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The Importance of Perceived Similarity Within Faculty-Faculty Mentoring Dyads

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THE IMPORTANCE OF PERCEIVED SIMILARITY WITHIN

FACULTY-FACULTY MENTORING DYADS

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science

By

EMILY NOEL POLANDER
B.A., Wright State University, 2008

2010
Wright State University
I HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER MY SUPERVISION BY Emily Noel Polander ENTITLED The Importance of Perceived Similarity Within Faculty-Faculty Mentoring Dyads BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF Master of Science

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ABSTRACT

Polander, Emily Noel. M.S., Department of Psychology, Wright State University, 2010. The Importance of Perceived Similarity Within Faculty-Faculty Mentoring Dyads.

This study investigated the effects of gender similarity, perceived similarity, and relationship type (formal vs. informal) within faculty-faculty mentoring dyads on various mentoring outcomes from the protégé’s perspective. Perceived similarity was expected to be a stronger predictor of relationship satisfaction, affective commitment, job satisfaction, and turnover intent than gender similarity. Perceived similarity was also examined as a potential mediator of relationship type and relationship satisfaction. Tenure-track faculty who reported having mentors (N = 45) answered questions regarding their primary career mentor and other workplace attitudes. Results indicated that perceived similarity had a positive, greater effect than gender similarity on relationship satisfaction, affective commitment, and job satisfaction. Perceived similarity did not mediate the relationship of informal mentoring and relationship satisfaction.
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I. INTRODUCTION

The notion of mentoring in the workplace has become an increasingly important topic ever since its early contributions to vocational literature approximately 30 years ago (Levinson, Darrow, Klein, Levinson, & McKee, 1978). Mentoring repeatedly has been shown to have positive outcomes for both the organization and employee (e.g., Chao, 1997; Ensher & Murphy, 1997; Kram, 1985a). For this reason, professional organizations have recently become more interested in implementing formal mentorship programs to facilitate workplace development (Strong, 2009). Formal mentorships, however, are not always successful as a third party is typically responsible for matching up two people who, many times, have not previously interacted with one another (Ragins & Cotton, 1999). Informal mentoring relationships (i.e., those relationships that spontaneously develop) are superior to formal mentoring relationships (e.g., Ensher, Grant-Vallone, & Marelich, 2002; Scandura & Williams, 2001). By uncovering the factors behind successful informal mentorships, organizations can improve the structure and function of formal programs.

The present study examines protégé perceived similarity with their mentor (e.g., regarding attitudes, work ethic, and career aspirations) and its importance over demographic similarity (e.g., gender) for the success of a mentoring dyad and protégé work outcomes. Administrators of formal mentoring programs tend to match protégés and mentors based on demographic similarity criteria for convenience (Ragins & Cotton, 1999), which does not always result in optimal mentor/protégé fit (e.g., Ensher & Murphy, 1997).
Research has evaluated the impact of protégé perceptions of the quality of the mentoring relationship on work outcomes, finding a positive relationship between perceived quality and protégé affective commitment, job satisfaction, and turnover intent (e.g., Koberg, Boss, Chappell, & Ringer, 1994; Payne & Huffman, 2005). However, research on protégé satisfaction with the mentoring relationship is lacking. Ensher and Murphy (1997) evaluated protégé satisfaction with their mentor and found strong correlations between protégé satisfaction and other important outcomes such as likelihood to continue the relationship and perceived amount of mentor support. The present study examines common protégé work outcomes (i.e., affective commitment, job satisfaction, and turnover intent) as functions of 1) protégé relationship satisfaction, taking into account the type of relationship initiation (i.e., informal or formal), 2) gender similarity within the protégé-mentor dyad, and 3) perceived similarity within the protégé-mentor dyad from the protégé’s perspective.

**Mentoring**

The term *mentor* has origins in Greek mythology where Mentor, trusted friend of Odysseus, served as both a counselor and tutor to Odysseus’s son, Telemachus, during the Trojan War (Strong, 2009). It was with the publication of the book "Les Aventures de Télémaque" by François Fénelon in 1699 that the term mentor became popularized to describe a senior person who offers friendship, guidance, and counseling to a more junior person, or *protégé*. (DeBolt, 1992). Portner (1998) described the role of a modern-day mentor as having four primary functions. He stated that a mentor 1) relates with their protégé by maintaining a relationship based on mutual trust and professionalism, 2)
assesses the protégé’s career progress, 3) coaches their protégé by serving as a role model, and 4) guides the protégé towards a state of independence.

**Mentoring Outcomes**

The positive outcomes associated with mentoring are well established (e.g., Ragins & Scandura, 1999; Turban & Dougherty, 1994). Effective mentoring relationships can lead to positive outcomes for the protégé, mentor, and organization. Organizations benefit from lowered turnover intentions (Fagenson, 1989; Payne & Huffman, 2005; Turban & Dougherty, 1994), greater organizational citizenship behavior (Donaldson, Ensher, & Grant-Vallone, 2000), and greater organizational socialization among employees (Chao, 1997). Although researchers tend to pay greater attention to the protégé than the mentor, there is a stream of research which has shown that mentors can benefit from these relationships as well. Apart from the recognition and satisfaction of helping a colleague, mentors may experience personal growth and increased learning (Allen, Poteet, & Burroughs, 1997) and increased job performance (Ragins & Scandura, 1999).

