THE IMPACT OF SIMILAR-GENDER AND STANDARD-SETTING CAREER REFERENTS
ON EXPECTED CAREER ACHIEVEMENT

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ABSTRACT

This study examines two questions concerning the impact of women’s and men’s career referents, the people they see as having similar careers, on expected career achievement. First, what is the relative effect of similar-gender and standard-setting career referents on individuals’ expected career achievement? Second, what happens to expected career achievement when women and men select standard-setters at the same hierarchical level? Current research suggests that women have lower expected career achievement than men because they compare themselves with women who hold lower-level positions than the standard-setters selected by men. Thus, if women and men compared themselves with similar level standard-setters, their expected career achievement would be equal. However, this chain of reasoning has not been tested. Using data collected from a large organization, we employ a social network measure of career referents that identifies the specific individuals women and men perceive as having similar careers. The organization’s personnel data are then used to assess these referents’ hierarchical level. The results show that the hierarchical level of standard-setters is more important than the gender composition of career referents in explaining expected career achievement. In contrast to extant explanations, the results show that even when women select career referents at the same levels as men, they still exhibit significantly lower expected career achievement. Drawing on social comparison theory, we speculate this occurs because men’s expectations are bolstered by extreme upward comparisons, whereas women’s expectations are dampened, perhaps because they see high achieving others as representing a less probable goal.
KEY WORDS: Gender, Social Comparison, Referents, Career Achievement, Career Expectations
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Research shows consistent and mounting evidence that women have lower expectations than men about their potential for achievement in organizations, including how much pay they expect and how far they expect to advance in their careers (Crosby 1982; Gattiker & Larwood 1990; Jackson, Gardner, & Sullivan 1992; Keaveny & Inderrieden 2000; Major 1994). The primary explanation for women’s lower career expectations is that women and men differ in the career referents, the others they view as having similar careers, used to form these expectations (Heckert et al. 2002; Jackson et al. 1992; Major & Konar 1984). In determining what they expect to achieve, women’s career referents diverge from men’s in two ways. First, women tend to see their careers as similar to those of other women, whereas men see their careers as similar to those of other men (Sumner & Brown 1996). These similar-gender referents are consistent with a key tenet of social comparison theory, that individuals tend to seek referents based on similarity (Festinger, 1954). Using such comparisons to determine career expectations makes sense because similar-gender referents are assumed to be similar on attributes related to achievement, such as background qualifications, work experiences, education, or family concerns, and are thus appropriate for an accurate appraisal of what one is likely to achieve (Zanna, Goethals, & Hill 1975).

Second, women’s career referents tend to be at lower levels than men’s in terms of career accomplishment and pay (Jackson et al., 1992; Major & Konar, 1984). In determining expectations, both women and men make upward comparisons to standard-setters, that is, social referents who perform at higher levels (see Feldman & Ruble, 1981; Zanna, Goethals & Hill, 1975). This tendency fits a second tenet of social comparison theory, that individuals have a unidirectional drive upward that prompts them to evaluate their current standing by comparing themselves to others who are superior to themselves on the dimension of interest (Festinger, 1954, p. 124). However, although both women and men use upward comparisons, women tend to compare themselves to standard-setters who hold lower hierarchical positions than those of men. These standard-setters frequently earn less money than those chosen by men (Heckert et al. 2002; Jackson et al. 1992) and often cluster in occupations that are valued less in the
economy, such as teaching, nursing, and service sector positions (Treiman & Hartman 1981). Using this reasoning, women’s achievement expectations tend to be lower than men’s because expectations depend on the level of one’s career referents. From a goal-setting perspective, women don’t set the bar high enough, and this has a dampening effect on motivation and outcomes (Locke & Lathan 1990).

Scholars’ explanation for why women’s career expectations are lower than those of men integrates these two arguments. They suggest that since women select similar-gender career referents and since these similar-gender referents tend to hold lower-level, lower-paid positions than men, the career referents with whom women compare themselves represent a lower level of standard-setters than men’s (Jackson et al. 1992). They conclude that this lower level results in women’s lower career expectations. However, scholars disagree about the relative significance of similar-gender comparisons and lower-level standard-setters in this process, with some emphasizing the former (e.g., Crosby 1982; Major & Forcey, 1985), and others emphasizing the latter (Jackson et al., 1992; Keaveny, T.J., & Inderrieden, 2000). While research suggests that both are important in explaining expected achievement, the links in this chain of reasoning remain untested. No existing studies examine both the number of similar-gender referents and the levels of the standard-setters that individuals include when they select career referents. Indeed, previous research has rarely specified the actual identity of individuals’ social referents. As Shah (1998, p. 253) argues, although the identity of social referents is critical to social comparison and equity theories, “it is astounding that the issue of the social referent has only been addressed in general terms.”

This paper explores how the relationships among gender, similar-gender referents and the hierarchical levels of standard-setters affect expected career achievement. Following Shah (1998), a social network approach is used to identify specific career referents and their hierarchical levels. This allows us to address two questions. The first involves the relative contribution of similar-gender and standard-setting career referents to individuals’ expected achievement. Which, if either, is more important in explaining why women’s levels of expected achievement are lower than men’s? The second question explores the impact of career referents on expected achievement when women and men select standard-
setters at the same level. If women’s lower expectations result from considering lower-level career referents than men, what happens when women select career referents at the same level?

**THEORETICAL BACKGROUND**

The central issue underlying these two questions is whom an individual perceives as his or her career referents. Although there have been many definitions of social referents (see, e.g., Goodman 1974, 1977; Kulik & Ambrose 1992; Shah 1998; Wheeler & Miyake 1992), we use Wood’s (1996, p. 521) inclusive approach, which emphasizes that selecting referent others is based on an individual “[T]hinking about…social information in relation to the self (e.g., observing similarities, differences, or both between the other and the self).” Thus, in this study we define an individual’s *set of career referents* as other people in the organization whom he or she regards as similar in terms of task, career advancement and future career opportunities. As stipulated by Goodman (1977), these variables reflect an individual’s referent choice based on perceived availability and relevance. While organizational research has often analyzed social comparison data using individuals’ choice of one to three prominent social referents (see, e.g., Ambrose & Kulik 1988; Crosby 1982; Oldham, Kulik, Ambrose, Stepina, & Brand 1986), this study examines data built from a broader set of possible career referents based on individuals' perceptions of others in their organization with similar careers. This approach is particularly appropriate for career referents because research shows that people tend to use a wide set of referents when they think about their status, satisfaction, and expectations in their organizational context (Goodman 1974; Lawrence 2006; Scholl, Cooper, & McKenna 1987).

