

# The Popularity Contest at Work: Who Wins, Why, and What Do They Receive?

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In 2 studies, the authors investigated the popularity of employees at work. They tested a model that positioned personality in the form of core self-evaluations and situational position in the form of communication network centrality as antecedents of popularity and interpersonal citizenship and counterproductive work behaviors received from coworkers as outcomes of popularity. Data from 116 employees and 383 coworkers in Study 1 and 139 employees, their significant others, and 808 coworkers in Study 2 generally supported the model. Core self-evaluations and communication network centrality were positively related to popularity, and popular employees reported receiving more citizenship behaviors and fewer counterproductive work behaviors from their coworkers than less popular employees, even controlling for interpersonal liking.

*Keywords:* popularity, organizational citizenship behavior, counterproductive work behavior, personality, social networks

During our school-age years, it was easy to identify which students were the most popular. At the extreme, some were anointed with titles (e.g., class president or homecoming king or queen) that reflected their popularity and bestowed on them special privileges that suggested the benefits of popularity. Research on popularity in school contexts has confirmed anecdotal evidence that being popular is advantageous. Compared with unpopular students, popular students are emulated and approached more often by others, receive more help, are the recipients of more positive stereotypes, and maintain more positive relationships with others (for a review, see Newcomb, Bukowski, & Pattee, 1993).

Unfortunately, the other side of the story is that being unpopular during childhood and adolescence is disadvantageous. Research has indicated that unpopular students' social interactions with others are largely negative, as they are frequently victimized by their peers (Schwartz, 2000). Perhaps as a result, those rejected by their peers experience higher levels of negative emotions, depression, and psychological withdrawal (Newcomb et al., 1993). Longitudinal studies have indicated that being unpopular results in a number of adverse behavioral outcomes, including higher levels of absenteeism and school dropout rates (DeRosier, Kupersmidt, & Patterson, 1994; Ollendick, Weist, Broden, & Greene, 1992). Overall, a considerable amount of research in developmental and educational psychology has shown that popularity is a salient phenomenon that substantially influences the way individuals are viewed and treated by others.

Despite the importance of popularity to childhood and adolescence, very little research has examined popularity beyond the contexts of primary and secondary school. However, it is likely that popularity continues to matter throughout adulthood. As Hogan (1983, p. 57) noted, "People have powerful needs for social approval"; consequently, the struggle to avoid social failure is prevalent throughout life, not merely during the school-age years. Moreover, interaction with others in groups does not desist once individuals become adults. This is especially true in the workplace, where an increasing amount of work is performed by teams (Kozlowski & Bell, 2003). Thus, the same social stratification that characterizes children's and adolescents' school experiences may also characterize adults' work experiences.

If popularity is an element of social stratification, then it is important to study popularity in organizations to reveal why some employees are more popular than others and whether popularity influences work outcomes. Indeed, many of the outcomes reviewed above in research on popularity in school settings mirror outcomes that have been examined in the organizational literature. Specifically, concepts such as receiving help from others, being victimized, withdrawing, being absent, and dropping out of school have workplace equivalents: organizational citizenship behavior (Smith, Organ, & Near, 1983), counterproductive work behavior (Sackett & DeVore, 2001), job withdrawal, absenteeism, and turnover, respectively. Popularity may thus be an additional variable to consider when understanding such outcomes and may provide another explanatory mechanism for why employees receive or engage in such behaviors.

Accordingly, the purpose of this article is to examine the concept of popularity in the workplace. We first define popularity and distinguish it from related concepts in its nomological network. We then develop a conceptual model of its antecedents and consequences. We test our hypotheses in two studies to determine whether (a) employees can be reliably differentiated by their coworkers in terms of popularity, (b) popularity is predicted by

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both personal and situational factors, and (c) popularity predicts treatment received from coworkers over and above related organizational concepts.

## Definition and Conceptual Model

### *Defining Popularity*

Although infrequently studied, popularity is not an entirely new concept to the organizational sciences. Several studies, most of which were conducted decades ago, suggested that the concept of popularity does translate from school to work. Popularity has been linked to job satisfaction (Van Zelst, 1951), individual job performance (Bass, 1962; Hollander, 1965), group performance (Lodahl & Porter, 1961; Porter & Ghiselli, 1960), and organizational punishment (Mitchell & Liden, 1982). Although this research suggested the relevance of popularity to the workplace, none of the studies provided a formal definition of popularity, and little theoretical rationale was presented linking popularity to the other variables examined. These limitations suggest that research on popularity can be enriched by defining popularity with greater precision and by drawing from existing theory to justify relationships between popularity and other work-related constructs.

Locke (2003) advocated the use of dictionaries as a useful foundation for formulating definitions of academic concepts, which he criticized for often being unnecessarily complex. The *Oxford English Dictionary* (2005) defined *popular* as “generally accepted, commonly known,” and *Merriam-Webster’s Collegiate Dictionary* (2003) defined it as “frequently encountered or widely accepted.” A common element of both dictionary definitions is the notion of acceptance, which parallels academic definitions of popularity found in the developmental and educational psychology literatures (e.g., Bukowski & Hoza, 1989; Coie, Dodge, & Copotelli, 1982; Newcomb & Bagwell, 1995). In accordance with the above, we define popularity as being generally accepted by one’s peers.

Some clarifications to this definition should be noted. First, although popularity is a property of an individual, an individual must be embedded in a group to possess it. Thus, in terms of level of analysis, popularity is “both an individual and group-oriented phenomenon” (Rubin, Bukowski, & Parker, 2006, p. 579). *Popular* and *unpopular* are labels conferred by group members on a focal employee, reflecting those members’ shared perceptions. Moreover, when evaluating the popularity of a given employee, individuals are not likely to rely on their own feelings toward the employee in question. Instead, individuals evaluate how others view the focal employee—the collective perception held of that employee. Thus, popularity is not in the eye of the beholder; rather, it is in the eyes of the beholders, reflecting the general opinion of the group about a given individual (Bukowski & Hoza, 1989).