Mentored individuals report greater job satisfaction, more promotions, higher incomes (e.g., Dreher & Ash, 1990), greater career satisfaction (e.g., Fagenson, 1985), increased job involvement (Koberg, Boss, & Goodman, 1998) and increased affective commitment, which is defined as an individual’s emotional attachment to their organization (Aryee & Chay, 1994; Payne & Huffman, 2005). Job satisfaction, affective commitment, and turnover intent, which is defined as an individual’s intent to leave their organization, are of particular interest because their connections to mentoring can be explained by Sak and Ashforth’s (1997) organizational socialization process model. This
model states that socialization factors at the organizational level (e.g., formal mentoring programs) and the individual level (e.g., informal mentoring relationships) lead to information acquisition, which promotes learning different aspects of the job domain. Learning results in outcomes (e.g., skill acquisition) which can ultimately increase organizational commitment and job satisfaction.

Faculty Career Mentoring

Although most mentoring research has focused on business settings (e.g., Ensher & Murphy, 1997), some researchers have directed their attention to mentoring in the academic setting. Student-advisor dyads are most commonly studied (e.g., Turban, Dougherty, & Lee, 2002), however, the present research will focus on faculty-faculty dyads. There is little research on faculty-faculty mentoring relationships. This may be explained in part by a paucity of faculty career mentoring in universities (Sands, Parson, & Duane, 1991).

Most faculty career mentoring research that does exist has been conducted on formal mentoring programs among faculty in K-12 schools (e.g., Strong, 2009). The general conclusion from a review of this research was that formal mentoring programs are positively correlated with retention (Strong, 2009). Given the recent trend of formal mentoring programs for new faculty (Strong, 2009), the success and improvement of these programs, and their pay offs, are important.

Academic faculty, like any employee working for an organization in a business setting, can benefit from this kind of social support because the environment in which they are working (e.g., universities) can be regarded as a system with its own norms, rules, and standards. According to ecological theory, individuals adapt to these systems
over time with the guidance and support of others in the system, thus contributing to an individual’s growth and learning as they progress through the system (Germain & Gitterman, 1987).

**Mentor-Protégé Dyadic Fit**

One of the keys to a successful mentoring relationship is an appropriate dyadic fit between the mentor and protégé (e.g., Eby & Allen, 2002). Poor dyadic fit is one of the leading reasons for negative mentoring experiences (Eby & Allen, 2002). The potential for mismatch is explained in a number of ways, ranging from demographic mismatch (e.g., gender, race, age) to low perceived similarity (e.g., attitudes, opinions, personality) (e.g., Ensher & Murphy, 1997; Scandura & Williams, 2001).

**Demographic Similarity**

One of the most researched variables in the mentor-protégé pairing literature has been demographic similarity, particularly gender. Research has reported mixed results in regards to gender composition in mentoring relationships (Sosik & Godshalk, 2000). Some research has found that same-gender relationships have positive effects for psychosocial support (e.g., Koberg et al., 1998) and role modeling (e.g., Allen, Day, & Lentz, 2005) whereas other researchers have found that gender composition is irrelevant for mentoring outcomes (e.g., Ensher et al., 2002; Turban et al., 2002) and employee-supervisor exchanges (Liden, Wayne, & Stilwell, 1993). Still others have shown that mixed-gender dyads yield more positive effects for protégé work outcomes than same-gender dyads (Burke & McKeen, 1997; Noe, 1988). One reason that research on gender composition is fraught with inconsistency is that both mixed-gender and same-gender relationships are prone to different types of problems. For example, mixed-gender
relationships may be more prone to involving sexual advances, interpersonal discomfort, and lower likelihood of role modeling than same-gender relationships (Kram, 1985a, pp. 105-119). Research offers no specific issues for same-gender relationships, although one could speculate that jealousy or competition may arise.

Same-gender mentoring advocates have argued that because gender is salient, individuals will naturally be attracted to those similar in gender because of interpersonal comfort and sex stereotypes (e.g., Ragins, 1997). As Turban et al. (2002) found, although these reasons may explain why same-gender dyads are more common, they often do not result in more effective mentoring than mixed-gender dyads. The variable in this study that did significantly predict all four functions of mentoring effectiveness (i.e., Psychosocial mentoring, Exposure/Visibility and sponsorship, Challenging assignments, and Protection and assistance), however, was perceived similarity.

**Perceived Similarity**

Byrne’s (1971) attraction-similarity paradigm asserts that individuals tend to be more attracted to and show greater liking for those whom they perceive to be most similar to themselves, particularly in regards to attitudes. Research has proposed that liking is an important component in successful relationship development and maintenance (Altman & Taylor, 1973). Aside from liking, perceived similarity can also play a role in the amount of help and assistance that individuals are willing to give to one another. Schroeder, Penner, Dovidio, and Piliavin (1995) stated that individuals are more inclined to help those whom they perceive as being similar to themselves, particularly in terms of personality and attitudes, simply because “being with others who share our values, interests, and beliefs is much more pleasant than being with those who do not” (p.
As well, there is a sense of threat that may come along with helping dissimilar others, which can be explained by the cost-reward perspective (Dovidio, Piliavin, Gaertner, Schroeder, & Clark, 1991). Taking these theories into consideration, one would expect that those mentors who perceive themselves to be more similar to their protégés would provide greater help and guidance, thus contributing to increased protégé satisfaction with the mentoring relationship.

