

# PROFESSIONAL NETWORKS OF JUNIOR FACULTY IN PSYCHOLOGY

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Composition and functioning of academics' professional networks were assessed in a study of 47 women and 43 men holding tenure-track assistant professor positions in psychology at sixty universities. Women's networks had significantly more women colleagues, more higher-status women colleagues, and fewer associates from their previous institutions than men's. Women also consistently rated their networks as less effective at helping them build a professional reputation. However, women were similar to men in terms of the number of "important colleagues" and higher status associates in their networks and ratings of colleagues' effectiveness at providing professional socialization, friendship, career information, and access to current research. The results suggest that by the third year at the assistant professor level, women in psychology have established a small same-sex support network, but that their larger network functioning may be beginning to diverge from men's in one important area—building a professional reputation. Implications for women's career strategies are discussed.

Over a decade ago, Epstein (1971) addressed the role of the informal structure of the professions in maintaining "women's place" in the lower echelons of male-dominated occupations. Noting that much of the interaction of professional life occurs in informal clublike contexts such as university clubs, bars, athletic clubs or during poker games, she identified women's exclusion from such interactions as a structural barrier to their advancement. She charged that because women by virtue of their sex are "not equipped with a set of appropriate statuses to enter this exclusive society" (p. 173), they

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are effectively barred from contexts in which important decisions are made, introductions are performed, and information is exchanged

Recently, a number of popular "how to succeed" books have urged women to actively cultivate a "professional network," a support system composed of colleagues, as one means of solving the problem of exclusion identified by Epstein (Kleiman, 1980, Stern, 1981, Welch, 1980). Operating as one type of social network, professional networks should fulfill five basic functions (Mitchell & Trickett, 1980). First, they serve to "socialize" the novice by communicating expectations concerning the norms, protocols, ethics, and ideals of the profession (Becker & Strauss, 1956, Hess, 1972, Merton, 1957, Terborg, 1977). Second, through the development of occupationally based friendships, networks both support the individual and increase the social and moral solidarity of the group (Barnard, 1938, Hess, 1972). Third, by providing opportunities for peer evaluation, they help to establish an individual's reputation and promote her or his visibility within the field (Epstein, 1971, Etzioni, 1961, Levinson, Darrow, Klein, Levinson, & McKee, 1978). Fourth, networks provide members with professional contacts, informal recommendations, and information about job opportunities (Kessler, McKenna, Russell, Stang & Sweet, 1976, Leviton & Whitely, 1981). Fifth, colleagues supply new and diverse information concerning current developments in the field prior to their formal communication in trade publications and journals (Garvey, 1979, Goode, 1957, Menzel, 1962).

In academe, compared to other professions, the network functions of enhancing visibility and providing access to current developments assume an increased significance. Particularly within the sciences, academicians are highly dependent on a network that is national or even international in scope. Scientific inquiry and the research process are linked intimately to a social context involving both formal public exchanges of research and informal communication between colleagues (Reskin, 1978). Colleagues are necessary to promote one's work and keep one informed of prepublished discoveries in the field.

Little research has focused specifically on women faculty's collegial ties or their contribution to career development. Findings that are available suggest that in the natural or social sciences, colleagues are less apt to fulfill the socialization, friendship, visibility, and access to career information functions for women. However, network functioning as a whole has not been studied, and the extent of women's exclusion has not been documented systematically.

For instance, inadequate socialization of women has been observed in two studies of faculty. Widom & Burke (1978) had faculty rank, in order of importance, which factors would be most highly related to success or eminence in the profession. Because women tended to rate almost all items as more important for success than men did, Widom and Burke (1978) concluded that the women had been socialized inaccurately to believe that many

activities were more important for success than they actually were. Similarly, women microbiologists studied by Kashket, Robbins, Leive and Huang (1974) reported having received little advice from colleagues regarding their professional futures and little encouragement.

Friendship, particularly cross-sex friendship, also has been reported as less accessible to women. Bernard (1964) reported that women zoologists were less likely than their male counterparts to interact with fellow scientists. Women Ph D's studied by Simon, Clark, and Galway (1967) reportedly had difficulty finding someone with whom to have lunch or even talk over ideas. Kutner and Brogan (1981), in research on women medical students, cited the women as claiming they had been excluded from the informal networks of male students. Likewise, research on female academicians conducted by Kaufman (1978) found that women had fewer male colleague friends in their networks than male faculty.

