



EXCELLENCE | EQUITY | DIVERSITY

## **MENTORING WORKSHOP ANNOTATED BIBLIOGRAPHY**

<b>BENEFITS OF EFFECTIVE MENTORING.....</b>	<b>2</b>
<b>COLLECTIVE MENTORING, MENTORING MOSAICS &amp; MULTIPLE MENTORING .....</b>	<b>4</b>
<b>EFFECTIVE MENTORING.....</b>	<b>7</b>
<b>INEFFECTIVE MENTORING .....</b>	<b>11</b>
<b>MEASURING MENTORING EFFECTIVENESS .....</b>	<b>13</b>
<b>UNCONSCIOUS BIAS AND BARRIERS TO MENTORING .....</b>	<b>14</b>
<b>WILLINGNESS TO MENTOR .....</b>	<b>18</b>

## **BENEFITS OF EFFECTIVE MENTORING**

**Athey, S., Avery, C., & Zemsky, P. (2000). Mentoring and Diversity. *American Economic Review*, 90, 765-786.**

We study how diversity evolves at a firm with entry-level and upper-level employees who vary in ability and "type" (gender or ethnicity). The ability of entry-level employees is increased by mentoring. An employee receives more mentoring when more upper-level employees have the same type. Optimal promotions are biased by type, and this bias may favor either the minority or the majority. We characterize possible steady states, including a "glass ceiling," where the upper level remains less diverse than the entry level. A firm may have multiple steady states, whereby temporary affirmative-action policies have a long-run impact.

**Bahniuk, M. H, Dobos, J., & Hill, S. K. (1990). The Impact of Mentoring, Collegial Support, and Information Adequacy on Career Success: A Replication. *Journal of Social Behavior & Personality*, 5(4), 431-452.**

Replicated a study by S. E. Hill et al (1989) of the relationship between mentoring and career success. 215 male and 43 female managers were surveyed concerning mentoring support, perceived success, and demographics. Four dimensions of informal support emerged: collegial/task, mentor/protégé, collegial/social, and teacher/coach support. Results support those of Hill et al, showing the importance of a mentor for career success. Men had higher success scores on managerial rank and income than women, and both men and women with mentors scored higher on informal and formal communication variables than did those without mentors.

**Cleveland, J.N., Stockdale, M., & Murphy, K.R. (Eds). (2000). *Women and Men in Organizations: Gender Issues at Work*. Mahwah, NJ: Lawrence Erlbaum Associates.**

For both men and women, mentoring is related to organizational advancement, career development, and career satisfaction. Mentoring programs help to break barriers to integrating a diverse workforce into the social networks of the organization. Mentoring can be beneficial at many career stages, although different kinds of mentoring may be needed at different stages. Finding and becoming a mentor can be difficult for women for several reasons. First, women tend to have fewer opportunities to establish contact with potential mentors because of a lack of access to informal information networks. Second, tokenism also influences women's ability to obtain mentors, particularly in workplaces with affirmative action policies that are misunderstood by their employees. Tokenism can cause people, including women themselves, to believe that women earn positions and promotions not because of their abilities and achievements but because of a quota system. Third, negative stereotypes and attitudes about women, particularly about women as managers and leaders, can influence how mentors view women as protégés. Fourth, peer perceptions about cross-gender mentor relationships and their potential to become sexual can discourage men from mentoring women and women from seeking male mentors. Fifth, women are socialized to downplay their successes, which may discourage successful coworkers from taking them on as a protégé.

**Greene, M.T. & Puetzer, M. (2002). The value of mentoring: a strategic approach to recruitment and retention. *Journal of Nursing Care Quality*, 17(1), 63-70.**

The issues of recruitment, training, and retention of experienced nursing staff remains an ongoing business strategy of nursing service in many health care facilities. The implementation of a structured mentoring program recognizes the need to develop and maintain relationships between the new and the experienced nurses. The terms of mentor and mentee are defined within a structured orientation program, highlighting specific roles and responsibilities of each. The use of other staff as preceptors and resources is discussed as a mechanism to enhance diversity in skill and knowledge development. The value of clinical tracking forms, planning calendars, and feedback mechanisms are stressed to ensure success in monitoring this program in a longitudinal way. Problems associated with the assignment of mentors are addressed as an area for future investigation in different care settings.

**Ragins, B.R. (1999). Gender and Mentoring Relationships: A Review and Research Agenda for the Next Decade. In G. Powell (Ed.), *Handbook of Gender and Work* (347-370). Thousand Oaks, CA: Sage Publications, Inc.**

Ragins investigates the empirical research on mentoring relationships. Mentoring relationships are critical resources for employees in organizations. Empirical research has shown that protégés receive more promotions, greater compensation, and more career mobility than nonprotégés. Mentoring is related to greater career satisfaction, career commitment, career planning, organizational socialization, self esteem at work, job satisfaction, job involvement, and lower turnover intentions. Individuals with mentors receive more power in organizations and advance at a faster rate than those without mentors. Mentoring relationships are particularly important for women as women have been found to be less likely than men to receive personal support, job-related information, and developmental support from their supervisors. Mentors can help women overcome barriers to advancement, act as buffers for overt and covert discrimination, alter stereotypes by showing support and legitimating protégés' work, and help women create valuable networks. Mentors provide two key functions: career development functions (coaching, sponsoring advancement, protecting protégés from adverse forces, providing challenging assignments, and fostering positive visibility) and psychosocial functions (personal support, friendship, acceptance, counseling, and role modeling). A single mentor may provide some or all of these functions. Research on mentorship behaviors has shown that the more functions provided, the greater the greater the career and organizational benefits received.

