert *et al.*, 2001; Sparrowe *et al.*, 2001; Thomas and Lankau, 2003). Thus, just like having a mentor, a developmental network signifies the development of social capital. In the present study we expect that having a developmental network has an incremental effect on the intrinsic career success of protégés. To examine this, we make the same distinction in two dimensions as used by Higgins (2000):

- (1) developmental network diversity; and
- (2) developmental relationship strength.

Developmental network diversity

Developmental network diversity refers to the number of different types of contacts of the employee, such as one's employer, school, community, professional associations, and so on (Higgins, 2000). Developmental network diversity focuses on the flow of information and particularly to the extent to which the information provided by one's network is unique. The more unique, or the less redundant, the information provided by the contacts, the greater the employee's access to valuable resources and information (Burt, 2000).

Two ways to measure network diversity are: range, the number of different social systems, and size of the advice network. A protégé who has one developmental contact within the faculty, one from the university, and one from a professional association will have a higher range than a protégé with all of their developmental relationships within the same research group (Higgins, 2000). Size of the advice network is the number of contacts that results from asking employees to construct a list of all the people from whom he or she seeks advice (Anderson, 2003). It is expected that greater range and greater size of the advice network will be positively related to intrinsic career success. The benefits of multiple relationships are implied in the literature (Higgins, 2000). For instance, employers are expected to benefit from both past and current developmental relationships (Kram and Isabella, 1985) and the study of Higgins and Thomas (2001) suggest that benefits of mentoring may accumulate by having multiple developmental relationships. Therefore, we will examine that effectiveness of mentoring lies in the amount of mentoring and expect that diverse developmental networks will have an incremental effect on intrinsic career success, on top of a mentoring relationship.

- H2.* After controlling for having a mentor, developmental network diversity (i.e., greater range and size of the advice network) will be positively associated with intrinsic career success (i.e., intrinsic job satisfaction and career satisfaction).

Developmental relationship strength

Second, development relationship strength refers to the level of emotional affect, reciprocity, and frequency of communication (Higgins, 2000). 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). Several characteristics of relationship strength can be expected to be associated with intrinsic career success. First, emotional intensity or strength of the relationship emphasizes the importance of close informal ties of trust and loyalty to ensure reliability within relationships (Ibarra, 1995). Second, frequency of communication emphasizes the importance of frequent contacts to achieve valued career success (Higgins, 2000, 2001). Third, the length of the relationships refers to the stability of the relationships. Stable relationships within one's network may signify more opportunities for employees to mobilize resources. It is expected that greater relationship strength will be positively related to intrinsic career success. Moreover, we again expect that relationship strength will have an incremental effect on intrinsic career success, on top of having a mentoring relationship.

- H3.* After controlling for having a mentor, developmental relationship strength will be positively associated with intrinsic career success (i.e., intrinsic job satisfaction and career satisfaction).

Gender differences

It is increasingly acknowledged that mentoring relationships and social networks may allocate resources differentially and thus may result in different intrinsic career success (Haines and Hurlbert, 1992; Raider and Burt, 1996). Furthermore, much has been said about the existence of old boys' networks and differential achievement of career goals by men and women (e.g., Lyness and Thompson, 2000; Sheridan, 2002). Still, few studies actually compared the network characteristics of men and women, although networking appears to be particularly important to women's advancement to higher hierarchical levels (Metz and Tharenou, 2001).

Gender differences are thought to arise from gender-specific socialization experiences and the socialization perspective 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, it is suggested that men hold more instrumental attitudes, whereas women hold more emotional responsive attitudes, and seem to disclose emotions more easily (Bakker *et al.*, 2002; Ogus *et al.*, 1990). 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 prescribes for men (Greenglass *et al.*, 1996). 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 and ambitious) qualities and behavior (Wood and Lindorff, 2001). Consequently, in the present study it is expected that men are more likely to specialize in improving the diversity of their developmental networks to achieve better intrinsic work outcomes, i.e. the more instrumentally

oriented side of their developmental network. Whereas women are expected to specialize in improving the relationship strength of their developmental networks to achieve better intrinsic career success, i.e. the more interpersonally sensitive side of the developmental networking.