**What is the Relative Contribution of Similar-Gender and Standard-Setting Career Referents to Expected Achievement?**

Our first research question concerns the relative impact of two different types of career referents: those based on similarity and those based on standard-setting. Social comparison theory suggests that individuals are motivated to evaluate their current abilities, opinions, performance level, outcomes, and future opportunities, and that they do so by comparing themselves to others in their social environment (Festinger 1954; Goodman 1974; Wood 1989). According to Festinger’s (1954) original theory, for
evaluation purposes individuals will tend to choose social referents based on similarity; that is, referents whose abilities or outcomes closely match their own. However, he also argued that individuals have a unidirectional drive upward that motivates them to desire self-improvement (1954, p. 124).

Social comparison researchers have pointed out that the theory’s emphasis on similarity in ability or performance outcomes as the primary determinants of referent choice is paradoxical. Why would individuals be interested in comparing to referents whose performance is identical to their own, when this provides little evaluative information? Goethals and Darley (1977) attempted to resolve the paradox by refining Festinger’s concept of similarity. They argue that individuals are not merely interested in others whose performance outcomes are similar to their own. Rather, individuals are interested in referents who have similar attributes, such as gender, age, or experience, that might relate to performance, and thus provide an indication of how their performance compares, given that they share these attributes. In judging their running ability, for example, young women will compare themselves to other young women, rather than to others with similar time results (Zanna et al., 1975).

However, this similar attributes hypothesis does not explain the countervailing tendency, suggested by Festinger’s notion of the unidirectional upward drive, for individuals to make upward social comparisons to others superior to themselves on a selected dimension. In some cases, individuals compare themselves with standard-setters, social referents who represent upward comparisons in terms of ability, regardless of whether they share similar attributes (Zanna et al. 1975). In the context of task performance in the laboratory, for example, individuals tend to compare themselves with others at higher skill levels (Arrowood & Friend 1969; Gruder 1971). On cognitive achievement tests without competitive pressures, when asked which scores they would like to see to assess privately their own level of achievement, individuals select others having higher scores. Research suggests that this strategy helps individuals assess the range, and particularly the upper bound, of performance (Wheeler et al. 1969).

These two approaches, one underscoring referents who share similar attributes, and the other stressing referents who are standard-setters, represent a conflict in emphasis. Researchers emphasizing the similarity approach argue that the standard-setter studies cited above are flawed because they do not allow
respondents to compare themselves with similar others. In studies in which individuals are presented with both social referents who are similar-gender and social referents who are standard-setters, researchers have found support for the similarity approach. Zanna et al. (1975), for example, found that individuals chose similar-gender and similar-college major referents rather than standard-setters as their first choice in assessing their ability on a cognitive test. Major and Forcey (1985) found that both men and women preferred to maximize similarity using similar-gender and similar-job referents rather than choosing the highest paid referents in evaluating the fairness of their level of pay.

These studies, in which individuals prioritize similar-attribute others over standard-setting others, focus on situations where individuals assess how their current abilities compare with the current abilities of others (Feldman & Ruble 1981). Thus, their findings may not translate directly to situations where individuals estimate their achievement expectations, because these expectations predict the future rather than evaluate the present. In determining expected career achievement, individuals may prefer standard-setters over similar-others. Similar-others may provide them with the most useful information about their current performance, but standard-setters may provide greater insight into achievement at higher levels (Lockwood & Kunda 1997). As a result, when asked about their future career expectations, individuals may select those they see as the best, the standard-setters who are high achievers.

Perhaps not surprisingly, researchers emphasizing the standard-setter approach do focus on career referents involving future expectations rather than current performance. For instance, individuals appear to seek standard-setters in forming their achievement expectations about pay (e.g., Adams 1963; Berkowitz, Fraser, Treasure, & Cochran 1987; Oldham, Kulik, Stepina, & Ambrose 1986; Rice, Phillips, & McFarlin 1990). Pay is an important variable in organizations because it is both a means to acquire goods and “an important signal of achievement, recognition and potential enhancement of self-esteem” (Goodman 1974, p. 171). Pay constitutes an important metric by which individuals judge their own and others’ career achievement (Jaques 1970). Thus, expectations about future pay are signals of individuals’ expectations for career achievement. Pay expectations are also fruitful for studies of upward social comparisons, because the degree of upward comparison can be measured.
Research on pay expectations consistently shows gender differences (Heckert et al. 2002; Sumner et al. 1996). Men’s pay expectations for entry level jobs and peak career jobs virtually always exceed women’s pay expectations. For example, a study of college students showed that men expected to make $24,344 in their entry-level job whereas women only expected $22,799, and this significant difference held across a variety of majors. At peak career, men expected to make $66,098 while women expected to make $48,154 (Jackson et al. 1992). These findings mirror several other studies showing gender differences in pay expectations (e.g., Heckert et al. 2002; Jackson & Grabski 1988; Keaveny et al. 2000). Major and Konar (1984, p. 788), for example, found that “Men expected to earn approximately 16.5 percent more pay at career entry and 46 percent more pay at career peak than did women.”

The pay expectations literature also shows that men’s higher expectations are related to men’s selection of more highly paid career referents. These studies show that even when initial pay levels are held constant, women tend to select standard-setters at less extreme levels than men. In the Jackson et al. (1992) study, men’s expectations of social referents’ peak pay were 33% higher than their own pay expectations ($88,134 versus $66,098); whereas women’s expectations of social referents’ peak pay were only 17% higher than their own pay expectations ($56,245 versus $48,154). Major and Konar (1984) found even more extreme gender differences between pay expectations for self and pay expectations for social referents. Men’s expectations for what the “best paid people” in their field earned were 280% higher than their pay expectations for themselves ($236,315 versus $61,482). Women’s expectations were only 65% higher than their pay expectations for themselves ($69,588 versus $42,188). Thus, men tend to select more extreme standard-setters than women.