If access to higher ranking colleagues is used as an indicator of the opportunities available for increasing professional visibility, research suggests that women may be at a disadvantage here, too. Higher-ranking individuals, perhaps in a mentor role, are in a position to promote the work of junior colleagues, without such contacts, developing a reputation may be difficult. Kaufman (1978) reported that male assistant professors were more likely than females to have at least one-half of their network composed of higher-status individuals. Denmark and McKenna (cited in Denmark, 1980) also found that within psychology, females were less likely than males to have direct access to high-status professionals in the field.

In terms of information about career opportunities, a study by Leviton and Whitely (1981) indicates that women's access is restricted, at least on the graduate level. They reported that male Ph D students were significantly more likely to have heard of job offers through announcements to departments than were females, and inferred that female students had less access to departmental or graduate student channels of communication about job possibilities.

Research directly assessing sex differences in access to current research and developments prior to formal publication has not been done. Indirect evidence indicates women are at a disadvantage, if membership and participation in professional societies is used as an index of informal contact with colleagues that might lead to prepublication exchange of research. Studies by Fava (1960) and Bernard (1964) found that female sociologists and zoologists, respectively, were both less likely than their male counterparts to attend meetings of professional societies, and the female zoologists also were less likely than males to be on regular mailing lists for reprints of research articles. More recent research by Astin (1973) and Glenwick, Johansson, and Bondy (1978), however, has found no sex difference in rates of membership in professional organizations. In terms of published work, Searleman, Morris, Becker, and Makosky (1983) reported that male psychologists were more

likely to honor reprint requests than were female, and that male requesters were sent their reprints significantly faster

The research cited suggests that women's colleague networks function less effectively than men's. However, the studies reviewed have several limitations that prevent clear-cut conclusions from being drawn. First, as noted before, no research has examined network functioning as a whole, at most, one or two functions have been explored in each study. Second, several investigations included only women subjects (i.e., Kashket et al., 1974; Kutner & Brogan, 1981; Simon et al., 1967). Hence, some of the conclusions about women faculty's isolation relative to men's are based on an often unsubstantiated assumption that men have larger or better functioning networks. Third, sex differences in expectations for colleague relationships were not assessed independently of perceptions of network functioning. Thus, women's dissatisfaction with collegial interactions could reflect higher expectations for interpersonal contacts rather than actual differences in treatment by colleagues.

The present study explores these issues using a national sample of junior faculty in psychology. The discipline of psychology was selected for study because, while still a male-dominated discipline, a sufficient proportion of women are in the field (23%) to provide an adequate pool from which to draw a sample. Junior faculty were selected partially for the same reason: even fewer women hold associate and full professor positions than junior-level ones. In addition, it was presumed that network functioning would be more universally important to junior faculty working toward tenure than among tenured faculty whose career security had already been established.

Network composition and functioning were the two primary areas of investigation. In terms of composition, it was hypothesized that female faculty, in comparison with male faculty, would have more female associates, fewer male associates, and fewer higher-status colleagues. It also was predicted that women would rate their networks as less effective at fulfilling the socialization, friendship, visibility, and career information functions than men.

## METHOD

### Sample

Subjects were drawn from lists of assistant professors of psychology in university catalogs. Sixty universities were randomly selected from 1980-1981 catalogs available at a public library. Only institutions having a Master's or Ph.D. program in psychology were included in the catalog sampling. The universities ranged in size from 2,000 to over 20,000 in student population.

A seven-page questionnaire was mailed to 360 Ph.D. assistant professors of psychology (127 women, 238 men) identified from the catalogs. Completed

**TABLE 1**  
 Characteristics of assistant professor responders and nonresponders

		<i>Responders</i>		<i>Nonresponders</i>	
		<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>
Percent meeting assistant professor criterion		61 0 ( <i>N</i> = 47)	69 4 ( <i>N</i> = 43)	68 9 ( <i>N</i> = 33)	72 3 ( <i>N</i> = 60)
Age	Mean	33 1	33 3	33 7	33 6
	S D	(4 5)	(4 4)	(3 9)	(4 0)
Years since Ph D degree	Mean	4 5	4 3	5 1	4 9
	S D	(2 4)	(2 7)	(2 7)	(2 4)
Years at present position	Mean	3 3	3 2	3 8	3 8
	S D	(1 8)	(2 1)	(2 0)	(2 5)

questionnaires were returned by 139 individuals, resulting in a 39% overall response rate. The response rate for women (61%) was higher than that for men (26%).