**Ragins, B. R. & Cotton, J. L. (1999). Mentor functions and outcomes: a comparison of men and women in formal and informal mentoring relationships. *Journal of Applied Psychology*, 84, 529-550.**

Compared to formal mentoring, informal mentoring is spontaneously initiated, lasts for 3-6 years, changes the amount, type, and purpose of contact over time, and may have more motivated and skilled mentors. A survey of 614 protégés in male-, female-, and non-biased occupations compared the effectiveness of formal and informal mentoring. Protégés in informal mentoring reported more career development functions than did those in formal mentoring relationships; they reported higher levels of compensation. Protégés (both male and female) of male mentors made more money than protégés of female mentors. Male protégés of male mentors made the most money; female protégés of female mentors made the least. Male mentors probably have more organizational power and knowledge than female mentors. Formal protégés made the same amount of

money and had the same number of promotions as individuals with no mentors; only informal protégés outearned and had more promotions than those with no mentors. Formal mentoring programs should mimic informal mentoring as much as possible. Caveat: the effectiveness of informal mentoring may be due to selection factors.

**Scandura, T. A. & Williams, E. A. (2001). An investigation of the moderating effects of gender on the relationships between mentorship initiation and protégé perceptions of mentoring functions. *Journal of Vocational Behavior*, 59, 342-363.**

Recent research has suggested that the more the mentor is involved in relationship initiation the greater the benefits that the protégé may receive. No research, however, has examined the impact of protégé gender on the relationship between initiation and mentoring received. The results of this study indicate that male protégés received more mentoring than female protégés in protégé-initiated mentorships. Female protégés, however, reported receiving more mentoring than male protégés if the relationship was mentor-initiated or where both mentor and protégé initiated the relationship. Protégés in informal mentorships reported receiving more mentoring than those in formal organizational programs. The findings of this study also indicate that protégés may benefit more from same-sex relationships than cross-sex relationships with respect to role modeling.

## **COLLECTIVE MENTORING, MENTORING MOSAICS & MULTIPLE MENTORING**

**Boice, R. (1992). *The new faculty member: Supporting and fostering professional development*. San Francisco, CA: Jossey-Bass Inc.**

In this book, Robert Boice offers a range of proven support strategies designed to help new faculty thrive and provides tested solutions for helping them cope. He outlines a structured mentoring program to build collegiality through social support networks. And he presents specific techniques for helping new faculty find time, fluency, and balance as writers, including advice on dealing with editorial evaluations or rejections. The author also details a variety of self-help projects, including exercise and mood management groups run largely by new faculty, as well as faculty handbooks and newsletters. And perhaps most important, he tells how to gain the crucial support of department chairs, deans, and other administrators, secure funds to get programs off the ground, and keep new programs manageable and successful.

**Chesler, N.C., & Chesler, M.A. (2002). Gender-Informed Mentoring Strategies for Women Engineering Scholars: On Establishing a Caring Community. *Journal of Engineering Education*, 91(9), 49-55.**

Improved mentoring of women graduate students and young faculty is one strategy for increasing the presence, retention and advancement of women scholars in engineering. We explore the sociological literature on interpersonally- and institutionally- generated gender roles and dynamics that make the construction and maintenance of mentoring relationships especially difficult for women in male-dominated fields. In addition, we

review nontraditional strategies including peer-, multiple- and collective mentorships that are likely to be more successful for most women (and many men). Finally, organizational change strategies designed to provide a more egalitarian and cooperative atmosphere in engineering programs and departments are presented. These ideas represent a social contract for a caring community more supportive of all members' personal and professional growth and success.

**Cleveland, J.N., Stockdale, M., & Murphy, K.R. (Eds). (2000). *Women and Men in Organizations: Gender Issues at Work*. Mahwah, NJ: Lawrence Erlbaum Associates.**

For both men and women, mentoring is related to organizational advancement, career development, and career satisfaction. Mentoring programs help to break barriers to integrating a diverse workforce into the social networks of the organization. Mentoring can be beneficial at many career stages, although different kinds of mentoring may be needed at different stages. Finding and becoming a mentor can be difficult for women for several reasons. First, women tend to have fewer opportunities to establish contact with potential mentors because of a lack of access to informal information networks. Second, tokenism also influences women's ability to obtain mentors, particularly in workplaces with affirmative action policies that are misunderstood by their employees. Tokenism can cause people, including women themselves, to believe that women earn positions and promotions not because of their abilities and achievements but because of a quota system. Third, negative stereotypes and attitudes about women, particularly about women as managers and leaders, can influence how mentors view women as protégés. Fourth, peer perceptions about cross-gender mentor relationships and their potential to become sexual can discourage men from mentoring women and women from seeking male mentors. Fifth, women are socialized to downplay their successes, which may discourage successful coworkers from taking them on as a protégé.