Second, some researchers studying popularity in school contexts have equated acceptance with interpersonal liking, using interpersonal liking and disliking nominations made by peers to identify popular students (e.g., Coie et al., 1982). Although clearly they are related, there are fundamental differences between interpersonal liking and popularity. Whereas being liked interpersonally occurs at the dyadic level, being popular occurs at the group level (Rubin et al., 2006). Judgments of interpersonal liking are self-referenced (e.g., Cardy & Dobbins, 1986), and judgments of popularity are

other referenced (i.e., describe how the person is perceived by others). This notion fits well with Chan’s (1998) distinction among composition models, which specify the functional relationships among phenomena at different levels of analysis (see also Kozlowski & Klein, 2000). Of the various composition models discussed by Chan, referent-shift consensus models appear most applicable to the concept of employee popularity, as such models focus on how individuals believe others perceive a given construct. More important, Chan suggested that referent-shift consensus models require within-group agreement to justify the aggregation of individual perceptions. Thus, there should tend to be consensus among coworkers regarding the popularity of a given employee.

In contrast to judgments of how the group perceives a given employee, which should tend to be similar among coworkers, feelings of interpersonal liking toward that employee may differ among coworkers. This change in referent (from other to self) acknowledges that a coworker may perceive an employee as popular yet dislike that employee on an interpersonal level or, alternatively, that a coworker may perceive an employee as unpopular yet like that employee on an interpersonal level. On this point, research on children’s popularity has revealed that unpopular students tend to envy and dislike interpersonally those whom they perceive to be popular (Eder, 1985). Interestingly, despite these negative interpersonal feelings, students who dislike popular students still behave positively toward them. As LaFontana and Cillessen (1998, p. 317) noted, “Children may resent popular children, but their behavior toward them may be positive nonetheless, out of a desire to ingratiate themselves.” Thus, popularity may be associated with organizational phenomena in ways that are unique compared with interpersonal liking. In addition, given that feelings of interpersonal liking toward a given employee may not always match assessments of how popular that employee is within the group, we expect greater levels of agreement among coworkers for ratings of popularity than for ratings of interpersonal liking.

*Hypothesis 1 (H1):* Within a given work unit, coworkers will agree on the popularity of a given employee, as reflected by indices of interrater agreement.

*Hypothesis 2 (H2):* Popularity will be distinct from interpersonal liking, such that a confirmatory factor analysis will reveal the factors to be distinct (H2a), and popularity will predict outcomes over and above interpersonal liking (H2b).

In addition to interpersonal liking, popularity also can be distinguished from reputation. At a general level, reputation refers to “a specific characteristic or trait ascribed to a person or thing” (*American Heritage Dictionary*, 2000). Accordingly, reputation can be positive or negative, referring to anything that characterizes a given entity on a particular attribute. Thus, one must have a reputation *for* something. Within the organizational literature, reputation has been defined in various ways, depending on the characteristic to which reputation refers (e.g., reputation for fairness [Jones & Skarlicki, 2005] and reputation for performance [Kilduff & Krackhardt, 1994]). Clearly, the degree to which popularity and reputation are similar depends on how reputation is defined. Defined broadly, popularity may be one of several qualities that contributes to one’s reputation. Defined narrowly, differences between reputation and popularity are more apparent, as being

popular is not necessarily synonymous with being known as a fair person or a high performer.

*Conceptual Model*

Having defined popularity, we turn to a model of its antecedents and outcomes, which is shown in Figure 1. Regarding the antecedents, in accordance with person–situation perspectives of behavior (Mischel & Shoda, 1998), we conceptualized popularity as a function of both an employee’s personality and an employee’s situational position within his or her group. Specifically, we focused on core self-evaluations (Judge, Locke, & Durham, 1997) and work communication centrality (e.g., Brass & Burkhardt, 1993) as personal and situational antecedents of popularity, respectively. As we expand on below, we chose these two antecedents because both characteristics tend to elicit positive appraisals from others and thus should have implications for how accepted (i.e., popular) employees are among their coworkers.

Regarding the outcomes, we hypothesized that popular employees are the more frequent recipients of two exchanged-based outcomes from their coworkers: organizational citizenship behavior (OCB; Smith et al., 1983) and counterproductive work behavior (CWB; Sackett & DeVore, 2001). Social exchanges refer to “voluntary actions of individuals that are motivated by the returns they are expected to bring and typically do in fact bring from others” (Blau, 1964, p. 91). As we discuss below, interactions with popular employees should be perceived by coworkers as rewarding. As a result, coworkers should be motivated to direct more beneficial behaviors and fewer harmful behaviors toward popular employees to maintain affiliation. Indeed, research on children’s popularity has indicated that popular children are the recipients of more helpful behaviors and fewer harmful behaviors from their peers than unpopular children (e.g., Newcomb et al., 1993), suggesting parallels with OCB and CWB, respectively.

*Antecedents of Popularity*

*Core Self-Evaluations*

Studies on the popularity of children and adolescents have revealed associations between popularity and several dispositional traits. For example, Daniels and Leaper (2006) found that individuals with high self-esteem were more popular than individuals with low self-esteem, and Sandstrom and Coie (1999) found that individuals with an internal locus of control were more popular than those with an external locus of control. Research has also shown that emotionally stable individuals are more popular than neurotic individuals (Mehrabian, 1997; Young & Radkin, 1998). Together, these studies have suggested that certain dispositions may influence an individual’s popularity.