Of the 139 responders, 49 had either been promoted to the associate level or did not meet the tenure-track assistant professor criterion. Those individuals were excluded from further analyses, resulting in a final sample size of 90 tenure-track assistant professor responders (47 women, 43 men).

The significantly differing response rate for women compared to men raises the question of whether these two populations were equally representative of their sexes. To test for possible differences, responders and nonresponders were compared, within sex, on the variables present position, age, time since degree, and time at present position. These data were available from the 1981 APA directory for 62% (*N* = 83) of the male and 68% (*N* = 48) of the female nonresponders.

As Table 1 shows, comparisons of the responders and nonresponders revealed no significant differences, within sex, for percentage meeting the assistant professor criterion, age, time since degree, or time at present position. The similarities, particularly those between male responders and nonresponders, suggest that at least with respect to the external variables assessed, the population studied was a fairly homogeneous sample of young Ph D s in their first tenure-track positions. Nevertheless, this comparison does not rule out the possibility that responders differ from nonresponders on other more substantive variables.

Also as reported in Table 1, no significant sex differences were found for the variables age, time since degree, or time at present position for the ninety tenure-track assistant professor responders who composed the final sample. Nor did the women and men studied differ with respect to marital status. Sixty-eight percent of the responders (32 women, 29 men) were

married or living with a significant other, the remainder (15 women, 14 men) indicated a single status

In addition, women and men were about equally distributed across different size institutions. Thirty-four percent (19 women, 12 men) were from universities with a student population of less than 10,000, 29% (11 women, 15 men) were at institutions with student population ranging from 10,000 to 20,000, 37% (17 women, 16 men) were at universities with over 20,000 students

## Instrument

*Demographic Data* Demographic information elicited from respondents included sex, age, marital status, spouse's occupation, number of children, year in which Ph D was received, present position, number of years at present institution, name of current institution, department, graduate degrees offered by department, and job rank

*Professional Network Survey* Subjects responded to 54 items evaluating network composition and functioning as part of a longer 125-item survey of network development. Only responses pertaining to composition and functioning are reported below. Time to complete the total questionnaire ranged from about 30 to 50 minutes for a pilot sample of six faculty

*Network Composition* The first six questions pertained to network composition. Subjects were asked to provide a list (by first name or initial) of individuals with whom they had "an important colleague relationship" for three separate categories of colleagues: (1) those within the discipline of psychology but not at the subject's present institution, (2) those within the subject's present department, and (3) those outside the department but within the university. The three separate networks were referred to as the *national*, *departmental*, and *university* networks, respectively. Three further instructions requested subjects to indicate which of the colleagues listed were (a) close personal friends, (b) known from the subject's previous institution, and (c) would be selected to write letters of recommendation were the subject to apply for another job

*Network Functioning* Two items assessed expectations for network functioning. Subjects were asked to select which one of the five functions (socialization, visibility, friendship, career information, or access to new developments) they viewed as *most important* for (a) their national and (b) their departmental network to fulfill

Effectiveness of national network functioning was assessed by five measures asking subjects to indicate the degree to which "important colleagues" outside the subject's current institution provided (1) advice and information

about the norms and values of the profession (socialization), (2) friendship, (3) a means of establishing a professional reputation (visibility), (4) information concerning jobs, grants, and professional opportunities (career information), and (5) access to current developments in the field (current research), using 7-point scales ("not at all provided" to "very much provided")

The same five measures were repeated to obtain subjects' evaluations of departmental network functioning. In addition, one overall rating of how favorably subjects felt their entire network had affected their career was obtained on a 7-point scale ("not at all favorably" to "very favorably")

In order to assess in more detail the specific behavioral components associated with network functioning and their frequency, six items addressed how often subjects' colleagues had offered different types of career advice (e.g., advice about how to approach higher ranking individuals) and had provided contacts with other professionals (e.g., introduced them to someone who was useful later professionally), using 5-point scales ("never" to "very often")

Another twelve items focused on how substantively useful the network had been by asking each subject to specify, from a list of twelve professional activities (e.g., writing a book chapter, editing a journal, etc.), those in which they *had been invited* by a colleague to participate

Four items evaluating the amount of help subjects had received in establishing a network asked how much effort had been expended in establishing collegial ties by the subject, spouse, advisor or mentor, and colleagues who were close personal friends. Seven-point scales ranging from "no effort" to "very much effort" were used