These studies suggest that when examining pay expectations, choosing standard-setting career referents may be more important than choosing similar-gender career referents. However, studies of such future expectations have not examined similar-gender and standard-setting referents simultaneously and this prediction thus remains speculative. The first relationship we examine, then, is the relative effect of individuals’ similar-gender and standard-setting career referents on their level of expected career achievement.
What Happens to Expected Career Achievement When Women and Men Select Career Referents at the Same Level?

The second question concerns the impact of career referents on expected career achievement when women and men select standard-setters at the same level. The positive association between upward comparisons and expectations for men suggests that if women also made upward comparisons to career referents at levels comparable to men’s, their goals for achievement and thus their expected career achievement would be similar to those of men. However, this contention has not been examined empirically. What happens to women’s achievement expectations when they choose career referents at the same high levels as men?

While the extant literature has not examined this question, there are clues from social comparison research that women and men respond differently to upward comparisons, and these differential responses may affect their expected career achievement. Women, for instance, appear more attuned and responsive than men to social cues in general and social comparisons in particular, and interpret these cues differently than men (Kemmelmeier & Oyserman 2001). For example, Buunk et al. (1990) found that married women are more likely than married men to experience negative affect when they compare their marital situation to that of other couples who are better off. In achievement contexts, women are more likely than men to underestimate their expected achievement when they are told about a socially-defined standard of performance, such as others’ performance levels (Feather & Simon 1971), and when they must report their performance publicly in a social setting (Crandall 1969; Roberts 1991). These findings suggest that women may be cautious about making comparisons to a high performance standard and are likely to feel better about moderate, rather than extreme, upward comparisons. Men appear to respond more positively than women to upward social comparisons. In studies of children, boys prefer higher-level social comparisons than girls (Veroff 1969; Wilson & Benner 1971), which has been attributed to boys’ higher level of competitiveness (Ahlgren 1983; Gibbons, Benbow, & Gerrard 1994). Competitiveness in adults has also been associated with the tendency to make upward comparisons (Gastorf, Suls, & Sanders 1980; Wood 1989). Men tend to exhibit higher levels of self-confidence than do
women, which could lead them to compare themselves with more successful others (Beyer 1990; Heatherington et al. 1993). This may result because self-confident, highly motivated persons are spared feelings of inferiority when making extreme upward social comparisons. They assume that they are similar to the highly performing other (Collins 1996; Wood 1989). These findings suggest that men might be willing to make extreme upward social comparisons because these comparisons are likely to increase, rather than decrease their feelings of self-confidence.

Overall, previous research suggests that women and men react in different ways to upward social comparisons. Consequently, even when levels are similar, the meaning such comparisons acquire for women and men may differ and this may moderate the association between social comparison and expected achievement. The second relationship we examine, then, is whether women’s and men’s expected career achievement still differ if they select career referents at similar high levels.

**THE CURRENT APPROACH**

In the current study, we examine these two relationships: the relative contribution of managers’ similar-gender and standard-setting career referents to their expected career achievement and the impact of managers’ gender on how the level of these career referents affects their expectations. Data were collected from a large organization, where the average tenure is seventeen years and where the company has a tradition of hiring employees and their relatives. Although a portion of the labor market is now involved in more short-term, boundaryless careers (Arthur & Rousseau 1996; Cappelli 1999), a substantial number of employees still work in single organizations for long periods of time (Jacoby 1999). Thus, using a large organization in which the average tenure is high provides a reasonable setting to study career referents and expected achievement.

There are several advantages to using a single, large organization for this study. The most important of these is that examining a management career within one organization produces a commonly-understood measure of career level. Everyone understands what each hierarchical level means and this permits direct comparisons of the relative levels of respondents’ career referents. In addition, although there are no data concerning career referents outside the organization, using a single, large organization
allows respondents to consider all possible career referents within the organization. A third advantage is that most research on social comparisons has been conducted in the laboratory (see reviews in Collins 1996; Wood 1989) and the field setting allows us to explore how respondents actually experience their careers. For instance, respondents’ expectations can be examined throughout the life course, including expectations at diverse ages and career stages. This improves on the pay expectations literature, which by focusing on young individuals anticipating or in early stages of their careers does not address the question of whether expectations may be affected by adult development or life experiences in a career or an organization (Gasser, Oliver, & Tan 1998; Jackson et al. 1992; see review in Major 1994).

Finally, the field context facilitates the identification of specific career referents and their attributes. In the past, in order to determine respondents’ social referent choices, scholars have asked respondents to: 1) name one to three specific referents (e.g., Crosby 1982); 2) observe a fictitious social referent and assess respondents’ cognitive and affective reaction (Major & Forcey 1985; Wheeler et al. 1969); or 3) respond to a general category of referents, where specific others are not identified. For example, instead of naming specific referents, respondents are asked to compare themselves with “other individuals doing the same job as me in my company” (Scholl et al. 1987), or “most people with your level of education” (Jackson et al. 1992), or “relevant employees in similar organizations” (Blau 1994). Thus, these studies rarely solicit the names of specific referents and, even when they do, they request a limited number of names and then ask respondents to provide information on the attributes of those selected. This may introduce errors because respondents do not always know others’ attributes accurately. It is easy to assess a referent’s gender, but respondents may not know specifically the referent’s other attributes, such as age or organizational tenure.