**de Janasz, S. C. & Sullivan, S. E., (2004). Multiple mentoring in academe: Developing the professorial network. *Journal of Vocational Behavior*, 64(2), 263-283.**

Previous studies in business organizations have shown that mentoring provides numerous benefits for both individuals and organizations. Most of this mentoring research has been based on traditional, hierarchical mentor-protégé relationships in non-academic settings. We discuss why there is little empirical research on faculty mentoring and review changes in professors' careers that necessitate a fresh look at this issue. We suggest that because of environmental changes, the traditional model of professors being guided throughout their careers by one primary mentor, usually the dissertation advisor, may no longer be realistic or desirable. Instead, professors may be better served by a portfolio of mentors (Baugh & Scandura, 1999; Higgins & Kram, 2001) who facilitate the protégé's development of career competencies. Building on the work of intelligent careers (DeFillippi & Arthur, 1996), we examine how the career competencies of knowing why, how, and whom interact with learning demands to produce the need for faculty to develop multiple mentoring relationships across their academic career. We build on this conceptualization by considering the role of signaling of career competencies (Jones, 2002) in developing the professorial network, offering managerial implications in developing mentoring programs, and discussing avenues for future research.

**Kalev, A. (2006). Cracking the Glass Cages? Job Segregation, the Restructuring of Work, and Managerial Diversity. *American Journal of Sociology*.**

Since job segregation blocks career opportunities for women and minorities, work structures that expand opportunities for women and minorities to network and demonstrate their capabilities may increase their share in higher ranking jobs. The reorganization of work over the last two decades provides a test case. I examine whether the adoption of programs that counteract segregation, namely self-directed work teams and cross-job training, is followed by higher managerial diversity. I analyze longitudinal data on workforce composition and the organization of work from a national sample of over 800 American work establishments between 1980 and 2002. The results show that teams and training programs that do not transcend job boundaries, such as problem-solving teams or job training, do not lead to increased managerial diversity. In contrast, when employers adopt programs that increase workers' exposure to other people and jobs, such as self-directed teams or cross-job training, the proportion of white women and black women and men among managers increases. The analysis controls for a wide range of other organizational structures that may affect managerial diversity. These unintended consequences buttress structural theories of inequality at work and suggest a new way for remedying it.

**Peluchette, J. V. E. & Jeanquart, S. (2000). Professionals' use of different mentor sources at various career stages: Implications for career success. *Journal of Social Psychology*, 140(5), 549-564.**

The authors investigated the various sources of mentors used by professionals, how these sources influenced both objective and subjective career success, and whether the participants used different sources of mentors at different stages of their careers. According to data from 430 faculty members at 2 US research institutions, assistant professors with mentors in their professions, associate professors with mentors outside the work place, and professors with mentors within their organizations had the highest levels of objective career success. Assistant professors with multiple sources of mentors yielded significantly higher levels of both objective and subjective career success than did those with single sources or no mentor. If one links professorial rank to career stage, the results suggest that the participants used different sources of mentors at different stages of their careers.

**Raabe, B. & Beehr, T. A. (2003). Formal mentoring versus supervisor and coworker relationship: Differences in perceptions and impact. *Journal of Organizational Behavior*, 24, 271-293.**

Formal mentoring programs in two companies were examined regarding 1. the extent to which mentees and mentors agreed on the nature of the mentoring relationships and 2. the extent to which dimensions of mentoring relationships were related to outcomes for the mentees, compared with the extent to which dimensions for supervisory and coworker relationships were related to the same outcomes: job satisfaction, organizational commitment, and turnover intentions. Mentors were at least two hierarchical levels above the mentee, and both were part of the company's formal mentoring program. Sixty-one pairs of mentors and mentees participated. Overall, there was little agreement between mentees and mentors regarding the nature of the mentoring relationship. Furthermore, the mentoring relationship was not related to

mentee outcomes, while supervisory and coworker relationships were. It is suggested that, if one desires to affect job satisfaction, turnover intentions, and organizational commitment, mentoring functions may be best performed by supervisors and coworkers rather than assigned formal mentors from higher up in the organizational hierarchy.

**Ragins, B. R. & Cotton, J. L. (1999). Mentor functions and outcomes: a comparison of men and women in formal and informal mentoring relationships. *Journal of Applied Psychology*, 84, 529-550.**

Compared to formal mentoring, informal mentoring is spontaneously initiated, lasts for 3-6 years, changes the amount, type, and purpose of contact over time, and may have more motivated and skilled mentors. A survey of 614 protégés in male-, female-, and non-biased occupations compared the effectiveness of formal and informal mentoring. Protégés in informal mentoring reported more career development functions than did those in formal mentoring relationships; they reported higher levels of compensation. Protégés (both male and female) of male mentors made more money than protégés of female mentors. Male protégés of male mentors made the most money; female protégés of female mentors made the least. Male mentors probably have more organizational power and knowledge than female mentors. Formal protégés made the same amount of money and had the same number of promotions as individuals with no mentors; only informal protégés outearned and had more promotions than those with no mentors. Formal mentoring programs should mimic informal mentoring as much as possible. Caveat: the effectiveness of informal mentoring may be due to selection factors.

**Scandura, T. A. & Williams, E. A. (2001). An investigation of the moderating effects of gender on the relationships between mentorship initiation and protégé perceptions of mentoring functions. *Journal of Vocational Behavior*, 59, 342-363.**

Recent research has suggested that the more the mentor is involved in relationship initiation the greater the benefits that the protégé may receive. No research, however, has examined the impact of protégé gender on the relationship between initiation and mentoring received. The results of this study indicate that male protégés received more mentoring than female protégés in protégé-initiated mentorships. Female protégés, however, reported receiving more mentoring than male protégés if the relationship was mentor-initiated or where both mentor and protégé initiated the relationship. Protégés in informal mentorships reported receiving more mentoring than those in formal organizational programs. The findings of this study also indicate that protégés may benefit more from same-sex relationships than cross-sex relationships with respect to role modeling.