Previous studies within the social networks perspective suggest that gender indeed may be related to such differential specialization processes in developmental networking. For instance, social networks of women are likely to consist of more socio-emotional oriented non-work contacts (Moore, 1990). It also has been argued that women need to be socially connected to a higher degree than men and therefore they may profit more from emotional intense ties (Umberson *et al.*, 1996). Hence, the following moderating hypothesis is formulated:

- H4.* (a) The association of diversity of the developmental network with intrinsic career success will be stronger for men than for women. (b) The association of relationship strength of the developmental network with intrinsic career success will be stronger for women than for men.

Method

Population and sample

This study was comprised of a sample of university faculty members from a larger survey on careers of faculty members within one university in The Netherlands. All faculty members received a questionnaire at their private address with a free return envelope. Anonymity was guaranteed and an introduction letter, from the board of the university, supported the study. Because of the lengthy questionnaire and the additional lengthy inventory and the personal/private nature of filling in the social network variables, respondents were given the choice to skip the questions concerning the network variables, but asked still to return the questionnaire. The overall survey yielded 1881 questionnaires with a net response rate of 33 percent, which is lower than other reported studies (Baruch, 1999) and this probably is due to the length of the questionnaire. PhD students were included since these are regular employees in The Netherlands, and the original database also included faculty members that had left the organization, these employees were excluded prior to the analyses. For the present study, only the information of respondents that had filled in the social network variables – where the presence of a mentor and the developmental networking was asked – was used ($n = 1,010$). The response with respect to gender and age was compared with data from the personnel information system of the university. According to this database, 43 percent is female and 57 percent is male. The sample was comprised of 416 (41 percent) female and 594 (59 percent) male faculty members. Further, the personnel database showed that the mean age of female faculty members is 41.7 years ($SD = 3.1$) versus 37.5 ($SD = 9.48$) in the sample. A total of 58 percent of the respondents were classified as having a mentor.

Measures

Intrinsic job and career satisfaction. Intrinsic job satisfaction was measured with five items concerning interesting work, use of knowledge and experience, challenge, autonomy, and sufficiently challenging work (Cronbach's $\alpha = 0.82$). Career satisfaction was measured with the following five items: Satisfaction with career

perspectives, satisfaction with employment conditions, satisfaction with taking care for career well-being of employees, satisfaction with opportunities to participate in important decision making, and satisfaction with professional training opportunities ($\alpha = 0.70$). Both indices were developed by Van Emmerik (2004) and measured on a five-point Likert scale response format and summated and divided by 5, thus indicating 1 = lowsatisfaction, and 5 = highsatisfaction.

Measurement of mentoring constellations. 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 respondent's resources in the following domains:

- informal social contacts;
- important personal contacts;
- working together; and
- receipt of advice, i.e. sharing resources such as information, assistance, and guidance.

The preceding 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". After that, characteristics of respondent's contacts were inventoried. 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, diversity of the developmental network was computed. First, developmental network diversity was measured with the range of the network by the average distance of the employee to each of his/her contacts with contact within the department, contact within the faculty, contact within the university, and contact outside the university where employee is working. Second, developmental network diversity was also measured with the size of the advice network, the number of contacts that results from asking the employee to construct a list of the people from whom he or she seeks advice (Anderson, 2003).

Also relationship strength of the developmental network was computed from the ego networks information. First, emotional intensity was measured with the average emotional bonding of the employee with each of his or her contacts from the question "How close are you to this person" rated on a four-point scale with (1) none, (2) not so strong, (3) reasonably strong, (4) very strong. Second, frequency of communication was measured as the average frequency of having contact with (1) less than monthly, (2) monthly, (3) weekly, and (4) daily. Third, stability of relationships was measured by the average number of years that respondent is acquainted with the listed contacts.

Presence of a mentor was classified with the question 'Do you have a mentor' and this was coded 1 = mentor, and 0 = no mentor. Since there are no formal mentoring programs, all of these mentoring relationships are considered to be informal.

Background/control variables. As background variables gender (0 = male, and 1 = female), organizational tenure (in years), and tenure track (0 = notenuretrack, and 1 = tenuretrack). Age was not included in the analyses because it is strongly related to organizational tenure in tenure-based academic ranks. Intrinsic work and career satisfaction are associated with a variety of constructs, such as job characteristics,

group and organizational characteristics, and leader relations (Kinicki *et al.*, 2002). Specifically for the sample of faculty members used in this study, workload and role conflict brought by multiple role obligations (such as the combination of educational, research and administrative tasks), may negatively affect intrinsic career success (Blaxter *et al.*, 1998), therefore these variables are controlled. Work pressure was measured on a five-point Likert scale response format (1 = very satisfied, and 5 = very dissatisfied). Three role conflict items were used from the scale of Rizzo *et al.* (1970): Unreasonable pressure to perform, conflicting task demands, and doing tasks that are opposed to own judgment. The items were scored on a five-point Likert scale response format (1 = completely disagree, and 5 = completely agree), summated and divided by 3. Cronbachs' alpha = 0.68.