In contrast, we use a two-step, social network approach in which respondents are first asked to identify people they know from a list of all other employees in the organization and then asked to evaluate the similarity of their own careers to these specific others. This prompts respondents to consider a broad set of others as potential referents and, by knowing the names of these possible referents, allows us to identify their attributes from company records. This network approach has several advantages over those
emphasizing respondent’s choice of referent based on immediate recall. First, this approach addresses a possible recency bias, since asking a respondent for one to three career referents is likely to elicit referents the respondent has used most recently or who are currently salient for reasons unrelated to the research question (Marin 2004). Second, instead of presenting a yes-no choice to respondents about their choice of referents, our measure allows respondents to identify the degree to which their referents are similar, providing a more fine-grained measure of the extent to which they are regarded as a career referent. Third, respondents may use more than one to three salient referents. For example, Scholl et al. (1987: 115) find that individuals tend to make “multiple, simultaneous comparisons” and role model research suggests that individuals create cognitive “composite” referents made up of comparisons with several referents (Gibson 2003). The wider set of referents elicited here increases the likelihood of capturing both specific and composite information about career referents. Thus, by priming respondents to think about everyone they know before selecting and assessing career referents, our measure reduces the likelihood of forgetting important referents (Brewer 2000) and, by eliciting responses on a wide range of others, may reflect more accurately the nature of respondents’ actual social comparisons.

We define standard setting as the degree to which a respondent’s career referents represent an upward social comparison in terms of hierarchical level. Career achievement is defined as upward movement through a corporate hierarchy (Gattiker et al. 1990) and measured as the hierarchical level a manager expects to achieve within his or her organization. Using hierarchical level rather than pay as a measure of career achievement has two benefits. First, since this study is conducted within one organization, hierarchical level provides a common status measure that is well understood by managers and can be used to measure the relative level of career referents. Second, because the formal organizational structure is defined by hierarchical level, managers are more likely to know the hierarchical level of other managers than these other managers’ pay. As a result, managers are more likely to have an idea of how far they expect to progress in the organization (e.g., to vice president level) than how much pay they will receive if they get there.
To our knowledge, no research exists in which the impact of gender on an individual’s broad set of career referents and the degree to which those referents reflect upward comparisons has been studied within an organization. Of the existing organizational studies, Goodman (1974) had respondents list a limited set of referents, but did not examine gender effects; Oldham et al. (1986) and Oldham, Kulik, Stepina & Ambrose (1986) had respondents choose a primary referent, but did not examine gender effects; Crosby (1982) had respondents list their first three referents, but did not examine a single organization or the hierarchical level of these referents (see also Steil & Hay 1997); Shah (1998) requested that respondents select referents, but, aside from the average number selected, did not provide either the gender or status level of those referents.

**HYPOTHESES**

The first four hypotheses replicate predictions made in the extant literature (see Figure 1). Subsequent hypotheses explore the two additional relationships suggested by these studies. We begin by testing whether men and women differ in their expectations about future career achievement. Consistent with previous studies showing that women underestimate their performance levels (Beyer 1990), have lower pay expectations (Major 1994), and have less self-confidence than men in some achievement settings (Lenney 1977; Roberts 1991), we expect that:

*Hypothesis 1. Women will have lower expectations than men for their future career achievement.*

Next, we examine the two social comparison processes that existing research suggests provide a rationale for women’s lower expectations: the gender composition of their career referents and the hierarchical level of their career referents. Social comparison theory suggests that individuals choose social referents based on their perceived similarity (Festinger 1954). In terms of gender, empirical studies find that individuals tend to select same-sex referents to form their career expectations; that is, women are more likely than men to compare themselves with other women (Sumner et al. 1996). Thus, we expect that:
Hypothesis 2. Women’s sets of career referents will include a greater proportion of women than men’s sets of career referents.

Next, researchers posit that women’s career referents tend to represent a lower standard of comparison than do men’s. This argument is supported by the pay expectations literature, showing that women attribute lower salaries to their career referents than do men (Heckert et al. 2002; Jackson et al. 1992; Keaveny et al. 2000; Major & Konar 1984; Major, Vanderslice, & McFarlin 1984). Using hierarchical levels rather than pay, we expect analogously that:

Hypothesis 3. Women’s sets of career referents will hold lower hierarchical level positions than men’s sets of career referents.

If the logic of Hypotheses 2 and 3 holds, we should find an effect of individuals’ career referents on career achievement expectations such that having a higher proportion of women in an individuals’ set of career referents will be associated with lower expectations. The logic is that if women tend to identify other women as career referents, and women tend to hold lower occupational positions in organizations than men (Treiman & Hartman 1981), then identification with women career referents will indicate a lower standard of comparison (Major & Konar 1984). Men who identify with women career referents should be affected similarly. Thus:

Hypothesis 4. The higher the proportion of women in an individual’s set of career referents, the lower his or her expected career achievement.

The final two hypotheses extend our understanding of how the relationships among gender, gender composition, and hierarchical level of career referent affect expected achievement. The first involves assessing the relative impact of gender composition and hierarchical level of career referents on expected career achievement. Previous studies of career expectations reflect a controversy in the social comparison literature as to the relative prominence of similarity and standard-setters as criteria in social referent choice. For example, Crosby (1982) and Major & Forcey (1985) emphasize a gender similarity approach, but do not test the level of upward comparison, while most pay expectations studies (e.g., Jackson et al. 1992; Keaveny, & Inderrieden 2000) emphasize referent pay levels and speculate about, but
do not test the effect of gender similarity. We expect that men and women in organizations will use a combination of similarity and standard setting in selecting their career referents, but that standard setting, here measured by the hierarchical level of career referents, will exhibit a stronger association with career achievement expectations.

Several findings support this argument. Women’s tendency to have greater numbers of women in their sets of social referents does not mean that they are insensitive to identifying with high-level referents. Crosby (1982) shows that when women hold high-level positions in male-dominated environments, they increase their use of male social referents. This finding suggests that it is the availability of high-level social comparisons in an organizational context, rather than women’s tendency to make same-sex comparisons, that may determine expectations (see Major 1994; Goodman 1974). This notion is also supported by the finding that comparisons to others’ pay, another measure of referent level, explains more of the variance in pay expectations than do other factors, such as gender differences in career paths, job inputs (e.g., effort, predicted performance, and job skills), or the importance of job characteristics (e.g., job security and friendliness of co-workers and supervisors—Heckert et al. 2002). These findings suggest that while women’s sets of career referents may contain more women than those of men, women are still likely to incorporate career referents at higher levels and thus use standard setting data to form their expectations. Therefore:

Hypothesis 5. The average hierarchical level of an individual’s set of career referents will be a better predictor of his or her expected career achievement than his or her gender or the proportion of women in his or her set of career referents.