## EFFECTIVE MENTORING

**Boice, R. (1992). *The new faculty member: Supporting and fostering professional development*. San Francisco, CA: Jossey-Bass Inc.**

In this book, Robert Boice offers a range of proven support strategies designed to help new faculty thrive and provides tested solutions for helping them cope. He outlines a structured mentoring program to build collegiality through social support networks. And he presents specific techniques for helping new faculty find time, fluency, and balance

as writers, including advice on dealing with editorial evaluations or rejections. The author also details a variety of self-help projects, including exercise and mood management groups run largely by new faculty, as well as faculty handbooks and newsletters. And perhaps most important, he tells how to gain the crucial support of department chairs, deans, and other administrators, secure funds to get programs off the ground, and keep new programs manageable and successful.

**Chesler, N.C., & Chesler, M.A. (2002). Gender-Informed Mentoring Strategies for Women Engineering Scholars: On Establishing a Caring Community. *Journal of Engineering Education*, 91(9), 49-55.**

Improved mentoring of women graduate students and young faculty is one strategy for increasing the presence, retention and advancement of women scholars in engineering. We explore the sociological literature on interpersonally- and institutionally- generated gender roles and dynamics that make the construction and maintenance of mentoring relationships especially difficult for women in male-dominated fields. In addition, we review nontraditional strategies including peer-, multiple- and collective mentorships that are likely to be more successful for most women (and many men). Finally, organizational change strategies designed to provide a more egalitarian and cooperative atmosphere in engineering programs and departments are presented. These ideas represent a social contract for a caring community more supportive of all members' personal and professional growth and success.

**Davidson, M. N. & Foster-Johnson, L. (2001). Mentoring in the preparation of graduate researchers of color. *Review of Educational Research*, 71, 549-574.**

Schools of graduate education in the United States continue to be challenged to attract and retain students of color. We argue that effective mentoring within a department can improve multicultural students' graduate school experience and better position them for success in their postdoctoral careers. To be an effective mentor, a faculty member must cultivate understanding of the experience of students from various cultural backgrounds. This task is especially challenging for White faculty members because of societal dynamics involving race and ethnicity. We propose actions to help faculty members enhance their multicultural competence in mentoring.

**Ensher, E. A., Grant-Vallone, E. J., & Marelich, W. D. (2002). Effects of perceived attitudinal and demographic similarity on protégés' support and satisfaction gained from their mentoring relationships. *Journal of Applied Social Psychology*, 32(7), 1407-1430.**

The purpose of this study was to examine how perceived attitudinal similarity (measured as similarity in general outlook, values, and problem-solving approach) and demographic similarity operationalized as similarity in race and gender, affected protégés' support and satisfaction from their informal mentoring relationships. Scandura and Katerberg's (1988) 3-factor scale of mentor functions was used to measure vocational, psychosocial, and role-modeling support. Participants were 144 protégés from diverse backgrounds (54% female; 54% non-White). Perceived attitudinal similarity was a better predictor of protégés' satisfaction with and support received from their mentors than was demographic similarity.



**Kalev, A. (2006). Cracking the Glass Cages? Job Segregation, the Restructuring of Work, and Managerial Diversity. *American Journal of Sociology*.**

Since job segregation blocks career opportunities for women and minorities, work structures that expand opportunities for women and minorities to network and demonstrate their capabilities may increase their share in higher ranking jobs. The re-organization of work over the last two decades provides a test case. I examine whether the adoption of programs that counteract segregation, namely self-directed work teams and cross-job training, is followed by higher managerial diversity. I analyze longitudinal data on workforce composition and the organization of work from a national sample of over 800 American work establishments between 1980 and 2002. The results show that teams and training programs that do not transcend job boundaries, such as problem-solving teams or job training, do not lead to increased managerial diversity. In contrast, when employers adopt programs that increase workers' exposure to other people and jobs, such as self-directed teams or cross-job training, the proportion of white women and black women and men among managers increases. The analysis controls for a wide range of other organizational structures that may affect managerial diversity. These unintended consequences buttress structural theories of inequality at work and suggest a new way for remedying it.

**Kidd, J. M., Jackson, C., & Hirsh, W. (2003). The outcomes of effective career discussion at work. *Journal of Vocational Behavior*, 62, 119-133.**

This article examines the outcomes that resulted from career discussions experienced by 104 employees. Employees appeared to benefit from discussions about their careers with individuals in a wide range of roles. Many effective career discussions produced multiple outcomes, and some of these were long-lasting. The most common types of outcomes experienced were a clearer view of future direction, self-insight, awareness of opportunities, and feeling reassured or better about self or work. The findings highlight the need for future research into the effectiveness of career interventions to take more account of multiple outcomes and how these evolve over time. Also, organizations need to encourage informal career discussions and informal mentoring.

**Kram, K. E. (1985). *Mentoring at Work: Development Relationships in Organizational Life*. Glenview, IL: Scott, Foresman.**

This foundational piece on mentoring dispels several myths about mentoring: that the primary beneficiary is the protégé, that mentoring is always a positive experience, that all mentoring relationships look the same, that mentoring is the sole key to career success, and that it is readily available for those who want it. The book began as a study of mentoring relationships between junior and senior corporate managers and grew into research on nature, benefits, and limitations of different relationships between coworkers. Kram details two types of functions of mentoring relationships: career functions - sponsorship, visibility, coaching, buffering, and challenging assignments – and psychosocial functions – role modeling, acceptance and confirmation, counseling, and friendship. The sample size focuses mainly on men, but much research following this book has investigated gender differences in mentoring processes. The book suggests that developing mentoring relationships with more than one person and with peers as well as superiors.