Researchers have examined perceived similarity within mentoring dyads most often using constructs such as attitudes, values, work styles, and personality (e.g., Armstrong, Allinson, & Hayes, 2002; Ensher et al., 2002; Turban et al., 2002). Armstrong et al. (2002) defined perceived similarity in terms of personality, work approaches, social attributes, and communication skills and found that overall perceived similarity had a significant effect on how much the protégé liked their mentor and perceived the mentorship to be effective. In particular, perceived similarity in regards to personality and work approaches had the strongest effects on perceptions of mentoring effectiveness. Wanberg, Kammeyer-Mueller, and Marchese (2006) conceptualized perceived similarity using more general terms (e.g., “My mentor and I see things in much the same way” and “My mentor was similar in terms of our outlook, perspective, and values”) and found that overall perceived similarity had a significant effect on perceptions of mentoring effectiveness and satisfaction with the mentor. From a slightly different perspective, Eby and Allen (2002) looked at the dark side of mentoring and attempted to uncover the causes behind negative mentoring experiences. Among the most significant findings were that mismatch of values within the mentoring dyad was positively correlated with protégé turnover intentions, and mismatch of personalities was
correlated with all three protégé outcomes: lower job satisfaction, higher turnover intent, and higher levels of stress.

Although perceived similarity does not appear in the literature nearly as often as demographic similarity, studies that compared the two found perceived similarity to be a stronger predictor of mentoring outcomes (Ensher & Murphy, 1997; Ensher et al., 2002; Turban et al., 2002). Ensher and Murphy (1997) looked at racial similarity and perceived similarity and found that perceived similarity uniquely predicted protégé relationship satisfaction and likelihood of continuing the relationship while racial similarity did not. As mentioned earlier, Turban et al. (2002) found significant effects on all four functions of mentoring effectiveness for perceived similarity, whereas gender and racial similarity did not yield any significant effects. Similarly, Ensher et al. (2002) found strong effects on all four outcomes of mentoring effectiveness used in their study (i.e., vocational support, psychosocial support, role-modeling support, satisfaction with mentor) for perceived similarity whereas gender and racial similarity, once again, did not result in any significant effects for any of the four outcomes.

**Measurements of Relationship Effectiveness**

The majority of mentoring research has used Kram’s (1985a) pair of mentoring functions, career and psychosocial, as a gauge for mentoring effectiveness. Kram described career functions, also known as instrumental or vocational support, as those aspects of the mentoring relationship that promote career enhancement. Instrumental support includes the provision of coaching, exposure, sponsorship, and challenging assignments. Psychosocial functions, on the other hand, can be thought of as the provision of counseling, role modeling, friendship, and mutual trust (p. 22). Several
studies treat “role modeling” as a separate function (e.g., Allen et al., 2005; Scandura & Williams, 2001).

Other studies have included additional measures such as mentor liking (Armstrong et al., 2002) and protégé relationship satisfaction (Ensher et al., 2002; Ensher & Murphy, 1997; Ragins, Cotton, & Miller, 2000; Wanberg et al., 2006). All three studies that examined relationship satisfaction and perceived similarity found the two to be strongly correlated (Ensher et al., 2002; Ensher & Murphy, 1997; Wanberg et al., 2006). Ragins et al. (2000) conducted a large study that surveyed 1,258 professional workers and found that protégé relationship satisfaction was strongly correlated with protégé job satisfaction and affective commitment.

**Turnover Intent**

Job satisfaction and affective commitment among employees may be especially crucial to the success of an organization, considering that they are both indirect antecedents of turnover (Dougherty, Bluedorn, & Keon, 1985). Research has established that employee turnover costs organizations significant amounts of time and money. Not only do the costs to replace an employee include advertising, recruitment, selection, hiring, and signing bonuses, but there are other setbacks as well. These include temporary loss of production, vacancy costs, and a potential decrease in employee morale (Abbasi & Hollman, 2000). The magnitude of this issue has long been recognized as employee turnover has been studied since nearly a century ago (Fish, 1917). Turnover intent, on the other hand, is a comparatively newer construct. Although turnover intent might not always result in leaving the organization, several researchers have pointed to this construct as perhaps the most significant precursor to actual turnover (e.g., Bluedorn,
Research has linked several different individual and organizational predictors to turnover intent. Among two of the most researched predictors are job satisfaction and affective commitment (Dougherty, Bluedorn, & Keon, 1985). To date, no studies have examined perceived similarity, demographic similarity, protégé relationship satisfaction, and protégé work outcomes.

We will test the following hypotheses:

*Hypothesis 1A:* The positive relationship between perceived similarity and protégé relationship satisfaction will be stronger than the relationship between gender similarity and protégé relationship satisfaction.

*Hypothesis 1B:* The positive relationship between perceived similarity and affective commitment will be stronger than the relationship between gender similarity and affective commitment.

*Hypothesis 1C:* The positive relationship between perceived similarity and job satisfaction will be stronger than the relationship between gender similarity and job satisfaction.

*Hypothesis 1D:* The negative relationship between perceived similarity and turnover intent will be stronger than the relationship between gender similarity and turnover intent.

We also predict the following mediational relationships:

*Hypothesis 2A:* Protégé relationship satisfaction will mediate the relationship between perceived similarity and protégé affective commitment.

*Hypothesis 2B:* Protégé relationship satisfaction will mediate the relationship between perceived similarity and protégé job satisfaction.
Hypothesis 2C: Protégé relationship satisfaction will mediate the relationship between perceived similarity and turnover intent.

Informal Versus Formal Mentoring

Formal mentoring programs have become a popular way of implementing the basic ideas from informal mentoring relationships into the structure of an organization (Douglas & McCauley, 1999). Although researchers have found formal mentoring to have greater benefits than no mentoring, a majority of the research points to the superiority of informal mentoring over formal mentoring (e.g., Chao, Walz, & Gardner, 1992; Raabe & Beehr, 2003; Underhill, 2006). The differences between the two types of mentoring are vast. Informal mentoring is typically initiated by the mentor or protégé based on mutual attraction and liking. These naturally developing relationships tend to yield such positive results because they are most often characterized by closeness, mutual trust, and internal motivation to assist the other party (Kram, 1985a, pp. 51-55). Formal mentoring, on the other hand, is an organization’s attempt to match a mentor with a protégé, most often by a third party who only takes into account certain demographic information or job characteristics (e.g., department or rank) during the matching process (Ragins & Cotton, 1999). Along with differences in initiation, the structure of the relationship differs between informal and formal relationships. Formal relationships are typically contracted agreements and only tend to last from 6 months to 1 year (Zey, 1985) whereas an informal relationship lasts for 5 years on average because of the friendship component (Kram, 1985a, p. 51). Formal mentorships also tend to be quite structured as the protégé and mentor must reach certain checkpoints throughout the relationship.
Informal relationships, on the other hand, are free to progress as a natural relationship would.