In addition, several measures of success were obtained. First, subjects were asked to rate on a 7-point scale how successful (from "not at all successful" to "highly successful") they were "given the expectations within your department for faculty at your year level." Next, subjects specified, from the list of twelve professional activities used earlier, those in which they *had participated*

## RESULTS

### Network Composition

A  $2 \times 2$  analysis of variance (sex  $\times$  marital status) was performed on each network composition measure. In terms of network size, women had a slightly larger number of colleagues ( $M = 12.7$ ) than men ( $M = 10.7$ ), but this difference was not significant. The distribution of colleagues among national, departmental, and university networks also was similar for female and male faculty ( $M_f = 6.62, 3.89, 2.20$  and  $M_m = 5.56, 3.86, 1.28$ , respectively)

As predicted, women's and men's networks differed with respect to the

**TABLE 2**  
Means and standard deviations of number of women in network

Network	Women		Men		F (1, 88)	p
	M	S D	M	S D		
National	1.93	(2.47)	1.21	(1.21)	3.03	< .10
Departmental	1.30	(1.33)	.95	(1.05)	< 1	n.s.
University	.85	(1.48)	.23	(.48)	6.80	< .02
Total	4.08	(3.93)	2.49	(1.76)	6.72	< .02

**TABLE 3**  
Mean number of higher-ranking colleagues and friends by sex

Higher-Ranking	Women		Men	
	M	S D	M	S D
Colleagues	7.70	(7.67)	6.12	(3.95)
Men	5.82	(5.64)	5.38	(3.49)
Close men friends	1.72	(2.53)	1.56	(1.79)
Close women friends	.79	(1.43)	.30	(.60)

proportion of women listed as "important colleagues." As reported in Table 2, men had significantly or near significantly fewer women colleagues in both their national and university networks than women did, but had about the same number of departmental contacts with women as women subjects.

The hypotheses that women would have fewer collegial relationships with men and fewer ties with higher-status associates were not supported. Women had about the same number of male associates in their network ( $M = 8.22$ ) as men did ( $M = 8.26$ ). In addition, no sex differences were found for number of higher-ranking colleagues, number of higher-ranking male colleagues, or number of higher-ranking male colleague friends (see Table 3). However, women had significantly more higher-status women as close friends than men did,  $F(1, 88) = 4.17$ ,  $p < .05$ , suggesting that women had a same-sex role model as part of their system of collegial ties.

Of extrastitutional colleagues, men had maintained significantly more contacts from their previous institutions ( $M = 4.14$ ) than women ( $M = 2.73$ ),  $F(1, 88) = 4.65$ ,  $p < .03$ .

Women had slightly more colleagues listed whom they would ask to write recommendations were they to look for another job ( $M = 5.48$ ) compared to men ( $M = 4.84$ ), but this difference was not significant.

No main effect of marital status was observed for any of the dependent variables. However, a significant sex  $\times$  marital status interaction effect was



found for the measure mean proportion of colleague-friends,  $F(1, 85) = 5.69, p < .02$ . Single female faculty had the largest proportion of colleagues classified as close personal friends ( $M = .541$ ), followed by married males, single males, and married females ( $M = .435, .402, \text{ and } .378$ , respectively). This result suggests there is more integration of colleague and friend networks for single female faculty than among males or married females.

## Functioning

Chi-square tests revealed no significant sex difference in expectations for network functioning. Women and men selected which function was *most important* with about the same frequency. For national networks, professional visibility was selected by 34% of the subjects as the first ranked function, whereas 23% chose friendship, 23% selected current research, and 17% picked socialization as most important. Not surprisingly for a sample of individuals who had gotten jobs recently, the career information function was not salient to many subjects (3%).

For departmental networks, a plurality of subjects (41%) ranked friendship as most important. Socialization and visibility were next most often selected (21 and 20%, respectively). Few chose current research (10%) or career information (8%).

Responses to the 5- and 7-point scales concerning network effectiveness were analyzed using a  $2 \times 2$  ANOVA (sex  $\times$  marital status). No significant effects were found for marital status for any of the dependent variables examined.

In general, both sexes rated their networks as only moderately effective. None of the functions for either national or departmental networks received a mean rating of "highly effective" (i.e., a rating of 6 or above on a 7-point scale). Subjects reported their networks to have had a slightly positive effect on their careers ( $M_f = 4.74, M_m = 4.90$ , 7-point scale).

Three measures revealed a sex difference with respect to how effectively subjects' networks functioned to help them develop a professional reputation. However, contrary to expectation, no sex differences were found on items concerning the socialization, friendship, career information, and current research functions.