Judge et al. (1997) proposed that the above traits (self-esteem, locus of control, emotional stability, and generalized self-efficacy) share conceptual similarities and represent a broad, higher order trait they termed *core self-evaluations*. Core self-evaluations represent bottom-line evaluations that reflect the positivism of one’s self-construal. Individuals with high core self-evaluations are described as “well adjusted, positive, self-confident,” and “efficacious” (Judge, Erez, Bono, & Thoreson, 2003, p. 304). In the context of the current framework, core self-evaluations should have implications for the popularity of a given employee. Compared with employees with high core self-evaluations, employees with low core self-evaluations are less likely to interact with others in a positive way. As Judge et al. (1997, p. 159) noted, “A person who feels worthless . . . may withdraw from other people since to him they are not to be trusted, thus ensuring that he will not develop any positive relationships.” In addition, because of their low self-esteem and high neuroticism (respectively), employees with low core self-evaluations are more likely to exhibit poorer social skills and friendliness (Tharenou, 1979) and to display

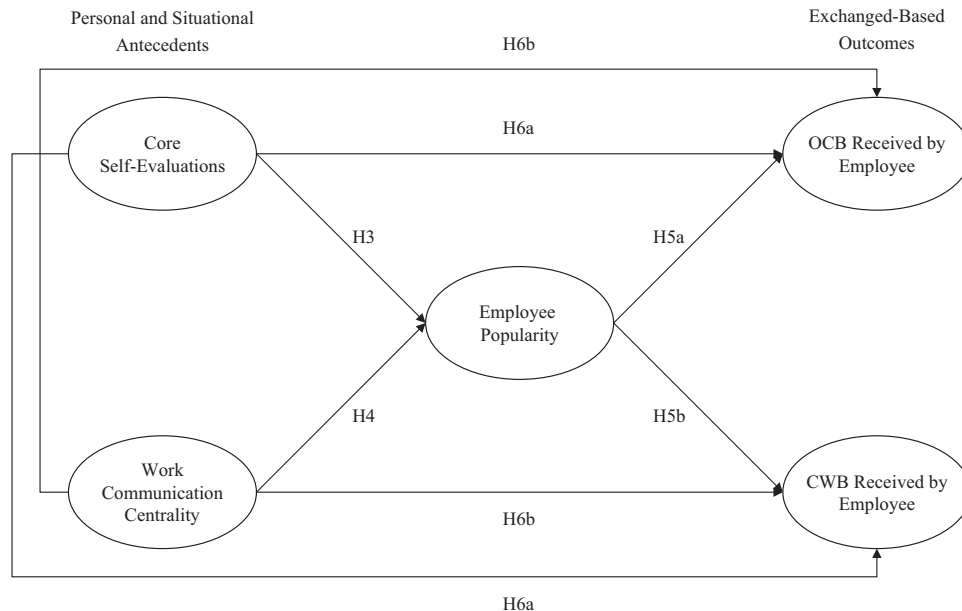


Figure 1. Hypothesized model of antecedents and outcomes of employee popularity. H = hypothesis; OCB = organizational citizenship behavior; CWB = counterproductive work behavior.

negative emotions such as hostility and anxiety (Watson, 2000), all of which should be appraised negatively by others, resulting in lower levels of popularity.

*Hypothesis 3 (H3):* Core self-evaluations will be positively related to popularity. Specifically, employees with positive core self-evaluations will be evaluated as more popular by their coworkers than will employees with negative core self-evaluations.

#### *Work Communication Network Centrality*

In addition to core self-evaluations, we propose that employees' situational positions within their group's communication network will influence popularity. A network refers to the structure of relationships within a group or organization and consists of a set of individuals (actors) and their relationships (ties) with one another (Wasserman & Faust, 1994). Individuals tied to many others are referred to as central. Although different types of networks exist in organizations (e.g., friendship networks), we focus on communication networks to capture employees' repeated patterns of work-related interaction (Brass & Burkhardt, 1993). That is, our goal was to consider employees' structural positions within their group's relatively formal, work-relevant communication network, as opposed to the more informal and less work-relevant friendship network.

Why should employees who are centrally located in the work communication network be more popular than those who are less centrally located? By virtue of their position, central employees should be more frequently encountered by their coworkers than less central employees. Over time, this frequent contact should result in greater acceptance. On this point, a substantial amount of research has shown that the more individuals are exposed to a stimulus, the more positively they appraise that stimulus (for a meta-analysis, see Bornstein, 1989). This "mere exposure" effect was first described by Zajonc (1968), who argued that through repeated exposure, novel stimuli not appraised as dangerous become more familiar and comfortable, resulting in increased acceptance and affiliation. It follows that because central employees are more proximal to others and are involved in more frequent interactions, they should be more widely known and accepted by their coworkers than peripheral employees. Taken together, this suggests that central individuals should be more popular. On this point, research on children's popularity has shown that popular schoolchildren tend to be those who are central within their classrooms (e.g., Farmer & Rodkin, 1996).

*Hypothesis 4 (H4):* Work communication centrality will be positively related to popularity, such that employees who are more central in their communication network will be evaluated as more popular by their coworkers than will employees who are less central in their communication network.

#### *Outcomes of Popularity*

##### *OCB and CWB*

As stated above, we chose to focus on OCB and CWB as exchanged-based outcomes of popularity. Both behaviors are un-

der the relative discretion of employees: OCBs include beneficial actions that bring people together, such as helping and demonstrating courtesy, and CWBs include harmful actions that drive people apart, such as behaving rudely and withholding information. The overwhelming majority of research on OCB and CWB has adopted an actor perspective, identifying the factors that lead employees to engage in these behaviors. Much less research has focused on the recipients, or targets, of these behaviors (for exceptions, see Bowler & Brass, 2006; Bowling & Beehr, 2006). Consequently, questions such as "What factors lead employees to receive OCB and CWB from their coworkers?" remain relatively unanswered. This question is especially relevant to interpersonal forms of OCB and CWB, which are directed specifically toward others (Robinson & Bennett, 1995; Smith et al., 1983). We turn the tables and adopt a target perspective of OCB and CWB, proposing that coworkers direct more interpersonal OCBs and fewer interpersonal CWBs toward popular employees.