Results

Table I presents means, standard deviations, and correlation coefficients for all measures included in the study. Intrinsic job satisfaction is moderately correlated with career satisfaction ($r = 0.45, p < .01$). As follows from the definition of a mentor being an influential individual who has advanced experience and knowledge, having a mentor is associated with less organizational tenure ($r = -0.18, p < .01$) and protégés are less often on tenure track ($r = -0.18, p < .01$). Further, mentoring is associated with size of the advice network ($r = 0.07, p < .05$) and with years acquainted ($r = -0.15, p < .01$). The other developmental network characteristics are not significantly related to having a mentor.

Separate moderate regression analyses were performed for intrinsic job and career satisfaction. To test specifically for the added value of a developmental network and the moderating effect of gender, the variables were entered in five steps. In Step 1, the background and job demand variables (i.e., gender, organizational tenure, tenure track, work pressure, role conflict) were entered. In step 2 having a mentor was entered. In Step 3, the dimensions of developmental network diversity and in Step 4 the dimensions of developmental relationship strength were entered. In Step 5 the interactions of gender with the (centered) mentoring constellations were entered. Table II shows the results of the regression analyses.

H1 predicted that mentoring is positively associated with intrinsic career success (i.e., intrinsic job satisfaction and career satisfaction). Model 1 shows that having a mentor is positively associated with career satisfaction ($\beta = 0.09, p < 0.01$) and with intrinsic job satisfaction ($\beta = 0.16, p < .01$). Thereby, *H1* receives support for both types of intrinsic career success.

H2 predicted that after controlling for having a mentor, developmental network diversity (i.e., greater range and size of the advice network) is positively associated with intrinsic career success. Model 2 shows that size of the advice network ($\beta = 0.08, p < .01$) is positively associated with career satisfaction. Model 2 for intrinsic job satisfaction shows also the positive relationship with size of the advice network ($\beta = 0.09, p < .01$). Step 3 shows a significant $\Delta R^2 = 0.01, p < 0.01$, for career satisfaction and $\Delta R^2 = .001, p < .01$, for intrinsic job satisfaction and *H2* is thereby supported.

H3 predicted that, after controlling for having a mentor, developmental relationship strength will be positively associated with intrinsic career success. Years acquainted ($\beta = 0.11, p < 0.05$) is positively associated with career

perspectives, satisfaction with employment conditions, satisfaction with taking care for career well-being of employees, satisfaction with opportunities to participate in important decision making, and satisfaction with professional training opportunities ($\alpha = 0.70$). Both indices were developed by Van Emmerik (2004) and measured on a five-point Likert scale response format and summated and divided by 5, thus indicating 1 = lowsatisfaction, and 5 = highsatisfaction.

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Table I.
Means, standard
deviations, and person
correlations ($n = 1,010$)

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Gender	0.41	0.49												
2. Org. tenure	9.18	7.96	-0.26**											
3. Tenure track	0.32	0.47	-0.23**	0.53**										
4. Work pressure	2.94	1.10	0.06	0.10**	0.22**									
5. Role conflict	2.30	0.82	0.08**	0.06*	0.06	0.42**								
6. Having a mentor	0.58	0.49	0.03	-0.18**	-0.10**	-0.06	-0.08**							
7. Size advice network	2.92	1.69	0.09**	-0.12**	-0.12**	-0.05	-0.03	0.07*						
8. Range	1.26	0.52	-0.02	0.07*	0.05	0.02	0.01	-0.04	0.11**					
9. Emotional intensity	2.32	0.64	-0.02	-0.02	0.01	-0.01	-0.03	-0.01	-0.14**	-0.02				
10. Freq. Contacts acquainted	3.49	0.54	-0.03	-0.13**	-0.11**	-0.10**	0.00	0.02	0.01	-0.32**	-0.17**			
11. Years	6.15	5.28	-0.25**	0.73**	0.52**	0.14**	0.07*	-0.15**	-0.06	0.12**	-0.08*	-0.16**		
12. Career satisfaction	3.98	0.68	-0.07*	-0.04	0.02	-0.22**	-0.31**	0.11**	0.11**	0.03	-0.08*	0.01	0.02	
13. Intrinsic job satisf.	2.96	0.77	-0.16**	0.06	0.25**	-0.19**	-0.32**	0.17**	0.09**	0.00	-0.06	0.06	0.10**	0.45**