First, for national networks, women rated their colleagues as significantly less effective than men's at enhancing *visibility*, that is, at providing a means of establishing a professional reputation,  $F(1,88) = 4.34, p < .04$  (see Table 4). No sex differences were found for subjects' ratings of the friendship, socialization, career information or access to current research functions at either the departmental or national level.

Second, as shown in Table 5 (item 1), women rated their colleagues as significantly less likely to have recommended their work to other colleagues,

**TABLE 4**  
Mean ratings of effectiveness by function, network, and sex\*

Function		National Network		Departmental Network	
		Women	Men	Women	Men
Socialization	<i>M</i>	5.41	4.84	4.55	4.43
	<i>S D</i>	(1.63)	(1.86)	(1.83)	(1.36)
Friendship	<i>M</i>	5.56	5.60	4.40	4.69
	<i>S D</i>	(1.61)	(1.34)	(1.78)	(1.70)
Visibility	<i>M</i>	4.91	5.62	3.74	3.57
	<i>S D</i>	(1.85)	(1.23)	(1.94)	(1.65)
Career information	<i>M</i>	4.82	4.62	4.04	3.98
	<i>S D</i>	(1.80)	(1.64)	(1.90)	(1.67)
Current research	<i>M</i>	5.20	5.30	4.12	3.81
	<i>S D</i>	(1.73)	(1.51)	(1.86)	(1.64)

\*Scale 1-7 points where 1 = not at all provided by the network 7 = very much provided

$F(1,88) = 9.82, p < .002$ . However, both sexes reported receiving similar amounts of help from colleagues with respect to being introduced to other professionals and receiving career advice.

Third, compared to men, women rated their colleague-friends as having expended significantly less effort in helping them establish a network,  $F(1,88) = 5.47, p < .02$ . No sex differences were found for ratings of amount of effort made by self, spouse, and advisor (see Table 6).

Furthermore, when women's colleagues did promote them, in terms of inviting them to participate in certain professional activities, it was somewhat more likely to be in the service area. Women were slightly more likely than men to have been invited by a colleague to serve on university or national committees ( $\chi^2 = 3.35, p < .10$ ) (see Table 7). Both women and men were equally likely to have been invited to participate in the other eleven activities.

## Success

Analysis of variance by sex revealed no significant difference on the self-rating of success item. Women and men alike rated themselves as performing above average given the expectations for junior faculty within their departments ( $M = 6.57$  and  $6.21$ , respectively, 7-point scale).

Chi-square analyses of frequency of participation in different types of professional activities revealed that women were more likely than men to have served on a professional task force or committee at the state or national level ( $\chi^2(1) = 4.56, p < .04$ ), and at the university level ( $\chi^2(1) = 2.27, p < .10$ ), and to have given talks ( $\chi^2(1) = 3.97, p < .05$ ) (see Table 7).

**TABLE 5**  
Mean ratings of frequency of help offered by colleagues<sup>a</sup>

Type of Help	Women		Men	
	M	S D	M	S D
1 Suggested that someone they knew professionally contact you concerning your work	2 77	(1 11)	3 52	(1 17)
2 Recommended that you contact someone they knew personally in your field	3 28	(1 14)	3 38	(1 06)
3 Introduced you to someone who was useful to you later professionally	3 02	(1 17)	3 21	(1 34)
4 Introduced you to someone that is now part of your network	3 11	(1 24)	3 17	(1 19)
5 Advised you about how to approach certain peers in your department	2 91	(1 32)	3 00	(1 25)
6 Advised you about how to approach higher-ranking individuals	2 85	(1 18)	2 79	(1 05)
7 Informed you of the informal criteria for tenure, e g , the publication rate expected of you	3 49	(1 20)	3 19	(1 11)

<sup>a</sup>5-point scale 1 = never to 5 = very often

**TABLE 6**  
Mean ratings of effort expended to establish a network<sup>a</sup>

Person(s)	Women		Men	
	M	S D	M	S D
Self	4 52	(1 37)	4 25	(1 42)
Spouse	2 78	(2 13)	3 54	(2 20)
Advisor/mentor	3 65	(1 70)	4 10	(1 66)
Colleague-friends	4 17	(1 51)	4 90	(1 41)

<sup>a</sup>7-point scale 1 = not at all 7 = very much

## DISCUSSION

Professional network composition and functioning differed for female and male assistant professors in psychology on a number of the measures examined, but not to the extent hypothesized. Women's network composition differed from men's in three areas: women had fewer ties to their previous institutions, had more women colleagues, and were more likely to have a higher-status woman associate.