Why might popular employees be the recipients of such beneficial behaviors from coworkers? We suggest that popular employees are perceived by others as rewarding to interact with for both affective and instrumental reasons. From an affective standpoint, interactions with popular employees are rewarding because those employees should elicit positive affective responses in their coworkers during encounters. Put simply, popular individuals are generally "fun to be with" (Newcomb et al., 1993, p. 119). From a more practical standpoint, interactions with popular employees are rewarding because affiliation with such employees may indirectly increase a coworker's own popularity. In essence, one basks in the reflected glory (Cialdini et al., 1976) of the popular employee. Research in developmental psychology has supported this notion, as Eder reported (1985) that middle-school girls increased their own popularity by affiliating with the most popular students. Thus, even those who dislike a popular employee on an interpersonal level may still benefit from maintaining a positive relationship. In sum, from a social exchange perspective (Blau, 1964), the rewards associated with interacting with a popular employee should trigger norms of reciprocity (Gouldner, 1960), resulting in the elicitation of behaviors that maintain positive relationships and increase the likelihood of future interaction, namely increased OCB and decreased CWB.

*Hypothesis 5 (H5):* Popularity will be positively related to receiving interpersonal OCBs from coworkers (H5a) and negatively related to receiving interpersonal CWBs from coworkers (H5b), such that popular employees will receive more interpersonal OCBs, and fewer CWBs, from their coworkers than will less popular employees.

#### *Popularity as Mediating Variable*

According to Baron and Kenny (1986, p. 1176), "a given variable may be said to function as a mediator to the extent that it accounts for the relation between the predictor and the criterion." In considering a mediated relationship, four conceptual linkages must be established: A is related to C (core self-evaluations and work communication centrality are related to OCB and CWB receipt); A is related to B (core self-evaluations and work communication centrality are related to popularity); B is related to C

(popularity is related to OCB and CWB receipt); and part (partial mediation) or all (full mediation) of the relationship between A and C is because of B. Thus far, we have offered conceptual support for the relationship between A and B (H3 and H4) and the relationship between B and C (H5).

Turning to the relationship between A and C, very little research has considered core self-evaluations and work communication centrality as antecedents of receiving OCBs and CWBs from coworkers. In line with our model shown in Figure 1, we propose that employees high in core self-evaluations, and those who are central in their group's work communication network, receive more OCBs and fewer CWBs from their coworkers in part because they are more popular. That is, to the extent that such employees are popular, as proposed in H3 and H4, their coworkers should be motivated to help them more, and hurt them less, because they view interactions with such employees as rewarding. Thus, we propose that the relationships between core self-evaluations, work communication centrality, and the receipt of OCBs and CWBs from coworkers are mediated, in part, by popularity.

However, this mediation should be partial rather than full, as other variables besides popularity may explain relationships between the above antecedents and outcomes. For example, according to Spector and Fox's (2002) emotion-centered model of voluntary work behavior, positive emotions elicit OCB, and negative emotions elicit CWB. Thus, employees high in core self-evaluations and employees high in centrality may be the recipients of OCB and CWB not only because they are popular, but also because of the emotions they elicit in others. In addition, coworkers may direct increased OCBs and fewer CWBs toward employees high in core self-evaluations and work communication centrality as a means of impression management because those employees are perceived as powerful and thus the most worthy targets of ingratiation (e.g., Bowler & Brass, 2006).

*Hypothesis 6 (H6):* Popularity will partially mediate the relationships of (a) core self-evaluations and (b) work communication centrality with the receipt of interpersonal OCBs and interpersonal CWBs, such that employees with positive core self-evaluations and employees who are more central in their communication network will receive more interpersonal OCBs and fewer interpersonal CWBs, in part because they are more popular.

#### *Control Variables*

In testing the model shown in Figure 1, we included several theoretically relevant control variables. According to status characteristics theory (Berger, Cohen, & Zelditch, 1972; Bunderson, 2003), certain demographic characteristics are attributed higher status, largely because such status cues are perceived by others to be associated with competence or expertise. We thus controlled for tenure, sex, and race, as research has shown that these individual characteristics are associated with status (Bunderson, 2003). In both studies, job title as a status indicator was controlled by design because participants and their coworkers were at the same level in the organizational hierarchy.

In addition to status cues, we controlled for interpersonal liking. Given the existing literature on liking in organizational psychology (e.g., Wayne & Ferris, 1990), it is important to empirically distin-

guish popularity from interpersonal liking to demonstrate that popularity adds beyond interpersonal liking in the prediction of work outcomes. According to Hunsley and Meyer (2003, p. 446), demonstrating that incremental validity

presents a rather stringent test of validity, as it requires not only that the prediction of an outcome with a test be better than that obtained by chance but also that the test demonstrate its value in comparison with other relevant sources of information.

As stated above, even coworkers who dislike a popular employee on an interpersonal level may still be motivated to direct positive behaviors toward that employee (e.g., LaFontana & Cillensen, 1998), and we thus expect popularity to predict the receipt of OCB and CWB, even controlling for interpersonal liking.

#### Study 1: Overview

The primary purpose of Study 1 was to construct a multi-item measure of employee popularity and to demonstrate its distinctiveness from interpersonal liking via confirmatory factor analyses and tests of incremental validity in predicting the receipt of interpersonal OCBs and CWBs from coworkers. Accordingly, we tested H1, H2, and H5 in Study 1.