Notes: * $p < 0.05$, ** $p < 0.01$

	Career satisfaction			Intrinsic job satisfaction		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
<i>Step 1. Background variables</i>						
Gender	-0.04	-0.04	-0.03	-0.08**	-0.08**	-0.09**
Organizational tenure	-0.06	-0.12**	-0.12**	-0.08*	-0.10*	-0.11**
Tenure track	0.09*	0.07*	0.07*	0.33**	0.33**	0.34**
Work pressure	-0.12**	-0.12**	-0.12**	-0.14**	-0.13**	-0.13**
Role conflict	-0.25**	-0.25**	-0.25**	-0.25**	-0.26**	-0.25**
<i>Step 2. Mentoring relationship</i>						
Having a mentor	0.09**	0.08**	0.06	0.16**	0.16**	0.12**
<i>Step 3. Developmental network diversity</i>						
Size advice network		0.08***	0.03		0.09**	0.11**
Range		0.02	0.03		0.00	0.01
<i>Step 4. Developmental relationship strength</i>						
Emotional intensity		-0.07*	-0.13**		-0.04	-0.06
Frequency of contacts		0.00	0.01		0.06*	0.07
Years acquainted		0.11*	0.09		0.05	0.09
<i>Step 5. Interactions with gender</i>						
Gender x having a mentor			0.03			0.06
Gender x size advice network			0.08*			-0.03
Gender x range			-0.01			-0.01
Gender x emotional intensity			0.09*			0.03
Gender x frequency of contacts			-0.01			0.00
Gender x years acquainted			0.03			-0.07*
Total R ²			0.15**			0.25**

Notes: Variance explained for career satisfaction step 1 $\Delta R^2 = 0.11^{**}$, step 2 $\Delta R^2 = 0.01^{**}$, step 3 $\Delta R^2 = 0.01^{**}$, step 4 $\Delta R^2 = 0.01^{**}$, and step 5 $\Delta R^2 = 0.01$ (ns); for intrinsic job step 1 $\Delta R^2 = 0.20^{**}$, step 2 $\Delta R^2 = 0.02^{**}$, step 3 $\Delta R^2 = 0.01^{**}$, step 4 $\Delta R^2 = 0.01^*$, and step 5 $\Delta R^2 = 0.01$ (ns). $p < .05$, ** $p < .01$.

Table II. Results of regression analyses for intrinsic job satisfaction and career satisfaction (standardized regression coefficients, $n = 1,010$)

satisfaction. However, emotional intensity is negatively related to career satisfaction ($\beta = -0.07$, $p < .05$). Model 2 for intrinsic job satisfaction shows that frequency of contacts ($\beta = 0.06$, $p < .05$) is positively associated with intrinsic job satisfaction. Step 4 $\Delta R^2 = 0.01$, $p < 0.05$, for career satisfaction and step 4 $\Delta R^2 = 0.01$, $p < 0.05$, for intrinsic job satisfaction and *H3* is thereby supported.

H4a predicted that the relationship between diversity of the developmental network and intrinsic career success is stronger for men than for women. Although the addition of the interactions in step 5 is not significant, there is one significant interaction (gender x size of advice network) for career satisfaction. Separate regression analyses for men and women (not reported), show that size of the network of men is not related to career satisfaction, but contrary to the expectation, that the size of network of women is positively related to career satisfaction ($\beta = 0.06$, $p < 0.01$). None of the two interactions of gender with the diversity characteristics is associated with intrinsic job satisfaction. Thus, *H4a* is not supported for job satisfaction.

H4b predicted that the relationship between relationship strength of the developmental network and intrinsic career success is stronger for women than for men. Although the addition of the interactions in step 5 is not significant, there is one

significant interaction (gender x emotional intensity) for career satisfaction and one for intrinsic job satisfaction (gender x years acquainted). Separate regression analyses for men and women (not reported), show that emotional intensity is negatively related to career satisfaction ($\beta = 0.14, p < 0.01$) and that emotional intensity of women is positively related to career satisfaction ($\beta = 0.03, ns$) although this is not significant. Years acquainted of men is not related to intrinsic job satisfaction, but years acquainted of women is associated with intrinsic job satisfaction ($\beta = 0.03, p < .05$). Thus, *H4b* receives support for career satisfaction.