TABLE 7

Percentage of subjects receiving invitations to participate and participating in professional activities by sex

Activity	Received Invitations		Have Participated	
	Women (N = 46)	Men (N = 42)	Women (N = 46)	Men (N = 42)
1 Informal review of manuscript in field prior to submission to journals	34 1	26 1	43 2	42 0
2 Review of grant proposals	17 1	17 1	31 8	31 8
3 Review of proposals for professional conferences	17 1	9 1	28 4	20 4
4 Journal article review	23 9	17 1	39 8	35 2
5 Textbook review	13 6	15 9	25 0	22 7
6 Participant in symposium	22 7	21 6	38 6	34 1
7 Written a chapter for an edited book	20 4	18 2	33 0	29 6
8 Served on a state or national task force or committee	9 1	2 3	19 3	8 0
9 Served on a university-wide committee	14 8	9 1	35 2	23 9
10 Acted as a member of an editorial board	6 8	5 7	14 8	13 6
11 Acted as editor of a special journal issue	2 3	1 1	2 3	3 4
12 Given talks	21 8	17 2	44 3	31 8

The finding that women have fewer contacts with former colleagues parallels reports by Roe (1966) and Bayer (1970) that women have weaker ties with their academic sponsors. The greater difficulty women have in making the transition from student to peer in their relationships with former teachers and coworkers (Reskin, 1978) is one possible explanation for this result. Even so, women seemed able to compensate for their weaker links to their graduate institutions. First, they had the same number of colleagues in their national networks as men. Second, over 90% of the women had two or more same-sex associates, and close to two-thirds had a higher-status woman in their network. Thus a majority of the women studied had a small same-sex support network, including a role model, as part of their system of collegial ties.

Only one consistent sex difference in network functioning was found, instead of the four predicted. Women rated their networks as less effective in helping them build a professional reputation on three measures assessing the visibility function. Because women did not have higher expectations for their networks in terms of visibility, the perceived difference in effectiveness cannot be explained by inordinate expectations for network functioning on

the women's part. Nor were women found to differ from men on the success measures, indicating that women's treatment by colleagues was not due to lower performance. Hence, it seems probable that women's responses reflect objective sex differences in treatment by colleagues.

When women's colleagues did facilitate visibility, it was somewhat more likely to be in the service area (i.e., women were more often invited to serve on national or state committees). In addition, women were more likely than men to participate in service activities such as committee work at the university, state or national level, and guest speaking—activities that are time-consuming and not as beneficial professionally as research.

The results demonstrating sex similarities in network composition and functioning suggest that the assumptions made by previous investigators concerning men's colleague relationships may be inaccurate, at least for men in psychology. Firm conclusions cannot be drawn, though, because the male response rate in this study was relatively low. In spite of the similarities between male responders and nonresponders on the variables assessed there may be other more subtle variables that differentiate them.

The greater ratio of women to men in psychology compared to other sciences also may be partially responsible for the similarities observed. According to Kanter (1977), once the proportion of women in a group exceeds 15%, the isolation and discrimination associated with being a "token" will be reduced. It would be useful to examine network functioning across several disciplines with varying sex ratios to test this hypothesis.

Nevertheless, while it appears that sex differences are few at this early career stage, the implications of the professional visibility finding for women faculty's later career development are potentially severe. If women's reputations actually are developed less well than men's, then tenure decisions, which are partially based on reviews from outside a faculty member's department, could be adversely affected. Invitations to participate in important professional activities may also be limited if a network functions weakly in this area. Although women and men faculty in their third year were similar with respect to the types of invitations to professional activities they had received, the cumulative effect of an active versus inactive network could be more pronounced by the tenure year.

If further research substantiates that colleagues are not as helpful to women at promoting their work to others, it may mean that women will have to develop career strategies specifically to develop their professional reputations. For instance, it might be particularly important for women to present their research at national conferences, to send unsolicited reprints of manuscripts to individuals whom they wish to become acquainted with their work, or to become active in professional mixed-sex or women's organizations. Women also may have to actively protect their time by limiting their service commitments and non-research-related public speaking.

Women may already be very attuned to the problems of network func-

tioning, if their response rate to the survey is an indication of its salience. Further research concerning the network's role in developing a novice's professional reputation is needed to determine objective sex differences in network functioning and potential career strategies for women.

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