#### *Method*

##### *Sample and Procedure*

The sample for Study 1 consisted of 116 undergraduate students (62 women and 54 men) attending a southeastern university. Participation was limited to individuals who were working at least 20 hr per week during the time of the study and who would be able to have multiple coworkers provide ratings on their behalf. Participants represented a wide variety of jobs, including restaurant servers, sales associates, and administrative assistants. The average age of the sample was 22.8 years ( $SD = 5.6$ ), and participants had worked an average of 22 months in their current position ( $SD = 22.5$ ). Reported ethnicities were as follows: African American (4.3%), Asian American/Pacific Islander (12.1%), Hispanic/Latino (14.7%), Native American Indian/Alaskan Native (1.0%), White (non-Hispanic; 67.2%), and other (1.0%).

Data were collected online. After reading an informed consent ensuring confidentiality, participants were instructed to provide at least two coworkers working under the same supervisor as the focal participant with a link to an online survey, which included the measures of popularity and interpersonal liking. Following completion of the coworker surveys, participants completed the measures of received interpersonal OCBs and CWBs and the demographic variables. Measures within both surveys were counterbalanced to avoid potential order confounds. Comparison of Internet Protocol (IP) addresses for each survey provided evidence that the participants did not complete the coworker surveys themselves. We received a total of 383 coworker surveys for the 116 participants ( $M = 3.3$  coworker surveys per participant). Participants received course credit for participation.

##### *Measures*

*Popularity.* On the basis of our definition of popularity and on existing research on popularity in school contexts, we developed

an eight-item scale to measure popularity. Items were generated to assess direct perceptions of the degree to which the employee is perceived as popular and accepted and more indirect perceptions of the degree to which the employee is known and collectively liked by coworkers within the employee's work group (Lease, Kennedy, & Axelrod, 2002). In accordance with referent-shift consensus models (Chan, 1998), we constructed the scale to refer to others' perceptions as opposed to individual perceptions. Specifically, each coworker who completed the scale was asked to

consider how the person who gave you this survey is perceived by his/her coworkers. Considering the perceptions of coworkers only in this person's immediate work group (those people, including yourself, who report to the same supervisor), indicate the extent to which you agree or disagree with each of the following statements.

The list of items began with the statement "The person for whom I am completing this survey," and items were as follows: "is popular," "is quite accepted," "is well-known," "is generally admired," "is liked," "is socially visible," "is viewed fondly," and "is not popular" (reverse scored). Coworkers responded to each item using a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Coefficient alpha for the scale was .92. Further information regarding the factor structure of the popularity scale is discussed below.<sup>1</sup>

*Interpersonal liking.* Interpersonal liking was measured using the four-item scale developed by Wayne and Ferris (1990). All items were measured on a 5-point scale. Anchors for the first item ("How much do you like this person?") ranged from 1 (*I don't like this person at all*) to 5 (*I like this person very much*); anchors for the remaining items (e.g., "I think this person would make a good friend") ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Coefficient alpha for this scale was .95.

*Interpersonal OCB and CWB received by employee.* To assess interpersonal OCB, we used the eight-item scale developed by Lee and Allen (2002); for interpersonal CWB, we used the nine-item scale developed by Porath, Pearson, and Shapiro (1999). Both scales were adapted to reflect receiving rather than engaging in the behaviors. Participants were asked to indicate how often their coworkers in their work group engage in each of the behaviors toward them using a 5-point scale ranging from 1 (*almost never*) to 5 (*very often*). Sample items for the OCB scale included "Give up time to help me with work or nonwork problems," "Assist me with my duties," and "Go out of the way to make me feel welcome in the work group." Coefficient alpha for this scale was .87. Sample items for the CWB scale included "Belittle me," "Try to avoid being in the same location as me," and "Treat me rudely." Coefficient alpha for this scale was .91.

## Results

### Support for Aggregation

As discussed above, referent-shift consensus models require within-group agreement to justify aggregation (Chan, 1998). Accordingly, we computed the following indices of interrater agreement:  $r_{wg(j)}$  (James, Demaree, & Wolf, 1993), and intraclass correlations ICC(1) and ICC(2) (James, 1982). For  $r_{wg(j)}$ , .70 and above is considered acceptable; for ICC(2), a cutoff of .60 is recommended (Bliese, 2000; Glick, 1985). ICC(1) values tend to

be lower, typically ranging from .05 to .20 (Bliese, 2000). Supporting Hypothesis 1, the average  $r_{wg(j)}$  for the popularity ratings was .95, ICC(1) = .38, and ICC(2) = .67. On the basis of these results, we aggregated the popularity items across raters (i.e., coworkers) for each focal participant. As expected, the interpersonal liking ratings demonstrated lower levels of interrater agreement than the popularity ratings. Although average  $r_{wg(j)}$  was relatively high (.95), ICC(1) = .15, and ICC(2) = .37.

### Confirmatory Factor Analyses

We conducted a confirmatory factor analysis to test the unidimensionality of the popularity scale. We entered the covariance matrix of the items, aggregated across raters, into LISREL 8.80 (Jöreskog & Sörbom, 1996). Fit statistics for the one-factor model were as follows:  $\chi^2(20, N = 116) = 110.25$ ,  $p < .001$ , comparative fit index (CFI) = .94, standardized root-mean-square residual (SRMR) = .054. According to Kline (2005), model fit is acceptable when CFI is above .90 and SRMR is below .10. All eight factor loadings were statistically significant ( $p < .001$ ), and the average standardized factor loading was .83 ( $SD = .05$ ).