Discussion

The present study focused on the relationship between mentoring constellations and intrinsic career success by examining the direct effects of mentoring on intrinsic career success and the incremental effects of developmental networking. Mentoring was found to be positively associated with both career satisfaction and intrinsic job satisfaction. After controlling for having a mentor, the relationship between developmental network diversity was found to be related to intrinsic outcomes. Specifically, size of the advice network was found to be positively related to both intrinsic career success. However, range of the developmental network was not associated with intrinsic career success. Perhaps, greater range and advice network might actually make the person realize that their job is comparatively worse than others, and this might even lower their perceived intrinsic career success. The relationship between developmental network relationship strength was less straightforward. Stability of the relationship or years acquainted was found to be positively associated with career satisfaction, and frequency of contacts was found positively associated with intrinsic job satisfaction. However, contrary to the expectation, emotional intensity was not positively but negatively associated with career satisfaction.

In addition, some moderating effects of gender were found. The association between diversity of the developmental network and intrinsic career success was expected to be stronger for men than for women. Yet, the opposite was found for size of the advice network, i.e. the advice network of women was found to be stronger related to career satisfaction than for men holds. Regarding this gender effect, the advice network of women may be larger precisely because they have no "old boys' network" to gain entry to or rely on to help out in certain situations. Perhaps, these women seek advice from a variety of sources beyond a mentor in getting information or making career decisions. Certainly something to consider for future research. Finally, the relationship between relationship strength of the developmental network and intrinsic career success was stronger for women than for men (i.e., for emotional intensity and for years acquainted).

Mentoring and developmental networking were separately measured. In the literature these concepts are sometimes interpreted as substitutes, for instance networking is seen as a viable substitute for mentoring (Forrett and Dougherty, 2001). The findings of the current study show that having developmental contacts is not so much a substitute, but has an incremental effect, on top of having a mentor, to achieve valued outcomes. In line with these results, in the study of Seibert *et al.* (2001) it was also found that individuals with more mentoring constellations may gather greater career benefits than those having only one mentor. Probably, this can be explained

by direct effects: The more mentoring constellations, the better. Perhaps this can also, at least partly, be explained by the idea that having a mentor paves the way for the development of a practical developmental network. In essence, this can also be explained by the idea that it is one of the functions of a mentor to teach the ropes of networking to the protégé.

Size of the advice network was associated with intrinsic career success, but range of the developmental network was not associated with intrinsic career success. Perhaps those in supportive environments rely less on external ties. Other contextual variables, that are not included in the present study, such as size of the department, size of the university, resource availability (e.g., to attend conferences and travel for teaching and research) may also be associated with mentoring constellations. Future research may include more of these contextual variables to provide support for the beneficial effects of the context. It was expected that developmental relationship strength was positively related to intrinsic career success. However, emotional intensity was found to be negatively related to career satisfaction. It seems that this could be explained because emotionally intense relationships become increasingly necessary the less satisfied one is at one's job. One might not need an emotionally intense relationship when things are going well at work. However, perhaps this can also be explained by the opposing effects of strong and weak ties. Strong ties refer to network relationships that are close, stable, and binding and resemble close relationships that fulfil essential psychosocial functions, such as sense of competence and effectiveness in a professional role (Granovetter, 1973; Ibarra, 1995). Yet, these types of ties may be less salient for the achievement of career goals.

We found three examples of the moderating role of gender. Forrett and Dougherty (2001) found little discrepancies in networking between men and women. Perhaps the unique features of the university context – notwithstanding the existence of structural constraints on women's network development – may stimulate women to actively develop network relationships and exert extra effort to use their relationships to play a role in providing career resources that are so vital to survival in male-dominated workplaces (Quinlan, 1999) and this may be reflected in different network characteristics than that of their male counterparts.