**Milem, J. F. (2003). "The Educational Benefits of Diversity: Evidence from Multiple Sectors." *Compelling Interest: Examining the Evidence on Racial Dynamics in Colleges and Universities*. (pp. 126-169). Stanford University Press.**

In his review of empirical research on diversity, affirmative action, and climate, Milem (2003) explains that positive interaction among diverse people can lead to learning experiences, creative insights in research and teaching, and can improve departmental and institutional climate. He argues that a positive climate and positive interaction encourages faculty and students to remain at the university and can even increase productivity.

**Peluchette, J. V. E. & Jeanquart, S. (2000). Professionals' use of different mentor sources at various career stages: Implications for career success. *Journal of Social Psychology, 140*(5), 549-564.**

The authors investigated the various sources of mentors used by professionals, how these sources influenced both objective and subjective career success, and whether the participants used different sources of mentors at different stages of their careers. According to data from 430 faculty members at 2 US research institutions, assistant professors with mentors in their professions, associate professors with mentors outside the work place, and professors with mentors within their organizations had the highest levels of objective career success. Assistant professors with multiple sources of mentors yielded significantly higher levels of both objective and subjective career success than did those with single sources or no mentor. If one links professorial rank to career stage, the results suggest that the participants used different sources of mentors at different stages of their careers.

**Raabe, B. & Beehr, T. A. (2003). Formal mentoring versus supervisor and coworker relationship: Differences in perceptions and impact. *Journal of Organizational Behavior, 24*, 271-293.**

Formal mentoring programs in two companies were examined regarding 1. the extent to which mentees and mentors agreed on the nature of the mentoring relationships and 2. the extent to which dimensions of mentoring relationships were related to outcomes for the mentees, compared with the extent to which dimensions for supervisory and coworker relationships were related to the same outcomes: job satisfaction, organizational commitment, and turnover intentions. Mentors were at least two hierarchical levels above the mentee, and both were part of the company's formal mentoring program. Sixty-one pairs of mentors and mentees participated. Overall, there was little agreement between mentees and mentors regarding the nature of the mentoring relationship. Furthermore, the mentoring relationship was not related to mentee outcomes, while supervisory and coworker relationships were. It is suggested that, if one desires to affect job satisfaction, turnover intentions, and organizational commitment, mentoring functions may be best performed by supervisors and coworkers rather than assigned formal mentors from higher up in the organizational hierarchy.

**Seibert, S. (1999). The effectiveness of facilitated mentoring: A longitudinal quasi-experiment. *Journal of Vocational Behavior*, 54, 483-502.**

The initiation of formal mentoring has become a widespread practice in public and private organizations. This paper reports results from a one-year longitudinal quasi-experiment which examined the effectiveness of a formal mentoring program at a Fortune 100 corporation. Employees who participated in the program were compared with a control group who reported never having had a mentor. Results showed that subjects with formal mentors reported significantly higher levels of job satisfaction. While a small to medium effect for participation in the mentor program was observed for organizational commitment, this effect failed to reach statistical significance in the current study. Subjects participating in the mentor program did not differ from their nonmentored counterparts in terms of work-role stress or self-esteem at work. These results suggest that a formal mentor program can have positive effects on individual and organizational outcomes, but its effectiveness may not be as extensive as widely assumed.

**Subramaniam, B. & Wyer, M. (1998). Assimilating the "Culture of No Culture" in Science: Feminist Intervention in (De)Mentoring Graduate Women. *Feminist Teacher*, 12, 12.**

Subramaniam and Wyer (1998) did a year-long qualitative study from 1992-3 with male and female faculty and female graduate students from three southeastern universities and multiple STEM departments as part of an NSF Model Project. All of the men in the study were considered advocates for women in the sciences. Participants were broken into three groups, the faculty group, the student group, and the mediator group (comprised of women faculty and graduate students). The three groups conversed with one another via the researchers and identities of participants in other groups were kept confidential. Discussions took place in a seminar setting with topics and readings determined by the researchers to address the culture of science, historical arguments for excluding women from the sciences, data on the presence of women in the sciences, stereotypes of scientists, gender norms, and male-male relations. Exercises were created to relay information between the groups, such as describing the unwritten rules of academia, naming and comparing what graduate students versus faculty would like to see changed, and first-person writing. Mentoring and the unwritten rules and unconscious biases that influence it was a major topic of discussion. The authors suggest a less individualized and a more community-based approach to mentoring as an alternative to traditional models.

## **INEFFECTIVE MENTORING**

**Eby, L.T., McManus, S.E, Simon, S.A., & Russell, J.E. (2000). The protégé's perspective regarding negative mentoring experiences: the development of a taxonomy. *Journal of Educational Behavior*, 57, 1-21.**

A taxonomy of negative mentoring experiences was developed using descriptive accounts of negative mentoring experiences from the protégé's perspective. Content

analysis revealed 15 types of negative mentoring experiences, nested within five broad metathemes: Match within the Dyad, Distancing Behavior, Manipulative Behavior, Lack of Mentor Expertise, and General Dysfunctionality. Quantitative analyses indicated that protégés were more likely to report that their mentor had dissimilar attitudes, values, and beliefs when describing their most negative mentoring relationship compared to their most positive mentoring relationship. Implications for theory-building, future research, and applied practice are discussed.