Researchers have cited several reasons as explanation for the advantages of informal mentoring over formal mentoring (Kram, 1985b; Murray, 1991; Ragins & Cotton, 1991). First, mismatched values, personalities, or work approaches may lead to a weak connection where the mentor is not internally motivated to help their protégé. Mentors in formal relationships may be volunteering for the position simply to help out the organization and obtain recognition, which could possibly hurt the relationship in the long run if the mentor is not comfortable with and is not motivated to assist their protégé (Ragins & Cotton, 1991). Second, a protégé may not be satisfied with the communication skills of the chosen mentor in a formal relationship. Communication is a key component of the relationship, and a mismatch in communication skills could be detrimental (Kram, 1985b). Lastly, some programs tend to match protégés with mentors from different departments which can often hinder interpersonal contact and vital mentoring functions (Murray, 1991). In an attempt to remedy these problems, several researchers have examined these formal program characteristics and suggested that a more extensive matching process, particularly where the parties involved are able to give their input upon meeting all potential protégés/mentors, may resolve some of these issues (Forret, Turban, & Dougherty, 1996; Ragins & Cotton, 1999; Singh, Bains, & Vinnicombe, 2002). Allen, Eby, and Lentz (2006) recently addressed the call to examine participant input into the matching process and found that participant input was significantly and positively correlated with relationship quality, career mentoring functions, and psychosocial mentoring functions.
What Allen et al. (2006) failed to examine was perceived similarity. Because informal relationships are formed based on mutual attraction and liking, Byrne’s (1971) attraction-similarity paradigm has important implications in the formation of informal mentoring relationships. It is for this reason we suggest this particular causal link that may serve to explain in greater detail just what makes informal programs more successful than formal programs:

*Hypothesis 3*: Protégé perceived similarity will mediate the relationship between relationship type (i.e., informal and formal) and protégé relationship satisfaction.

II. METHOD

Participants

Participants for the entire climate survey were 252 male and female STEM (Science, Technology, Engineering, and Mathematics) and Social Sciences tenure-track faculty from four mid-western institutes of higher education: a public university, a private university, a military technical institute, and a historically Black university. Out of the total sample, 45 participants indicated that they had a career mentor at the time. Thus, only these individuals were included in our final analyses. Out of this sub-sample, 26 respondents were men (57.8%), 17 were women (37.8%), and 2 respondents did not indicate gender (4.4%). The sample was evenly distributed across rank: 16 were assistant level (35.6%), 14 were associate level (31.1%), 13 were full (28.9%), and 2 did not indicate rank (4.4%). The majority of respondents were White (80.0%). Faculty were asked to participate in an NSF-funded study in exchange for the chance to win a $100 gift card. For this study, the portion of the climate survey concerning mentoring relationships and other organizational outcome variables was examined.
Measures

**Presence of a Mentor.** To assess whether faculty have a mentor we asked, “Do you have a career-related mentor?” If a participant answered “yes,” they were directed to the remaining mentoring questions. Conversely, if a participant answered “no,” the survey software skipped the succeeding mentoring questions and routed participants to the next section of the climate survey. Those who answered “no” were not included in analyses for this study.

**Perceived Similarity.** To assess perceived protégé-mentor similarity participants were asked to answer all mentoring items with their primary mentor in mind (the one with whom they have the most regular contact). The following items were taken from Turban et al. (2002): “My mentor and I see things in much the same way,” “My mentor and I are alike in a number of areas,” “My mentor and I have similar working styles,” “My mentor and I have similar career aspirations,” and “My mentor and I have similar values and attitudes.” The original scale alpha was .87. Participants rated each item on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Scores for the five items were averaged to obtain an overall perceived similarity score. Higher scores indicated greater perceived protégé-mentor similarity (alpha = .86).

**Gender Similarity.** To assess protégé-mentor gender similarity, one item asked the protégé to report whether his or her mentor was “same gender as you” or “different gender than you.” Several other mentoring studies have used gender similarity as a way of operationalizing demographic similarity (e.g., Ensher et al., 2002; Turban et al., 2002). Out of the 45 participants, 28 reported being in same-gender dyads (62%), while 16 were in mixed-gender dyads (36%).
**Initiation of the Mentoring Relationship.** To assess the means by which the protégé’s mentoring relationship was initiated, we asked participants to choose “formal” (assignment made by someone else in the organization) or “informal” (mutual attraction/spontaneously developed) (Allen & Eby, 2003). Out of the 45 participants, 15 reported being in formal relationships (33%), while 30 were in informal relationships (67%).

**Satisfaction With the Mentoring Relationship.** To assess protégé satisfaction with the mentoring relationship, the following items were taken from Ragins and Cotton (1999): “My mentor is someone I am satisfied with,” “My mentor disappoints me” (reverse-scored), “My mentor has been effective in his/her role,” and “My mentor fails to meet my needs” (reverse-scored). The original scale alpha was .83. Participants rated each item on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Scores for the four items were averaged to obtain an overall relationship satisfaction score. Higher scores indicated greater protégé relationship satisfaction (alpha = .89).