Although the differences in interrater agreement imply that popularity and interpersonal liking are not synonymous, we tested two measurement models to provide further evidence of their distinctiveness: a two-factor model separating popularity from interpersonal liking and a one-factor model combining the popularity and interpersonal liking items with items aggregated across raters. A chi-square difference test revealed that the two-factor model fit the data significantly better than the one-factor model,  $\Delta\chi^2(1, N = 116) = 187.00$ ,  $p < .001$ , supporting Hypothesis 2a. Fit statistics for the two-factor model were as follows:  $\chi^2(53, N = 116) = 196.64$ ,  $p < .001$ , CFI = .96, SRMR = .050. The latent correlation ( $\phi$ ) between popularity and liking was .79. On the basis of these results, we averaged the eight popularity items, aggregated across raters, into a single scale for hypothesis testing.

### Descriptive Statistics

Table 1 presents the means, standard deviations, and zero-order correlations among the variables measured in Study 1. Popularity was significantly associated with the receipt of both OCB ( $r = .43$ ,  $p < .05$ ) and CWB ( $r = -.38$ ,  $p < .05$ ) from coworkers. The correlation between these two outcomes was moderate ( $r = -.34$ ,  $p < .05$ ) and corresponds closely to the recent meta-analytic correlation reported by Dalal (2005). Also of note is the correlation between popularity and interpersonal liking ( $r = .67$ ,  $p < .05$ ). As this correlation is based on disaggregated data, it can be interpreted as the strength of association between a coworker's popularity rating for a focal employee and that coworker's liking for the focal

<sup>1</sup> Our original measure of popularity included one additional item ("Is often the center of attention"). Results of an exploratory factor analysis revealed that this item loaded solely on a second factor. Once this item was dropped, a respecified factor analysis indicated that a single factor emerged that explained 72.5% of the variance in the eight items. These factor analytic results were replicated in Study 2, and thus we eliminated this item from our measure.

Table 1  
Descriptive Statistics and Correlations: Study 1

Variable	M	SD	1	2	3	4	5	6	7
1. Employee popularity	4.12	0.57	(.92)						
2. Organizational citizenship behavior received by employee	3.73	0.68	.43*	(.87)					
3. Counterproductive work behavior received by employee	1.55	0.59	-.38*	-.34*	(.91)				
4. Interpersonal liking	4.37	0.54	.67*	.39*	-.26*	(.95)			
5. Sex (0 = male, 1 = female)	0.53	0.50	.14	.16	-.07	.24*	—		
6. Race (0 = Caucasian, 1 = non-Caucasian)	0.33	0.47	-.12	.05	.00	-.06	-.05	—	
7. Position tenure in months	22.03	22.53	.18	.04	-.11	.05	.05	-.22*	—

Note. *N* = 116. Coefficient alphas are shown along the diagonal in parentheses. Correlation between employee popularity and interpersonal liking calculated from disaggregated data (*N* = 383).

\* *p* < .05, two-tailed.

employee. Finally, the correlations between popularity and the demographic status indicators (sex, race, and tenure) were relatively weak in magnitude.<sup>2</sup>

Tests of Hypotheses

H5, which proposed that popular employees receive more OCBs and fewer CWBs from their coworkers, was tested using hierarchical regression. Interpersonal liking and the demographic variables were entered in the first step of the regression, followed by popularity, to assess the incremental validity of popularity. Table 2 shows the results of the regressions. As shown in the second step of the regressions, popularity was significantly associated with the receipt of interpersonal OCBs ( $\beta = 0.35, p < .05$ ) and CWBs ( $\beta = -0.40, p < .05$ ) from work colleagues, explaining an additional 5% of the variance in OCB ( $p < .05$ ) and 7% of the variance in CWB ( $p < .05$ ) over and above interpersonal liking and the status indicators. Thus, H5 was supported, and these results also provide additional support for H2b by demonstrating that popularity predicts the receipt of OCBs and CWBs even when controlling for interpersonal liking. To provide further evidence for the utility of popularity vis-à-vis interpersonal liking, we conducted a usefulness analysis by examining the incremental validity of interpersonal liking over and above popularity. Although popularity explained significant additional variance in both OCB ( $\Delta R^2 = .05, p < .05$ ) and CWB ( $\Delta R^2 = .07, p < .05$ )

Table 2  
Incremental Validity of Employee Popularity: Study 1

Predictor	Organizational citizenship behavior received by employee			Counterproductive work behavior received by employee		
	R <sup>2</sup>	$\Delta R^2$	$\beta$	R <sup>2</sup>	$\Delta R^2$	$\beta$
Step 1: Interpersonal liking	.17*		0.38*	.08		-0.26
Sex			0.07			-0.01
Race			0.08			-0.04
Tenure			0.03			-0.10
Step 2: Employee popularity	.22*	.05*	0.35*	.15*	.07*	-0.40*

Note. *N* = 116. Sex coded 0 = male, 1 = female; race coded 0 = Caucasian, 1 = non-Caucasian. Tenure represents months in current position.

\* *p* < .05.

over and above interpersonal liking and the demographic controls, the incremental variance of interpersonal liking over and above popularity and the demographic controls was not significant for OCB ( $\Delta R^2 = .01$ ) or CWB ( $\Delta R^2 = .00$ ).

Study 2

Overview

The primary purpose of Study 2 was to replicate the findings of Study 1 in a sample of full-time employees and to test the entire model shown in Figure 1. Participants from Study 2 worked together in intact teams, allowing us to obtain measures of work communication centrality. We also measured core self-evaluations in this sample; thus, all hypotheses were tested in Study 2.

Method

Sample and Procedure

Participants in Study 2 were 139 health care employees (93 women and 46 men) from 22 groups of a large hospital located in the southeastern United States. All participants worked full time and performed much of their work in teams, providing a good setting in which to study social interaction and popularity. The average age of the sample was 38 years (*SD* = 10.5), and participants had worked an average of 49 months in their current position (*SD* = 43.3). Reported ethnicities were as follows: African American (8.6%), Asian American/Pacific Islander (2.9%), Hispanic/Latino (3.6%), White (non-Hispanic; 81.3%), and other (3.6%).