The second relationship we examine is the assumption in the literature that women and men react similarly to upward social comparisons. That is, if, as Hypothesis 5 posits, the hierarchical level of career referents is critical to determining career achievement expectations, then if men and women have career referents at similar hierarchical levels, they should have the same expectations. In exploring this assumption, we expect a positive relationship between men’s and women’s levels of career referents and
their career achievement expectations. However, we also expect that men and women will differ in the degree to which their upward social comparisons increase their career expectations.

Specifically, while we expect men and women to respond similarly to the social comparisons they make at low levels, we expect women to respond differently to social comparisons made at extremely high levels. Previous research suggests that, relative to men, women may experience extreme upward comparisons as more risky, threatening, or unrealistic. Men tend to overestimate their achievement potential relative to women. Thus, they are more likely than women to believe that extreme standard-setting performances are relevant and potentially attainable, and thus to find them inspirational (see Lockwood & Kunda 1997). In Collins’ (1996) terms, men are more likely than women to fully assimilate to high-level referents and believe they can achieve at that level. In contrast, women tend to underestimate their achievement potential; thus, choosing referents at extremely high levels may seem less realistic to them than to men. Women are less likely than men to believe they can attain the highest levels (Roberts 1991). Moreover, since women tend to value different aspects of achievement than men, such as interpersonal fit and a sense of accomplishment, comparing upward on dimensions such as pay and hierarchical level may seem less relevant to them. Since they are less likely than men to see extreme upward comparisons as relevant or attainable, they are less likely to find them inspirational (Lockwood & Kunda 1997). However, it also seems likely that women preserve some of the positive inspiration that results from upward referent comparisons. These tendencies are reflected in the following predicted interaction:

*Hypothesis 6.* When women and men select career referents at the same level, the expected career achievement of men will be higher than that of women.

**METHOD**

**Setting, Respondents, and Sample**

Data were collected by the second author in a large regionally-dispersed organization with over 9,000 employees. Managers ($N = 2,685$) were selected as the study population because the fifteen hierarchical levels of the managerial career are clear and known by all employees. They thus provide a
salient metric with consistent meaning showing the upward or downward levels of career referents named by a respondent. In this company, managers move frequently to different divisions in different regions; their average time in one position is under two years. Thus, they have ample opportunities to develop work and friendship associations with a large and diverse group of people. Demographic data were obtained from company records on the population of management employees. In this company, 32% \((N = 848)\) of these employees are women, 9.8% \((N = 263)\) are Black, 15.9% are Hispanic \((N = 428)\), and 12.1% \((N = 326)\) are Asian. Of the 200 highest level managers, 12% \((N = 24)\) are women, indicating there are similar-gender, high level standard setters for women to select as career referents.

Surveys were mailed to a 20% systematic, stratified sample \((N = 537)\) of management employees. Four hundred and twenty-three surveys were returned (79%). Twelve surveys were deleted because they were completed by employees outside the sampling frame, leaving 411 (77%) usable surveys. The survey sample is similar to the population on all stratification dimensions: age \((t = 1.11, p = 0.27)\), organizational tenure \((t = -0.31, p = 0.75)\), career level \((t = 0.79, p = 0.43)\), gender \((\chi^2 = 0.23, p = 0.63)\), ethnicity \((\chi^2 = 1.02, p = 0.91)\), and hire type \((\chi^2 = 0.12, p = 0.73)\), that is, whether the employee was in a professional or non-professional job when hired.

Surveys were confidential but not anonymous. Respondents were requested to provide their social security number on an identification page that was perforated and easily detached from the survey booklet. Two envelopes were provided for returning each survey: one for the identification page and one for the completed survey. Respondents’ sealed responses could not be identified without opening the envelopes and matching the codes, thus giving them greater confidence that their responses would not be examined by others inside the company. After the surveys were returned, coded, and double-entered, a 5% sample was re-evaluated to estimate the percent of entry errors. This evaluation yielded an error rate of 0.002%.

Name generation, a social network approach used in large social systems, was used to identify the sample of others from whom respondents selected their career referents. Respondents first completed a booklet instructing them to list the names of people they know within the organization. Fifty-six blank
lines were provided for these names, and a complete list of managers was provided for reference. Respondents were asked to add names if necessary; the average number of names listed was 49.86 (range 0 - 56). Thus, respondents provided a broad set of known others from which they later selected career referents. The employee identification numbers of each name provided by each subject, totaling around 20,000 names, were coded by hand using the company’s personnel data. One advantage of this name generation approach is that it produced a sample of known others before the respondent was asked to identify his or her career referents. Moreover, demographic attributes for respondents’ samples of known others were obtained from the company’s employment records. Thus, respondents were not primed to over- or under-select people with a given attribute (Smith 2002).

Measures

**Dependent variable.** *Expected Career Achievement* was measured using a single item in which respondents were asked: “By the time you leave [THE COMPANY], what salary level do you expect to attain?” Salary level is the formal term the company uses to define an individual’s hierarchical career level, and this designation is understood by all employees in management careers. Given that this designation is unambiguous to the respondent, a single-item measure is preferable over a multiple-item measure. Adding additional scale items would not increase, and might decrease, the validity of respondents’ responses (Sackett & Larson 1990; Wanous, Reichers, & Hudy 1997).