**Affective Commitment.** Three items were used to assess the level of affective commitment that protégés have toward their institution. The following three items — those with the highest factor loadings onto the complete affective commitment scale (.81, .79, .82, respectively) — were taken from Allen and Meyer (1990): “I do not feel attached to this organization” (reverse-scored), “This organization has a great deal of personal meaning for me,” “I do not feel a strong sense of belonging to my organization” (reverse-scored). The items were modified, replacing the original word “organization,” with “institution” or “university.” The original full-scale alpha was .87. Participants rated
each item on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Scores for the three items were averaged to obtain an overall affective commitment score. Higher scores indicated greater affective commitment (alpha = .86).

**Job Satisfaction.** Job satisfaction was assessed using a one-item measure from the University of Michigan’s (2002) climate survey: “All things considered, I am satisfied with my current position.” Participants rated this item on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores indicated greater job satisfaction. Past research has suggested a one-item measure of job satisfaction is valid (e.g., Dolbier, Webster, McCalister, Mallon, & Steinhardt, 2005).

**Turnover Intent.** Turnover intent was assessed using a one-item measure from the University of Michigan’s (2002) climate survey: “I have seriously considered leaving this institution.” Participants rated this item on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). This item was reverse-scored so that higher scores indicated lower turnover intent. Past research has suggested a one-item measure of turnover intent is valid (e.g., Beehr & Gupta, 1978).

**Procedure**

The research piece of the NSF grant involved an extensive survey which assessed the work climate for faculty in their respective institutions. The survey providing data for the present study marks the beginning of the five-year period of the grant.

Faculty contact information for every tenure-track faculty member in STEM departments and selected Social Science departments at the participating institutions was obtained from their respective Human Resources Departments. The deans from each participating institution encouraged, via email, all of their tenure-track faculty to
participate. The deans were sent the email list of tenure-track STEM and Social Sciences faculty in their college as well as a pre-written sample email invitation that they were able to use or modify (see Appendix). All respondents were assured confidentiality and anonymity.

The climate survey was administered through the online survey host, SNAP software. Two weeks after the initial invitation, both email and regular U.S. postal mail follow-ups were sent to all participants. Email follow-ups continued to be sent every two weeks thereafter, modeled after University of Michigan’s (2002) study design. If they had not already responded to a previous reminder, faculty were asked to indicate whether they had 1) already participated in the survey, 2) not yet participated but planned to, or 3) did not wish to participate. Excluding those from the military technical institute, who were ineligible due to restrictions against incentive-driven research, participants’ responses to one of these reminders also served as their entry for the raffle. A total of six follow-ups were sent out. The last follow-up was sent out February 6, 2010.

III. RESULTS

The descriptive statistics and correlations for all of the study variables are reported in Table 1. Frequencies and percentages of respondents by college, relationship type, and gender similarity are reported in Table 2. Frequencies by relationship type of responses for perceived similarity, relationship satisfaction, and gender similarity are reported in Table 3.

Perceived Similarity, Gender Similarity, and the Workplace

Hypothesis 1A stated that perceived similarity would be more strongly related to protégé relationship satisfaction than would gender similarity. Correlations are presented
in Table 1. Analyses were conducted using Steiger’s (1980) $z$-test of differences in dependent correlations. There was a significantly stronger relationship of perceived similarity and protégé relationship satisfaction ($r = .61$) than of gender similarity and protégé relationship satisfaction ($r = .12; z = 2.73, p < .01$). Hypothesis 1A was supported.

Hypothesis 1B stated that perceived similarity would be more strongly related to affective commitment than would gender similarity. Correlations are presented in Table 1. Analyses were conducted using Steiger’s (1980) $z$-test of differences in dependent correlations. There was a significantly stronger relationship of perceived similarity and affective commitment ($r = .56$) than of gender similarity and affective commitment ($r = -.03; z = 2.97, p < .01$). Hypothesis 1B was supported.

Hypothesis 1C stated that perceived similarity would be more strongly related to job satisfaction than would gender similarity. Correlations are presented in Table 1. Analyses were conducted using Steiger’s (1980) $z$-test of differences in dependent correlations. There was a significantly stronger relationship of perceived similarity and job satisfaction ($r = .54$) than of gender similarity and job satisfaction ($r = .09; z = 2.34, p < .01$). Hypothesis 1C was supported.

Hypothesis 1D stated that perceived similarity would be more strongly related to turnover intent than would gender similarity. Correlations are presented in Table 1. Analyses were conducted using Steiger’s (1980) $z$-test of differences in dependent correlations. Although the relationship of perceived similarity and turnover intent was significant and in the expected direction ($r = .32$) while the relationship of gender similarity and turnover intent was not significant, ($r = .03$) the difference between these
two correlations was not significant \( (z = 1.37, ns) \). Hypothesis 1D was partially supported.

**Protégé Relationship Satisfaction as a Mediator of Perceived Similarity and Affective Commitment**

Hypothesis 2A stated that protégé relationship satisfaction would mediate the relationship between perceived similarity and affective commitment. Baron and Kenny’s (1986) mediation analysis steps were used to conduct this analysis. Betas are presented in Figure 1. First, protégé relationship satisfaction (mediator) was regressed on perceived similarity (the independent variable, IV). Second, affective commitment (the dependent variable, DV) was regressed onto perceived similarity (the IV). Finally, affective commitment was regressed on perceived similarity and protégé relationship satisfaction simultaneously. The first two regressions showed that perceived similarity predicted greater protégé relationship satisfaction and affective commitment. The third regression illustrates that there is no mediational effect. Relationship satisfaction no longer predicted affective commitment when including relationship satisfaction in the model (see Figure 1). Hypothesis 2A was not supported.