Participants were recruited through various contacts within the organization. The contacts were not of higher organizational rank to ensure that participants would not feel unfairly obligated to participate. Intact groups of employees of similar status within the organizational hierarchy were identified. Those wanting to participate were contacted by Brent A. Scott, who then e-mailed instruc-

<sup>2</sup> To provide convergent validity evidence, we followed the Coie et al. (1982) method and collected sociometric nominations in Study 1 by asking coworkers to nominate who they “like the most” and who they “like the least” in their work group. Scores were calculated by subtracting the number of liked-least nominations from the number of liked-most nominations. This sociometric measure correlated .45 ( $p < .05$ ) with our popularity scale.

tions. After reading the informed consent, each participant was first asked to have a significant other (i.e., spouse, partner, close friend, or close relative) complete an online survey that assessed the participant's core self-evaluations. Significant other reports were used to keep all hypotheses free of same-source bias. Studies have demonstrated the validity of others' ratings of personality, particularly between close acquaintances (Funder, Kolar, & Blackman 1995). More specific to the current study, Judge et al. (2003) showed substantial intersource (self-significant other) agreement in assessments of core self-evaluations, suggesting the validity of independent reports of the trait. Comparison of IP addresses ensured that ratings were completed by different sources.

Next, participants were instructed to ask every coworker within their immediate work group to complete a survey on their behalf. Thus, in contrast to Study 1, in which participants chose which colleagues to ask to complete the coworker survey, in Study 2 all coworkers within the focal employee's work group were asked to complete the coworker survey. Participants provided their coworkers with a link to the online survey, which the coworkers completed after viewing an informed consent page. The coworker survey included the network communication measure and measures of popularity and interpersonal liking. In all, we obtained 808 coworker surveys for the 139 participants ( $M = 5.8$  coworker surveys per participant), resulting in a response rate of 82.4%.

Following completion of the significant other and coworker surveys, participants completed an online survey that assessed interpersonal OCBs and CWBs received from coworkers and the demographic variables. Once again, measures within all surveys were counterbalanced, and comparison of IP addresses provided evidence that each survey was completed by a different source.<sup>3</sup> Because data were obtained from significant others, coworkers, and participants themselves, tests of hypotheses were free of same-source bias. In exchange for participating, participants received \$40.

## Measures

**Popularity.** The same measure from Study 1 was used to assess popularity. Once again, coworkers were instructed to consider how the focal employee is perceived by members of the employee's particular work group. In Study 2, groups were defined formally within the organization, which facilitated consistent referents across raters. For example, the occupational therapist group consisted solely of occupational therapists who worked together on a regular basis, and coworkers from that group were asked to consider how the focal employee was perceived within that group only. Coefficient alpha for this scale was .92.

**Core self-evaluations.** Significant others for each participant responded to the 12-item scale developed by Judge et al. (2003), with items adapted to be in reference to another individual (the focal participant). Significant others responded to each item on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Sample items included "When s/he tries, s/he generally succeeds," "Overall, is satisfied with him/herself," and "Determines what will happen in his/her life." Coefficient alpha for this scale was .86.<sup>4</sup>

**Work communication centrality.** To assess the centrality of employees' positions within their group's work-related communication network, we presented their coworkers with a list containing the names of employees from their particular work group. This roster method facilitates recall and limits measurement error (Hol-

land & Leinhardt, 1973). Following Brass and Burkhardt (1993), each coworker was asked to "check the names of people with whom you communicate as part of the job during a typical week."

Given the differences in group sizes, we computed normed in-degree centrality scores for each focal participant (Freeman, 1979). Specifically, we counted the number of coworkers who chose the focal participant as a work-related communication partner and then divided this number by the total number of possible choices (i.e., the group's size minus one). Thus, normed in-degree centrality scores range from 0 to 1, where 0 represents an employee who receives no choices and 1 represents an employee who is chosen by every other group member. We chose to use in-degree centrality scores as opposed to out-degree centrality scores because the former are derived from multiple sources (i.e., the focal participant's coworkers), whereas the latter are derived from a single source (i.e., the focal participant). Thus, in-degree centrality scores do not suffer from self-report limitations (see also Sparrowe, Liden, Wayne, & Kraimer, 2001).

To assess the reliability of the network data, we calculated the proportion of reciprocal choices (Wasserman & Faust, 1994). A reciprocal choice occurs when person A chooses person B, and person B chooses person A. The reliability of the instrumental network was .79 (i.e., 79% of the choices were reciprocated).

**Interpersonal OCB and CWB received by employee.** As in Study 1, the measures developed by Lee and Allen (2002) and Porath et al. (1999) were used to measure OCB and CWB, respectively. Measures were adapted to reflect receiving rather than engaging in the behaviors. Coefficient alpha was .92 for the OCB scale and .90 for the CWB scale.

**Interpersonal liking.** Liking was measured with a single item adapted from Wayne and Ferris (1990). Coworkers were asked to indicate to what extent they like the employee in question using a 5-point scale ranging from 1 (*I dislike this person very much*) to 5 (*I like this person very much*).

## Results

### Support for Aggregation

Following Study 1, we first computed indices of interrater agreement to determine whether coworkers agreed on the popularity of each employee they rated. Similar to Study 1, the average  $r_{wg(i)}$  for the popularity ratings was .94, and ICC(1) and ICC(2) were .36 and .77, respectively, supporting H1. Once again, the ratings of interpersonal liking demonstrated lower levels of agreement (average  $r_{wg(j)} = .70$ , ICC[1] = .14, ICC[2] = .52). On the basis of these findings, we aggregated the popularity ratings across raters for each participant.

<sup>3</sup> We excluded a coworker survey for 1 participant who completed it himself.