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. These problems are partly remedied by the use of more distant measures of the social network perspective. But future research efforts certainly need not only consider using longitudinal but also multi-actor data. For instance, gathering information from protégé, mentors and contacts within the developmental network. It is important to note the under-representation of women at senior levels within academia. Whether this is due to self-selection processes or to structural factors, the group of women that actually attains senior level is rather thinned out and network characteristics may vary accordingly. It emphasizes the need to study how network characteristics may change within career development trajectories of men and women. There is certainly a need for longitudinal data to resolve issues concerning differential dropout of women at senior levels and the development of effective social networks. Further, we assumed that men and women are being socialized into different gender roles. However, the extent to which the men and women were actually socialized into those gender roles was not measured, and differences in relational needs were not

assessed. It is recommended that future studies include such assessment with respect to the extent to which each individual resembled the feminine and masculine roles and to relate possible differential relational goals of men and women to developmental relationships.

One of the strength of the present study may well be the combination of traditional measurement of the relationship between mentoring and career success and the use of social network measurement. The present findings suggest that specific characteristics of developmental networks are related to intrinsic career success, however somewhat weakly. Further, although there was a rather large sample size the coefficients were not very strong. Other network studies also have not always reported strong effects of network characteristics (e.g., Moore, 1990; Pugliesi, 1998). Perhaps, ego network measures are not really sensitive enough to identify such effects. Still, it is also possible that, for instance to detect gender differences in the use of developmental networks, measures are needed to identify power and influence processes, 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 career success, research is needed that will illuminate the significance of each network characteristic in the provision of opportunities to achieve valued goals.

In this study, we emphasized the association of mentoring with positive employee outcomes and the results of the present study replicates and underscores that mentoring is a critical resource to facilitate employees' careers (e.g., Baugh and Scandura, 1999; De Janasz and Sullivan, 2004; Ragins and Cotton, 1999). However, it is also possible that mentoring is not only associated with improving career success but that mentoring also may be an important tool to reduce negative career outcomes when employees are confronted with adverse working conditions (Van Emmerik, 2004). That is, the negative relationship between adverse working conditions and career success was stronger for those without a mentor than for those with a mentor. Thus, providing support for a buffering model of mentoring on the relationship adverse working conditions and positive employee outcomes. It is recommended for future research not only to include positive outcomes but also to take along the buffering effects of mentoring constellations on the relationship between adverse working conditions and career outcomes (Van Emmerik, 2004).

Most of research on mentoring research has been based on mentor-protégé relationships in non-academic settings. Moreover, whereas formal mentoring programs has become an established phenomenon within companies, relatively few universities have formal programs and faculty members are dependent on personal initiatives (De Janasz and Sullivan, 2002). In this study, we therefore examined informal mentoring relationships. However, studies have found that informal mentoring relationships with frequent contacts can better than formal relationships (Ensher *et al.*, 2003).

The practical implications of this study are perhaps somewhat limited to professional organizations, such as universities, because networking within this context may take specific forms due to the task requirements and for instance the significance of the scientific community for the faculty members involved in this study. Within academia the successful development of professional networks is of critical importance to achieve valued career success. However, and that does not hold exclusively for this specific setting, the development of interpersonal skills may need to

have more attention to increase job and career satisfaction. Both men and women need to be able to communicate effectively and develop relationships with others in the organization. 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). Human resource management could also consider providing training in learning personal skill development to create better working relationships and to increase their exposure to other people, which may enhance better understanding of their organization through networking (Lankau and Scandura, 2002). This can be by stimulating one-to-one communications, but also by newer forms of communications. In this study, we did not pay attention to the mode of contact used by mentors and protégés. Ensher *et al.* (2003) strongly advocate that whenever possible mentors and protégés use multiple methods of contact in communicating with each other and they recommend computer mediated communications.

Mentoring constellations were found positively related to positive work outcomes i.e. intrinsic job satisfaction and career satisfaction. With this positive association of mentoring constellations with positive employee outcomes, the results of the present study replicate and underscore mentoring to be a critical resource to boost the career and psychosocial development of employees (e.g., Baugh and Scandura, 1999; De Janasz and Sullivan, 2002; Noe, 1988; Ragins and Cotton, 1999; Scandura, 1992). Moreover, as De Janasz and Sullivan (2004) already suggested, it shows that the traditional model of professors, being guided throughout their careers by one primary mentor, may no longer be realistic within academia. Having multiple mentors may enhance mentoring outcomes, such as greater job satisfaction and better career expectations (Baugh and Scandura, 1999). When more is indeed better, as the results of this study stress, then it is important to ensure that protégés are provided with ample opportunities to develop mentoring and developmental relationships.

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