**Protégé Relationship Satisfaction as a Mediator of Perceived Similarity and Job Satisfaction**

Hypothesis 2B stated that protégé relationship satisfaction would mediate the relationship between perceived similarity and job satisfaction. Baron and Kenny’s (1986) mediation analysis steps were used to conduct this analysis. Betas are presented in Figure 2. First, protégé relationship satisfaction (mediator) was regressed on perceived similarity (the IV). Second, job satisfaction (the DV) was regressed onto perceived similarity (the
Finally, job satisfaction was regressed on perceived similarity and protégé relationship satisfaction simultaneously. The first two regressions showed that perceived similarity predicted greater protégé relationship satisfaction and job satisfaction. Perceived similarity no longer predicted job satisfaction when including protégé relationship satisfaction in the model, but protégé relationship satisfaction continued to predict job satisfaction (see Figure 2). A Sobel test ($z = 2.35, p < .01$) confirmed that protégé relationship satisfaction mediated the effect of perceived similarity on job satisfaction (Preacher & Leonardelli, 2001). Hypothesis 2B was supported.

**Perceived Similarity as a Mediator of Relationship Type and Protégé Relationship Satisfaction**

Hypothesis 3 stated that perceived similarity would mediate the relationship between relationship type (i.e., informal or formal) and protégé relationship satisfaction. Betas are presented in Figure 3. First, perceived similarity (mediator) was regressed on relationship type (the IV). Second, protégé relationship satisfaction (the DV) was regressed onto relationship type (the IV). The first two regressions showed that relationship type did not predict greater perceived similarity, but did predict protégé relationship satisfaction (see Figure 3). Because relationship type did not predict perceived similarity, the third regression step was not conducted. Hypothesis 4 was not supported.

**IV. DISCUSSION**

As expected, the relationship between perceived similarity and protégé relationship satisfaction was stronger than that of gender similarity and protégé relationship satisfaction. Those protégés who indicated greater perceptions of perceived
similarity between themselves and their mentors also reported greater satisfaction with that mentoring relationship. This may be in part explained by Byrne’s (1971) attraction-similarity paradigm, which proposes that the amount of liking one has for someone is positively related to his or her perceptions of similarity (e.g., attitudes, personality) with the other person. This liking fosters interpersonal comfort and the development of quality relationships (Altman & Taylor, 1973). Additionally, mentors may be more inclined to spend time with, interact with, and help protégés whom they perceive to be more similar to themselves (Schroeder et al., 1995), which should ultimately lead to a more satisfying mentoring experience for both parties (Ensher & Murphy, 1997). Also as expected, not only was protégé relationship satisfaction positively correlated with perceived similarity, but it was not significantly related to gender similarity. This may be due to the fact that just because a protégé and mentor are demographically similar (e.g., gender, race), this does not necessarily mean that they will perceive themselves as similar in aspects (e.g., attitudes, personality) that may play a bigger role in the success of interpersonal relationships. These findings support previous research that found perceived similarity to be a stronger predictor than gender similarity of mentoring outcomes (Ensher et al., 2002; Turban et al., 2002).

Perceived similarity was also positively correlated with affective commitment and job satisfaction, while gender similarity was not. Those protégés who indicated greater perceptions of perceived similarity between themselves and their mentor also reported greater affective commitment and job satisfaction. Although perceived similarity was not a significantly stronger predictor of turnover intent than was gender similarity, it is still
important to note that those who indicated greater perceptions of similarity with their mentor also reported less intent to turnover.

The next hypothesis stated that the relationship of perceived similarity and the aforementioned work outcomes (i.e., affective commitment and job satisfaction) would be at least in part explained by protégé relationship satisfaction. The results did not yield support for relationship satisfaction as a mediator of perceived similarity and affective commitment. It did, however, fully mediate the relationship of perceived similarity and job satisfaction. Specifically, those protégés who reported greater perceived similarity with their mentor also reported greater satisfaction with that mentoring relationship, which in turn led to higher job satisfaction. This finding is in accordance with past studies and the organizational socialization process model, which asserted that successful mentoring could lead to positive work outcomes, such as job satisfaction (Sak & Ashforth, 1997; Ragins & Scandura, 1999). Typically, affective commitment and job satisfaction are highly correlated and are thought to be separate but highly related constructs (Harrison, Newman, & Roth, 2006). The explanation for why job satisfaction fit in this model while affective commitment did not is perhaps due to the fact that job satisfaction tends to be more affected by one’s work role or position, while affective commitment is generally more affected by one’s entire organization (Hulin, 1991). Because mentoring tends to address lower level, work-related issues (e.g., informing about department policies, advice about publication and grant writing), mentoring outcomes may be more relevant to work-related attitudes, such as job satisfaction, as opposed to organization-related attitudes, such as affective commitment.
Although this study found no differences in perceived similarity between formal and informal mentoring relationships, as past research has suggested there should be (Ragins & Cotton, 1991), there is reason to believe that with more power, a significant relationship may have been uncovered. There was, however, a significant relationship between relationship type and protégé relationship satisfaction. Specifically, those protégés in informal relationships reported greater satisfaction with their mentoring relationship. Perhaps there is some other characteristic of the relationship dynamic or the structure of informal mentoring that leads protégés to be more satisfied in these relationships.