**Eby, L. T. & Allen, T. D. (2002). Further investigation of protégés' negative mentoring experiences. *Group & Organization Management*, 27, 456-479.**

Negative mentoring experiences encountered by 242 protégés across their career histories were examined. Negative mentoring experiences clustered into 2 factors: Distancing/Manipulative Behavior and Poor Dyadic Fit. Protégés reports of the impact that these experiences had on them further suggested that several types of negative mentoring experiences were related to job satisfaction, turnover intentions, and stress. Finally, protégés in formally initiated mentoring relationships reported the most negative experience as having more of an effect on turnover intentions and stress than protégés in informal relationships. The results are discussed in the context of broadening the focus of mentoring research and implications for applied practice.

**Gersick, C. J., Bartunek, J. M., & Dutton, J. E. (2000). Learning from academia: The importance of relationships in professional life. *Academy of Management Journal*, 43(6), 1026-1044.**

This qualitative study of 37 faculty members (10 senior women, 9 junior women) from six management schools on mentoring relationships found that 55 percent of the senior women and 70 percent of the junior women interviewees told at least one story of harm at some point during their overall interviews; only 33 percent of the junior men and 11 percent of the senior men told at least one such story. Most of the women's harm stories involved discrimination, denial of resources, rejection, and tokenization.

**Scandura, T.A. (1998). Dysfunctional mentoring relationships and outcomes. *Journal of Management*, 24(3), 449-468.**

Mentoring has been correlated with career opportunities for protégés. Mentors accommodate various vocational career and psycho-social support to their protégés, including sponsorship, coaching, counseling and friendship. However, a number of relationship dysfunction have been correlated with mentoring relationships at work. Some mentoring relationships end up in anger, hostility or frustration, terminating for functional and dysfunctional reasons. A typological framework can be utilized to analyze possible dysfunction in mentoring relationships. The framework accommodates four psycho-social and vocational factors that influence mentoring, namely negative relations, bullying, sabotage, difficulty, sexual harassment, submissiveness, deception, and spoiling.

**Subramaniam, B. & Wyer, M. (1998). Assimilating the "Culture of No Culture" in Science: Feminist Intervention in (De)Mentoring Graduate Women. *Feminist Teacher*, 12, 12.**

Subramaniam and Wyer (1998) did a year-long qualitative study from 1992-3 with male and female faculty and female graduate students from three southeastern universities and multiple STEM departments as part of an NSF Model Project. All of the men in the study were considered advocates for women in the sciences. Participants were broken into three groups, the faculty group, the student group, and the mediator group (comprised of women faculty and graduate students). The three groups conversed with one another via the researchers and identities of participants in other groups were kept confidential. Discussions took place in a seminar setting with topics and readings determined by the researchers to address the culture of science, historical arguments for excluding women from the sciences, data on the presence of women in the sciences, stereotypes of scientists, gender norms, and male-male relations. Exercises were created to relay information between the groups, such as describing the unwritten rules of academia, naming and comparing what graduate students versus faculty would like to see changed, and first-person writing. Mentoring and the unwritten rules and unconscious biases that influence it was a major topic of discussion. The authors suggest a less individualized and a more community-based approach to mentoring as an alternative to traditional models.

**Tierney, W. (1992). An Anthropological Analysis of Student Participation in College. *The Journal of Higher Education*, 63(6), 603-618.**

This article argues for an alternative conceptualization of college student departure and critiques models of college leave-taking and statements from college administrators to demonstrate how, from an anthropological perspective, a "social integrationist" theory has misinterpreted fundamental terms such as "rite of passage." Issues that should be considered in a cultural analysis of student departure are discussed. More specifically, Tierney critiques models of assimilation which often require students to give up parts of their identities and separate from their cultures and communities.

## **MEASURING MENTORING EFFECTIVENESS**

**Berk, R. A., Berg, J., Mortimer, R., Walton-Moss, B., Yeo, T. (2005). Measuring the Effectiveness of Faculty Mentoring Relationships. *Academic Medicine*, 80(1), 66-71.**

"Mentor" is a term widely used in academic medicine but for which there is no consensus on an operational definition. Further, criteria are rarely reported for evaluating the effectiveness of mentoring. This article presents the work of an Ad Hoc Faculty Mentoring Committee whose tasks were to define "mentorship," specify concrete characteristics and responsibilities of mentors that are measurable, and develop new tools to evaluate the effectiveness of the mentoring relationship. The committee developed two tools: the Mentorship Profile Questionnaire, which describes the

characteristics and outcome measures of the mentoring relationship from the perspective of the mentee, and the Mentorship Effectiveness Scale, a 12-item six-point agree-disagree-format Likert-type rating scale, which evaluates 12 behavioral characteristics of the mentor. These instruments are explained and copies are provided. Psychometric issues, including the importance of content-related validity evidence, response bias due to acquiescence and halo effects, and limitations on collecting reliability evidence, are examined in the context of the mentor-mentee relationship. Directions for future research are suggested.

**Johnson, B.W. (2003). A framework for conceptualizing competence to mentor. *Ethics & Behavior*, 13(2),127-151.**

Although advertisements for jobs in academe increasingly suggest that mentoring students is a job requirement, and although academic institutions are increasingly prone to consider a faculty member's performance as a mentor at promotion and tenure junctures, there is currently no common approach to conceptualizing or evaluating mentor competence. This article proposes the triangular model of mentor competence as a preliminary framework for conceptualizing specific components of faculty competence in the mentor role. The triangular model includes mentor character virtues and intellectual/emotional abilities, as well as knowledge and skills (competencies) that are seen as expressions of training and experience. The article concludes with discussion of the implications of this model for faculty hiring, training, and evaluation.