**Independent variables.** *Gender* of each respondent was identified using company employment records. *Level of Career Referents* was measured using the sample of known others provided by each respondent. For each person listed as known, the respondent was asked: “How similar are you to each person on the list in terms of the types of jobs you have held during your career?” “How similar are you to each person on the list in terms of the pace of your advancement during your career?” and “How similar are you to each person on the list in terms of your future work opportunities at [THE COMPANY]?” Respondents were given five response categories (0 = I Don’t Know; 1 = Very Dissimilar; 2 = Somewhat Dissimilar; 3 = Somewhat Similar; and 4 = Very Similar). Respondents’ answers to these questions measure the degree of perceived similarity, availability among others they knew in the company, and
relevance in terms of types of jobs and future work opportunities, three factors considered important in choosing social referents (Festinger 1954; Goodman 1974; Kulik & Ambrose 1992; Shah 1998). Each person that a respondent rated as similar to him or her with a value of 3 or 4 on all three questions was considered a career referent. The hierarchical level of each career referent was identified through company records. The variable Level of Career Referents, then, is the average of these hierarchical levels across a respondents’ set of referents. This social network approach improves on previous studies (e.g., Crosby 1982; Goodman 1974; Oldham, Kulik, Ambrose et al. 1986; Shah 1998) by explicitly identifying 1) which individuals a respondent includes in his or her set of career referents, 2) the hierarchical level of each of those referents and 3) three of the dimensions known to be important in referent selection.

Coefficient alpha of the similarity scale was 0.96.

*Gender Composition* is the proportion of a respondent’s set of career referents who are women. For each career referent identified through the procedure outlined above, women career referents were coded as 1 and men career referents as 0.

**Control variables.** Respondents’ demographic attributes were used as control variables because research has shown that such attributes influence the selection of social comparison referents (Kulik & Ambrose, 1992; although see Shah, 1998). Six demographic attributes were used: *ethnicity* (White, Black, Hispanic, Asian), *age*, *organizational tenure*, *education*, and *current career level*. Education was measured using a nine-point scale, with 1 = some grade school to 9 = finished doctoral degree. *Expected Organizational Tenure* was used as a control variable because low expected career achievement may result because respondents intend to leave the organization, rather than because they don’t anticipate achieving high career levels. For instance, employees may leave for better opportunities, raising families, or retirement. Expected organizational tenure was measured using respondents’ response to the question “How long do you expect to remain with [THE COMPANY]?” Responses were coded on an eight-point scale, with 1 = less than 1 year, 2 = 1-2 years, 3 = 3-4 years, 4 = 5-9 years, 5 = 10-14 years, 6 = 15-19 years, 7 = more than 20 years and 8 = until retirement. Expected organizational tenure was coded as 8 = until retirement if respondents’ age plus their expected tenure exceeded 65. Finally, the *Number of Career*
Referents was included to control for potential differences between respondents who perceive many similar others and respondents who perceive few.

**Descriptive statistics and relationships among variables.** Table 1 shows a correlation matrix of the variables. The average hierarchical level of respondents is 7.42 and the average hierarchical level of their career referents is 11.41, suggesting that respondents do make upward social comparisons. Men tended to have a greater number of career referents than did women (Men, $M = 15.93$, women, $M = 11.91$, $t = 3.71$, $p < .001$). As many of the independent variables are significantly correlated, a Variance Inflation Factor ($VIF$) diagnostic was used to test for collinearity. The highest Variance Inflation Factors are for age ($VIF = 3.10$) and organizational tenure ($VIF = 3.72$), which are both well below the suggested cut-off of 10 (Chatterjee & Price 1991, p. 191). Thus, collinearity may attenuate the estimates for these variables, but it does not appear to be harmful.

RESULTS

Results for the hypotheses replicating previous research, H1-H4, are shown in Tables 1 and 2. Hypothesis 1, that women will have lower expectations than men for their future career achievement, is supported. As shown in Model 2, the unstandardized estimate for the regression of expected career achievement on gender shows a significant difference in expected career achievement for men and women in the hypothesized direction after controlling for relevant demographic variables and the respondent’s hierarchical level ($b = -0.51$, $p < 0.05$).

Hypothesis 2, that women’s sets of career referents will include a higher proportion of women than men’s sets of career referents, is also supported. Pearson correlations shown in Table 1 show a significant association between the respondent being a woman and tendency to have women career...
Hypothesis 3, that women’s sets of career referents will hold lower hierarchical level positions than men’s sets of career referents, is supported. As shown in Table 1, there is a significant negative association between respondent being a woman and the level of career referents \( r = -0.22, p < 0.01 \). A regression analysis with level of career referents as the dependent variable confirms a significant effect for respondent gender after the control variables are added to the equation \( b = -0.23, p < 0.05 \); analysis available from the authors). Based on this regression, the average expected level of women’s sets of career referents is 11.09 (range = 8.35 – 13.98). The average expected level of men’s sets of career referents is 11.34 (range = 8.02 – 14.82).

Hypothesis 4, that the higher the proportion of women in an individual’s set of career referents, the lower his or her expected achievement, is not supported. Although the correlation between gender composition and expected career achievement shows borderline significance in the expected direction \( r = -0.10, p < 0.06 \), this relationship is not significant when control variables are added to the equation. As shown in Model 3, the unstandardized estimate for the regression of expected career achievement on gender composition is \( b = -0.55 \) ( \( p \) value n.s.).

Results for the two hypotheses that extend previous research, H5 and H6, are shown in Table 2. Models 4 and 5 provide support for Hypothesis 5, that the average hierarchical level of an individual’s set of career referents will be a better predictor of his or her expected career achievement than his or her gender or the proportion of women in his or her set of career referents. Model 4 shows a significant, positive association between the hierarchical level of respondents’ career referents and their expected career achievement, independent of the control variables, \( b = 0.95 \) ( \( p < 0.001 \)). As the level of a respondent’s career referents increases, his or her expected career achievement also increases. Model
shows that this relationship holds even when respondent gender and gender composition of career referents are entered into the equation; the unstandardized regression coefficient for level of respondents’ career referents remains the same, $b = 0.96 \ (p < 0.001)$, while the regression coefficients for respondent gender and gender composition are not significant.