In summary, the results of this study do not provide strong support for the claim that perceived similarity is the reason behind satisfaction with informal mentoring relationships. It did suggest, however, that gender similarity is not a predictor of mentoring outcomes (i.e., relationship satisfaction, affective commitment, job satisfaction, and turnover intent), which is congruent with past research (Ensher et al., 2002; Turban et al., 2002). The findings suggest that although perceived similarity may not be the factor that causes informal mentoring to yield greater satisfaction, it may still play a positive role in any type of mentoring relationship. Specifically, perceived similarity seems to contribute to greater overall job satisfaction through its effect on relationship satisfaction. Unfortunately, the results from this study were not conclusive enough to uncover the primary reasons for greater satisfaction with informal relationships.

Limitations
Low power was the greatest limitation of this study. The subject pool was restricted to tenure-track STEM and Social Sciences faculty at four institutions because of constraints imposed by the research grant. While there were 252 participants for the overall climate survey, only 18% of them reported having a career-related mentor. Efforts were made to increase the overall response rate by sending out multiple reminders to all potential participants. Although the sample size for this particular study was small, it is important to note that our scales were reliable and we were still able to yield the expected significant relationships among several of our measures. However, low power may have hindered our ability to yield results in which the relationships were marginally significant (e.g., relationship type and perceived similarity).

Due to the fact that this is a cross-sectional study, it may not be prudent to assert cause-and-effect relationships between variables. That is, we cannot assume that X causes Y through M because of a lack of causation over time; rather, we can only speak of these directional relationships as logical speculations. This is because, although we can show our three variables are significantly correlated, these correlations may fit in one of several combinations of causal models (McDonald, 1999). In order to truly test for mediation, we would need to obtain longitudinal data and/or use randomized experimental design (Stone-Romero & Rosopa, 2008). Unfortunately, neither of these alternatives were feasible options for this study under the stipulations of this grant. In the future, a true experiment in which the criteria used to match protégé-mentor dyads are manipulated should be conducted so that longitudinal data on various individual and organizational outcomes can be gathered. In this way, actual cause-and-effect relationships could be more accurately inferred. Informal relationship characteristics and
outcomes could also be compared to those of formal mentoring relationships. It may be that some other characteristic of informal relationships (e.g., amount of contact, duration, or progression of the relationship) is causing those in informal relationships to be more satisfied than those in formal relationships.

Common method variance might be an issue because participants were asked to fill out a lengthy, computer-based survey. We addressed this issue by testing for discriminant validity among unrelated measures throughout the survey. Measures that were expected to be unrelated (e.g., vendor support and perceived similarity, value by students and protégé relationship satisfaction) did not exceed correlations of .70, which suggests that although some unrelated measures may covary, they still have discriminant validity (Bommer, Johnson, Rich, Podsakoff, & Mackenzie, 1995).

**Implications and Future Research**

There are both theoretical and practical implications of this research. Theoretically, this study has both supported and added to past research by demonstrating the importance of perceptions of similarity in faculty-faculty mentoring dyads. Those protégés who perceived their mentors to be more similar to themselves also reported greater satisfaction with the mentoring relationship. Whether this is due to the fact that amount of help and/or interpersonal contact was increased because of attraction and liking, the results indicated that this greater satisfaction contributed to greater overall job satisfaction. While job satisfaction reliably predicted turnover intent, this finding may be key in discriminating those mentoring characteristics that are most relevant in leading to positive organizational and work outcomes (i.e., perceived similarity and relationship satisfaction) from those that are less relevant (i.e., gender similarity). Because perceived
similarity was a stronger predictor of both mentoring outcomes and work outcomes, it may be more important for protégés to perceive themselves as being attitudinally similar to their mentor than for them to be similar in gender. Although protégés in informal relationships did not report significantly greater perceived similarity with their mentors than those in formal relationships, they did report greater relationship satisfaction. Because it is unclear whether this is due to characteristics of the persons involved or due to characteristics of the structure of informal mentoring, further research should be conducted to uncover what it is about informal relationships that could be implemented to improve satisfaction with formal mentoring programs.

This research has important implications for the development of workplace mentoring programs. Although the role of perceived similarity in informal versus formal relationships was inconclusive, the evidence strongly suggests that perceived similarity, in any mentoring relationship, is important. Allowing potential protégés to have more of an input in the initial matching process instead of allowing a third-party to use demographic criteria to match may foster an increase in perceived similarity within mentoring dyads. As mentioned above, there may also be other characteristics of informal relationships to take into consideration in order to improve the structure of formal programs. Assimilating those crucial characteristics from informal relationships into formal programs would then perhaps lead to more successful mentoring relationships and positive outcomes for both the protégé and the organization.

V. CONCLUSION

This study provides empirical support to the idea that perceived similarity, more so than gender similarity, is an important characteristic of mentoring dyads in terms of
protégé relationship satisfaction and overall job satisfaction. As organizations constantly strive to decrease employee turnover, it is imperative that job attitudes such as job satisfaction are fostered. One predictor, as this study found, of increased job satisfaction is satisfying mentoring relationships. Relationship satisfaction may be in part due to the quality of interpersonal relations within the dyad, which can be enhanced by perceptions of similarity. The findings of this study suggest that mentoring programs in organizations can be improved by allowing greater protégé and mentor input into the matching process, so that perceived similarity within dyads is facilitated.
REFERENCES


Table 1

Correlation Matrix and Scale Alphas

<table>
<thead>
<tr>
<th></th>
<th>Mean (SD)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Perceived similarity</td>
<td>3.80 (.85)</td>
<td>(.86)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Protégé relationship satisfaction</td>
<td>4.48 (.74)</td>
<td>.61**</td>
<td>(   )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Gender similarity</td>
<td>1.36 (.49)</td>
<td>.05</td>
<td>.12</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Affective commitment</td>
<td>3.64 (1.35)</td>
<td>.56**</td>
<td>.51**</td>
<td>.03</td>
<td>(.86)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Job satisfaction</td>
<td>4.00 (1.20)</td>
<td>.54**</td>
<td>.54**</td>
<td>.09</td>
<td>.58**</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Turnover intent</td>
<td>3.21 (1.57)</td>
<td>.32*</td>
<td>.44**</td>
<td>.03</td>
<td>.51**</td>
<td>.50**</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>7. Relationship type</td>
<td>1.67 (.48)</td>
<td>.27</td>
<td>.35*</td>
<td>.21</td>
<td>.12</td>
<td>.24</td>
<td>.10</td>
<td>--</td>
</tr>
</tbody>
</table>