**Ragins, B. R., Cotton, J. L., & Miller, J. S. (2000). Marginal mentoring: The effects of type of mentor, quality of relationship, and program design on work and career attitudes. *Academy of Management Journal*, 43, 1177-1194.**

Employing a national sample of 1,162 employees, we examined the relationship between job and career attitudes and the presence of a mentor, the mentor's type (formal or informal), the quality of the mentoring relationship, and the perceived effectiveness and design of a formal mentoring program. Satisfaction with a mentoring relationship had a stronger impact on attitudes than the presence of a mentor, whether the relationship was formal or informal, or the design of a formal mentoring program.

## **UNCONSCIOUS BIAS AND BARRIERS TO MENTORING**

**Athey, S., Avery, C., & Zemsky, P. (2000). Mentoring and diversity. *American Economic Review*, 90, 765-786.**

We study how diversity evolves at a firm with entry-level and upper-level employees who vary in ability and "type" (gender or ethnicity). The ability of entry-level employees is increased by mentoring. An employee receives more mentoring when more upper-level employees have the same type. Optimal promotions are biased by type, and this bias may favor either the minority or the majority. We characterize possible steady states, including a "glass ceiling," where the upper level remains less diverse than the entry level. A firm may have multiple steady states, whereby temporary affirmative-action policies have a long-run impact.

**Benz, E. J., Jr., Clayton, C. P., & Costa, S. T. (1998). Increasing academic internal medicine's investment in female faculty. *American Journal of Medicine*, 105, 459-463.**

The continued underrepresentation of female faculty in departments of internal medicine poses many challenges. Problems ranging from microinequities—a term that describes a continuum of discriminatory behaviors of increasing severity from unconscious slights to exploitation—to inappropriate distribution of resources can be addressed through careful evaluation, systematic planning, and effective program implementation. As with concerns about the future of clinician-scientists or teaching professionalism in medical education, departments of internal medicine should make addressing gender-based issues a high priority for their future success. With a knowledge of how to approach these issues, departments can foster the academic success of female faculty and the emergence of a strong and expanded cadre of female leaders in academic internal medicine. Provides recommendations at local and national levels.

**Chesler, N.C., & Chesler, M.A. (2002). Gender-Informed Mentoring Strategies for Women Engineering Scholars: On Establishing a Caring Community. *Journal of Engineering Education*, 91(9), 49-55.**

Improved mentoring of women graduate students and young faculty is one strategy for increasing the presence, retention and advancement of women scholars in engineering. We explore the sociological literature on interpersonally- and institutionally- generated gender roles and dynamics that make the construction and maintenance of mentoring relationships especially difficult for women in male-dominated fields. In addition, we review nontraditional strategies including peer-, multiple- and collective mentorships that are likely to be more successful for most women (and many men). Finally, organizational change strategies designed to provide a more egalitarian and cooperative atmosphere in engineering programs and departments are presented. These ideas represent a social contract for a caring community more supportive of all members' personal and professional growth and success.

**Cleveland, J.N., Stockdale, M., & Murphy, K.R. (Eds). (2000). *Women and Men in Organizations: Gender Issues at Work*. Mahwah, NJ: Lawrence Erlbaum Associates.**

For both men and women, mentoring is related to organizational advancement, career development, and career satisfaction. Mentoring programs help to break barriers to integrating a diverse workforce into the social networks of the organization. Mentoring can be beneficial at many career stages, although different kinds of mentoring may be needed at different stages. Finding and becoming a mentor can be difficult for women for several reasons. First, women tend to have fewer opportunities to establish contact with potential mentors because of a lack of access to informal information networks. Second, tokenism also influences women's ability to obtain mentors, particularly in workplaces with affirmative action policies that are misunderstood by their employees. Tokenism can cause people, including women themselves, to believe that women earn positions and promotions not because of their abilities and achievements but because of a quota system. Third, negative stereotypes and attitudes about women, particularly about women as managers and leaders, can influence how mentors view women as protégés. Fourth, peer perceptions about cross-gender mentor relationships and their potential to become sexual can discourage men from mentoring women and women

from seeking male mentors. Fifth, women are socialized to downplay their successes, which may discourage successful coworkers from taking them on as a protégé.

**Davidson, M. N. & Foster-Johnson, L. (2001). Mentoring in the preparation of graduate researchers of color. *Review of Educational Research*, 71, 549-574.**

Schools of graduate education in the United States continue to be challenged to attract and retain students of color. We argue that effective mentoring within a department can improve multicultural students' graduate school experience and better position them for success in their postdoctoral careers. To be an effective mentor, a faculty member must cultivate understanding of the experience of students from various cultural backgrounds. This task is especially challenging for White faculty members because of societal dynamics involving race and ethnicity. We propose actions to help faculty members enhance their multicultural competence in mentoring.

**Etzkowitz, H., Uzzi, B., & Kemelgor, C. *Athena Unbound: The Advancement of Women in Science and Technology*. (2000). Cambridge University Press.**

Based on extensive research, this book presents women's experiences at all key career stages – from childhood to retirement – and reveals the hidden barriers, subtle exclusions, and unwritten rules of the scientific workplace, and the effects, both professional and personal, that these have on female scientists. Related to mentoring, this study found that women were less likely to be in interdisciplinary networks and have mentors outside of their home departments, yet these types of social networks are critical for building reputations and gaining access to vital information.