Hypothesis 6—that when women and men select career referents at the same level, men will have a higher expected level of career achievement than women—is supported. Model 6 shows that the interaction between gender and level of career referents is significant, $b = -0.35 \ (p < 0.01)$, indicating that the slopes for men and women differ as the level of career referents increases. A further probe of this interaction shows that the simple slope for women of expected career achievement on level of career referents is $b = 0.66 \ (p < 0.001)$. The simple slope for men of expected career achievement on level of career referents is $b = 1.04 \ (p < 0.001)$. Thus, as the level of upward social comparisons increases, the differences in the expected career achievement of men and women also increase. Women still have lower expected career achievement than men even when their career referents are the same level as those of men. After centering the variables, additional analysis shows that when the level of career referents is one standard deviation below the mean, there is no difference in the slopes for women and men, $b = 0.048 \ (p = \text{ns})$; when the level of career referents is at the mean, there begins to be a slight difference in the slopes for women and men, $b = -0.487 \ (p < 0.10)$; and when the level of career referents is one standard deviation above the mean, the difference between women and men is significant, $b = -1.023 \ (p < 0.01)$. Thus, when women and men choose low levels of career referents, their expected career achievement does not differ, but as the levels of their career referents increases, the difference becomes significant, with women having lower expectations than men. Figure 2 shows the relationship between gender and expected career achievement at different levels of career referents.

Additional Analysis
The replication results for Hypotheses 1 through 3 are consistent with the literature. However, the analysis for Hypothesis 4 raises the question: why isn’t gender composition a significant predictor of expected achievement? Scholars argue consistently that it is the combination of same-sex comparisons and lower level referents that produces women’s lower pay expectations (Major & Konar 1984; Jackson et al. 1992). While we do find that women have lower career achievement expectations than men, that they are more likely to choose same-sex comparisons than men, and that they are more likely to select lower-level referents than men, women’s same-sex comparisons do not result in a significant effect for gender composition on expectations.

One explanation for this result may be that this study was conducted in a single organization while others have used samples from multiple organizations. Thus, this organization may be an idiosyncratic example from one end of the distribution. Another possibility is that this study includes a larger set of relevant control variables than has been used previously. This may have reduced the gender composition effect here, or it may suggest that previous results exclude relevant variables. A third possibility is that men respond differently to social comparisons who are women and this produces the non-significant result. However, a regression of expected achievement including the interaction between gender and gender composition shows that this relationship is not significant. Finally, this result may be picking up subtleties in the relationships between gender, gender composition, level of career referents and expected achievement that have not been identified previously because prior studies used coarser measures of the constructs. To explore this last possibility, we hypothesized that if gender composition does not exert a direct effect on expected career achievement, perhaps it moderates the relationship between level of career referent and expected career achievement.

To examine this relationship, we included the interaction of gender composition and level of career referent in the hierarchical regression equation. We find a borderline effect for this interaction such that gender composition moderates the level of career referent, $b = -0.53$ ($p < 0.056$). The positive impact of level of career referent on expected achievement increases as the proportion of women decreases. After centering all variables, regressions were run to assess the effect of level of career referent on expected
career achievement at various levels of gender composition. When gender composition is 1 s.d. above the mean, the unstandardized coefficient of level of career referent is 0.79 ($p < 0.001$). When gender composition equals the mean, the unstandardized coefficient of level of career referent is 0.93 ($p < 0.001$), and when gender composition is 1 s.d. below the mean, the unstandardized coefficient of level of career referent is 1.08 ($p < 0.001$). Thus, the impact of level of career referent on expected achievement is most extreme when the proportion of women is low and least extreme when the proportion of women is high.

This suggests that for women in this organization, there is some indication that having a higher proportion of female career referents does not directly reduce achievement expectations. Rather, having a higher proportion of female career referents tends to moderate the positive effect of choosing standard-setters: high-level career referents. In a pattern analogous to choosing mentors and role models, women seem to gain most from a balanced approach in which they have career referents who are both men and women rather than focusing predominantly on same-sex referents (see Gibson & Cordova 1999).

**DISCUSSION**

In this study we explore the extant explanation for why women consistently show lower achievement expectations than men. This explanation posits that women are more likely than men to compare themselves to women, and that these similar-gender referents hold lower level organizational positions than those held by men. As a result, when women consider their future potential, they compare themselves to low-level others and this attenuates their achievement expectations. While this study replicates some of the relationships underlying this explanation, it disconfirms others. The results support previous research showing that women have lower achievement expectations than men. They also sustain two previous results concerning the impact of gender on the selection of career referents. Women are more likely than men to choose women as career referents and women’s career referents are more likely than men’s to hold lower level positions.

However, the results challenge the logical integration of these relationships: that women have lower expected achievement than men *because* they compare themselves with women who hold lower level positions. By collecting social network data that provide a more fine-grained assessment of the
people respondents perceive as having similar careers in an organizational field setting, we were able to examine these relationships in more detail. First, in contrast to previous research, the gender composition of women’s career referents in this organization does not predict their expected achievement. Second, while level of career referent is a significant predictor of women’s lower expectations, there are limits to this relationship. When women and men compare themselves to career referents at the same high level, women still maintain achievement expectations that are lower than those of men. Thus, women’s lower expectations are fully explained neither by their comparisons to other women nor by the differences in the level of their comparisons.

Why is this the case? There are several possible explanations. One answer may be that women set more realistic achievement expectations than men. Men’s beliefs that they can achieve at high levels may be facilitated by high self-confidence (Heatherington et al. 1993), which reinforces their sense that they can assimilate to high-achieving others (Pelham & Wachsmuth 1995). Women may feel less confident than men that they can achieve at such high levels, and thus use a more conservative assessment of their abilities (Roberts 1991). Another possibility is that both women and men have realistic achievement expectations and that women’s lower-level judgments of who shares similar careers reflect the accurate assessment that their chances for achievement are lower than men’s, given the masculine-oriented structure of jobs and opportunities (Kanter 1977). Thus, women compare themselves with others who reflect their actual chances for future achievement (Major 1994; Zanna, Crosby, & Loewenstein 1987). If this is the case, future studies should find that women are more likely to accomplish their expected achievement than men.