Note. N = 45, *p < .05, **p < .01. Alphas of scales are on the diagonal. Gender similarity coded as 1=same gender, 2=opposite gender. Turnover intent is reverse-scored. Relationship type coded as 1=formal, 2=informal.
Table 2

Number (%) of Tenure-track Faculty Respondents by College, Relationship Type, and Gender Composition

<table>
<thead>
<tr>
<th></th>
<th>Informal</th>
<th>Formal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STEM Total</strong></td>
<td>19 (57.6)</td>
<td>14 (42.4)</td>
<td>33 (73.3)</td>
</tr>
<tr>
<td>Same-gender</td>
<td>14 (73.7)</td>
<td>11 (78.6)</td>
<td>25 (75.8)</td>
</tr>
<tr>
<td>Mixed-gender</td>
<td>5 (26.3)</td>
<td>2 (14.3)</td>
<td>7 (21.2)</td>
</tr>
<tr>
<td><strong>SBS Total</strong></td>
<td>6 (85.7)</td>
<td>1 (14.3)</td>
<td>7 (15.6)</td>
</tr>
<tr>
<td>Same-gender</td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Mixed-gender</td>
<td>6 (100.0)</td>
<td>1 (100.0)</td>
<td>7 (100.0)</td>
</tr>
<tr>
<td><strong>Other Total</strong></td>
<td>4 (100.0)</td>
<td>0 (0.0)</td>
<td>4 (8.9)</td>
</tr>
<tr>
<td>Same-gender</td>
<td>3 (75.0)</td>
<td>0 (0.0)</td>
<td>3 (75.0)</td>
</tr>
<tr>
<td>Mixed-gender</td>
<td>1 (25.0)</td>
<td>0 (0.0)</td>
<td>1 (25.0)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>30 (66.7)</td>
<td>15 (33.3)</td>
<td>45 (100.0)</td>
</tr>
</tbody>
</table>

*Note. STEM = Science, Technology, Engineering, and Mathematics, SBS = Social and Behavioral Sciences. Other = Health and Medical Sciences, Humanities, Education, and other professional fields.*
### Table 3

**Frequencies of Item Responses by Relationship Type**

<table>
<thead>
<tr>
<th></th>
<th>Informal</th>
<th>Formal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perceived Similarity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Somewhat disagree</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Neutral</td>
<td>8</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Somewhat agree</td>
<td>14</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>8</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td><strong>Relationship Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Somewhat disagree</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Neutral</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Somewhat agree</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>22</td>
<td>8</td>
<td>30</td>
</tr>
<tr>
<td><strong>Gender Similarity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Same-gender</td>
<td>17</td>
<td>11</td>
<td>28</td>
</tr>
<tr>
<td>Mixed-gender</td>
<td>13</td>
<td>3</td>
<td>16</td>
</tr>
</tbody>
</table>
Figure 1

*Protégé Relationship Satisfaction as a Mediator of Perceived Similarity and Affective Commitment*

Note: † \( p < .10 \). * \( p < .05 \). ** \( p < .01 \). Betas derived from mediation regressions are not in parentheses.
Figure 2

*Protégé Relationship Satisfaction as a Mediator of Perceived Similarity and Job Satisfaction*

Note: † $p < .10$. * $p < .05$. ** $p < .01$. Betas derived from mediation regressions are not in parentheses.
Figure 3

Perceived Similarity as a Mediator of Relationship Type and Protégé Relationship Satisfaction

Note: † p < .10. * p < .05. ** p < .01. Betas derived from mediation regressions are not in parentheses.
APPENDIX

Cover Letter/Consent Form

You are being invited to participate in an NSF-funded survey about your organization/workplace. This survey may help us to enhance the STEM and Social Science workplace in our institutions and regionally. The survey should take about 15-20 minutes. There are no known risks of participating, and though there will be no direct benefit to you, we hope the information from these surveys will facilitate STEM and Social Sciences faculty success.

Your survey responses, recorded using a secure survey collecting program, will be saved in a password-locked computer. Only research staff has access to the password. Your responses are completely confidential and anonymous. We do not record your name and no responses will be linked to your identity in any way. No individual data will be reported, only data in aggregate will be made public. Lastly, you do not have to answer any question that you do not want to. If you would like to stop being a part of the survey, you may do so at any time.

Your participation is completely voluntary. You have the right to decline to answer any question, and refuse to participate in this study or to withdraw at any time. Your decision of whether or not to participate will not result in any penalty or less of benefits to which you are otherwise entitled. Completing the survey implies your consent to participate.

In several weeks your will be sent both an email and a pre-addressed, stamped postcard inquiring about your participation in this online survey. Note whether you have completed the survey (in part or in full) and respond to either the postcard or the email soon, so that you will be included in a lottery for a $100 gift card. If you would like a summary of the group data you may contact me, Dr. Tamera R. Schneider, at nsfsurvey@wright.edu. If you have any questions or concerns about your participation in the survey you may contact me or the Internal Review Board for Human Subjects at Wright State University, at (937) 775-4462.

To begin the survey, please click the “next” arrow below.