**Gersick, C. J., Bartunek, J. M., & Dutton, J. E. (2000). Learning from academia: The importance of relationships in professional life. *Academy of Management Journal*, 43(6), 1026-1044.**

This qualitative study of 37 faculty members (10 senior women, 9 junior women) from six management schools on mentoring relationships found that 55 percent of the senior women and 70 percent of the junior women interviewees told at least one story of harm at some point during their overall interviews; only 33 percent of the junior men and 11 percent of the senior men told at least one such story. Most of the women's harm stories involved discrimination, denial of resources, rejection, and tokenization.

**Stonewater, B. B., Eveslage, S. A., Dingerson, M. R. (1990). Gender differences in career helping relationships. *Career Development Quarterly*, 39(1), 72-85.**

Explored differences regarding the way in which 27 male and 27 female faculty members described relationships with those whom they identified as career helpers. Data were obtained through interviews. Qualitative analysis of the interviews indicated gender differences on 2 themes: sense of professional self as related to career helpers and the nature of assistance received from them. The study found that the women faculty were more likely to feel unsure of their own goals until helped by a mentor, have a general sense of inadequacy about their careers and feel as if they have to prove themselves, and attribute their accomplishments to someone else. The men in the study tended to be more certain of themselves and their goals and, while they often acknowledged their mentors, they credited themselves for their achievements. This is in line with many studies which show that women are socialized to downplay their accomplishments and often, particularly within the sciences, feel as if they are impostors in the workplace, while men are socialized to claim full responsibility for their successes.



**Townsend, G.C. (2001). People who make a difference: mentors and role models. *ACM SIGCSE Bulletin*, 34(2), 57-61.**

Townsend offers a practical guide to recruiting and retaining women in computer science through the use of mentors and role models and explains that women often experience barriers to these critical resources.

**Trower, C. A. (2001). Women without Tenure. March 5 2007.**

[http://www.med.unc.edu/wrkunits/orgs/apwims/trower\\_xx\\_tenure\\_sci.pdf](http://www.med.unc.edu/wrkunits/orgs/apwims/trower_xx_tenure_sci.pdf)

In this four part series, based in a broad literature review, Cathy Trower explores academic science as a place for women to work. She explains that women scientists leave at higher rates than male scientists in part because of a lack of effective mentoring, role models, encouragement, and confidence.

**Ülkü-Steiner, B., Kurtz-Costes, B., Kinlaw, C. R. (2000). Doctoral student experiences in gender-balanced and male-dominated graduate programs. *Journal of Educational Psychology*, 92(2), 296-307.**

Similarities and differences were examined in graduate school experiences of male and female doctoral students in programs containing predominantly male or gender-balanced faculty. Participating students reported their perceptions of mentor support, partner support, peer support, academic self-concept, sensitivity to family issues, stress, and career commitment. In studies, women in male-dominated programs expressed lower academic self-concept, less sensitivity in their departments to family issues, and lower career commitment compared with all other students. Mentor support and academic self-concept predicted the career commitment of all students. Student reports were unrelated to the gender of their mentors. A subset of the students participated at both time points; these students showed significant drops in self-concept and career commitment across the 2 years.

**Valian, V. (1998). *Why so slow? The advancement of women*. Cambridge, MA: MIT Press, Chapter 14.**

Why do so few women occupy positions of power and prestige? Virginia Valian uses concepts and data from psychology, sociology, economics, and biology to explain the disparity in the professional advancement of men and women. According to Valian, men and women alike have implicit hypotheses about gender differences -- gender schemas - - that create small sex differences in characteristics, behaviors, perceptions, and evaluations of men and women. Those small imbalances accumulate to advantage men and disadvantage women. The most important consequence of gender schemas for professional life is that men tend to be overrated and women underrated. Valian's goal is to make the invisible factors that retard women's progress visible, so that fair treatment of men and women will be possible. The book makes its case with experimental and observational data from laboratory and field studies of children and adults, and with statistical documentation on men and women in the professions. This chapter summarizes data showing when erroneous judgments are most likely (little time, divided attention, low accountability), what types of reasoning errors are exacerbated when social groups are involved (failure to appreciate covariation, blocking, illusory correlation), how to improve reasoning about others, and how to use the authority of leaders to legitimate other leaders. Women, more often than men, lack information about what is required for career advancement, take on routine responsibilities which will not help their advancement, and get less mentoring from senior faculty.

## WILLINGNESS TO MENTOR

**Allen, T. D. (2003). Mentoring others: A dispositional and motivational approach. *Journal of Vocational Behavior*, 62, 134-154.**

Dispositional and motivational variables related to the propensity to mentor others and to the provision of career and psychosocial mentoring were examined. Results indicated that prosocial personality variables (other-oriented empathy, helpfulness) related to willingness to mentor others and also accounted for unique variance beyond variables associated with life and career stages. Other-oriented empathy related to actual experience as a mentor. Results also indicated that motives for mentoring others differentially related to psychosocial and career mentoring.

**Ragins, B. R. & Scandura, T. A. (1999). Burden or blessing? Expected costs and benefits of being a mentor. *Journal of Organizational Behavior*, 20, 493-509.**

We investigated the relationship between anticipated costs and benefits of being a mentor, mentoring experience, and intentions to mentor among a sample of 275 executives. Individuals lacking mentoring experience anticipated greater costs and fewer benefits than experienced individuals. Anticipated costs and benefits were related to intentions to mentor, and this relationship varied by mentoring experience. The results suggest that mentoring may be an intergenerational process.