Another answer may be that women and men select upward career referents for different reasons, and that these reasons influence how their referents affect their achievement expectations. For instance, women and men may differ in their comfort with the risks of upward comparisons. Extreme upward social comparisons are risky in the sense that they may provide inspiration by showing possible future achievement, especially if individuals regard that achievement as attainable. However, such comparisons may also make individuals feel threatened if they present a level of accomplishment individuals perceive
as unattainable (Lockwood et al. 1997). Drawing on our argument above that they are likely to perceive enhanced similarity to organizational leaders (see Ely 1994) and to have higher levels of self-confidence (Beyer 1990; Heatherington et al. 1993; Lenney 1977), men are more likely than women to regard higher levels of achievement as attainable. This suggests that extreme upward social comparisons may be inspirational for men and increase their expectations. In contrast, given the structural barriers to advancement women experience and their lower levels of self-confidence in achievement settings, women may be more likely than men to feel threatened by extreme upward comparisons. These comparisons are less likely to enhance women’s expectations, then, because women find them less inspirational.

Further, the fact that women base their expectations on career referents who are less upward than men may imply that their motivation for making social comparisons differs. Recent theory suggests that a motivation to self-evaluate prompts slightly upward comparisons, while a motivation to self-improve prompts more extreme upward comparisons (Nosanchuk & Erickson 1985; Taylor, Wayment, & Carrillo 1996). The current study shows gender differences in the degree of upward social comparison, but does not examine women’s and men’s motivations. It is possible that the differences in upward comparisons result because women are more likely than men to use these comparisons for self-evaluation whereas men are more likely than women to use these comparisons for self-improvement. Thus, women’s and men’s achievement expectations may differ because women are less likely than men to use social comparisons for self-improvement.

Finally, gender differences in expected achievement may result because women use different metrics to assess their achievement than do men. For example, there is evidence that women place a lower value on money as a component of career achievement than men, favoring outcomes such as interesting work or stimulating social environments (Nieva & Gutek 1981). Thus, women may compare themselves with lower-level career referents because these referents more closely represent the characteristics women regard as important; they may cognitively “trade off” higher pay for other job aspects (Heckert et al. 2002).
Although this study offers several methodological contributions to previous work, there are limitations. First, we collected both independent and dependent measures on one survey instrument, raising the issue of common method bias. However, our primary dependent variable, expected career achievement, represents a respondent attitude, while the primary independent variables (respondent gender, gender composition and hierarchical level of career referents) are not attitudinal, but based on a separate set of social network questions. While respondents indicated their perceived degree of similarity with career referents, the measures of gender composition and hierarchical level of career referents were derived from the organization’s records and are not perceptual measures. These widely differing measures and differing response formats between independent and dependent variables represent a “psychological separation,” possibly reducing some common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff 2003). [THIS IS A BIT CONFUSING. WHY IS IT BAD TO REDUCE COMMON METHOD BIAS? AM I READING THIS WRONG?] A second potential limitation is that although the data set is relatively large and complete, it still represents only one company and the results may be company-specific. The fact that the results replicate many previous findings on gender and achievement expectations, however, provides some promise that they are generalizable.

In terms of management practice, the expectations women have about career achievement are important because they may represent a self-fulfilling prophecy for actual achievement. Research shows, for example, that job candidates with higher pay expectations are offered more money than equally qualified candidates with lower expectations (Major, Vanderslice et al. 1984). To the extent that women set lower career achievement expectations, they may also contribute to—and help to sustain—an achievement level that is less than men’s, even when this difference is unwarranted.

An obvious question facing managers then, is, “How can women’s expectations of career success be enhanced?” One answer is that women’s expectations are partially based on the presence of upward career referents by whom they can be inspired. To the degree that women look to the people holding leadership positions in their organization and feel that they have little chance of attaining those positions, their expectations will reflect those assessments. This suggests first, that organizations need women in
high-level positions to enhance the achievement expectations of other women. Second, it suggests that managers need to be cognizant that women tend to shoot for lower positions than men, and use careful assessment and encouragement to make sure these women are not undervalued and thus underemployed.

This study suggests that the extant explanation for why women have lower achievement expectations than men needs further elaboration. We find significant differences in the effect of extreme upward social comparisons on women’s and men’s achievement expectations, which suggests that it is not just differences in the level of social comparisons that produces this disparity. It seems likely that future research on gender and achievement expectations will uncover a complex picture: that the effect of career referents on expectations is not solely based on referents’ structural characteristics—the demographic and hierarchical structure of the work environment—but also on differences in the way women and men learn from, perceive, and relate with other people in their work environment.
References


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Correlations larger than 0.10, p < .05.

Gender and ethnicity variables dummy-coded with 1 = minority category.
**TABLE 2a**
The Relationship Between Gender, Gender Composition of Career Referents, and Level of Career Referents on Expected Career Achievement

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<th>Model:</th>
<th>Model 1 (Controls)</th>
<th>Model 2 (H1)</th>
<th>Model 3 (H4)</th>
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<td>Independent Variables:</td>
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<tr>
<td>Gender</td>
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<td></td>
<td></td>
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<td>3.52*</td>
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<tr>
<td>Gender Composition</td>
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<td>0.64</td>
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<tr>
<td>Level of Career Referents</td>
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<td></td>
<td>0.95***</td>
<td>0.96***</td>
<td>1.06***</td>
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<tr>
<td>Gender x Level of Career Referents</td>
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<tr>
<td>F</td>
<td>33.41***</td>
<td>30.91***</td>
<td>26.86***</td>
<td>41.83***</td>
<td>38.54***</td>
<td>36.63***</td>
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<tr>
<td>R²</td>
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<td>0.45</td>
<td>0.46</td>
<td>0.59</td>
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</table>

Entries are unstandardized regression coefficients; *** p < .001, ** p < .01, * p < .05, † p < .10
FIGURE 1
The Effect of Gender, Gender Composition and Level of Career Referents on Expected Career Achievement

Replication: Extension:
H1: $b_1 > .05$  
H5: $b_5 > b_4$, controlling for Respondent Gender
H2: $b_2 > .05$  
H6: $b_{6a}$ (Men) $> b_{6b}$ (Women), controlling for Respondent Gender
H3: $b_3 > .05$  
and Gender Composition of Career Referents
H4: $b_4 > .05$

FIGURE 2
Interaction of Gender by Level of Career Referents