<sup>4</sup> As a validity check, we collected self-ratings of core self-evaluations by having participants respond to the same set of items ( $\alpha = .83$ ). The self- and significant other reports correlated at .51, which is similar to the level of self-other agreement reported in previous research (Judge et al., 2003). Hypotheses were tested with the significant other reports to preserve independence in the data sources.

Table 3  
*Descriptive Statistics and Correlations: Study 2*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Employee popularity	3.94	0.51	(.92)								
2. Organizational citizenship behavior received by employee	3.83	0.82	.24*	(.92)							
3. Counterproductive work behavior received by employee	1.34	0.53	-.16	-.41*	(.90)						
4. Core self-evaluations	3.87	0.58	.21*	.25*	-.24*	(.86)					
5. Work communication centrality	0.69	0.24	.27*	.07	.05	-.04	(.79)				
6. Interpersonal liking	4.35	0.47	.55*	.10	-.12	.16	.34*	—			
7. Sex (0 = male, 1 = female)	0.67	0.47	.15	.18*	-.15	-.04	-.07	.10	—		
8. Race (0 = Caucasian, 1 = non-Caucasian)	0.17	0.38	.17*	-.16	.00	-.02	.19*	.26*	.03	—	
9. Position tenure in months	49.00	43.27	-.10	.03	-.05	.00	-.06	-.16	-.01	-.06	—

*Note.*  $N = 139$  after listwise deletion. Reliabilities are shown along the diagonal in parentheses. Correlation between employee popularity and interpersonal liking calculated from disaggregated data ( $N = 711$ ).

\*  $p < .05$ , two-tailed.

### Descriptive Statistics

Table 3 presents the means, standard deviations, and zero-order correlations among the variables measured in Study 2. Both core self-evaluations ( $r = .21, p < .05$ ) and work communication centrality ( $r = .27, p < .05$ ) were positively correlated with popularity. In addition, popularity was significantly associated with the receipt of more OCBs ( $r = .24, p < .05$ ) from coworkers, although its correlation with the receipt of CWBs was not significant ( $r = -.16$ ). Also of note is the correlation between popularity and interpersonal liking ( $r = .55, p < .05$ ), which was somewhat lower than the correlation found in Study 1.

### Tests of Hypotheses

The model in Figure 1 was tested using structural equation modeling. We first conducted a confirmatory factor analysis to test the validity of the measurement model for the multi-item scales. The hypothesized four-factor model separating core self-evaluations, popularity, OCB, and CWB was tested using the covariance matrix of items as input into LISREL 8.80 (Jöreskog & Sörbom, 1996). Fit statistics for the four-factor measurement model were as follows:  $\chi^2(623, N = 139) = 1,189.03, p < .001$ , CFI = .92, SRMR = .075. The 37 factor loadings all were statistically significant ( $p < .05$ ), and standardized factor loadings for each variable averaged .57 for core self-evaluations, .84 for popularity, .78 for OCB, and .72 for CWB. We also tested a competing model combining OCB and CWB into a single coworker treatment factor; however, a chi-square difference test revealed that the four-factor model fit the data significantly better than the alternative three-factor model,  $\Delta\chi^2(3, N = 139) = 459.36, p < .001$ .

After validating the measurement model, we added structural paths corresponding to the hypotheses. Work communication centrality was added as a latent variable by setting the error variance equal to the observed variance multiplied by 1 minus the observed reliability (see Kline, 2005). The control variables (interpersonal liking, sex, race, and tenure) were included by adding paths from these variables to the two outcomes.<sup>5</sup> We allowed the error terms between OCB and CWB to covary, as both outcomes reflect job performance (Rotundo & Sackett, 2002). In covariance structure modeling, when one wishes to estimate a noncausal association

between two endogenous variables, one frees the error variance between the two latent concepts in the psi matrix (e.g., Judge & Colquitt, 2004). The model and results are shown in Figure 2. Numbers shown along the paths in Figure 2 represent standardized regression coefficients. Fit statistics for the model indicated acceptable fit and were as follows:  $\chi^2(792, N = 139) = 1,518.32, p < .001$ , CFI = .91, SRMR = .087.

H3 predicted that core self-evaluations are positively related to popularity. In support of this hypothesis, the path coefficient from core self-evaluations to popularity was positive and significant ( $\beta = 0.27, p < .05$ ). H4 predicted that work communication centrality is positively related to popularity. Figure 2 shows that the path coefficient was positive and significant ( $\beta = 0.38, p < .05$ ). Thus, H4 was supported: Employees with whom many others communicated about work-related matters were more popular than employees who were less central in their group's communication network.

H5 predicted that popularity is positively related to receiving OCBs (H5a) and negatively related to receiving CWBs (H5b). Results shown in Figure 2 reveal that popularity was positively associated with receiving OCBs ( $\beta = 0.28, p < .05$ ), which replicates the findings of Study 1. In contrast, the path coefficient between popularity and CWBs was not significant ( $\beta = -0.18$ ). Thus, H5a, but not H5b, was supported. In addition, these results provide some support for H2b in that popularity was related to OCB with interpersonal liking controlled. To further investigate the differential validity of popularity and interpersonal liking, we followed the procedure outlined by Brooke, Russell, and Price (1988) by estimating a structural model in which the paths between popularity, interpersonal liking, and the outcomes (OCB and CWB) were constrained to be equal. A chi-square difference test revealed that this model fit the data significantly worse than the

<sup>5</sup> Some scholars have argued that the status characteristics of demographic variables should be considered in relative, rather than absolute, terms, with an individual's demographic profile being either status consistent or status inconsistent within a given unit of analysis (Bachrach, Bamberger, & Mundell, 1993). Accordingly, we reestimated the model shown in Figure 2 controlling for relational demography by computing indices of sex, race, and tenure similarity within groups (e.g., Tsui & O'Reilly, 1989). Results were unchanged.

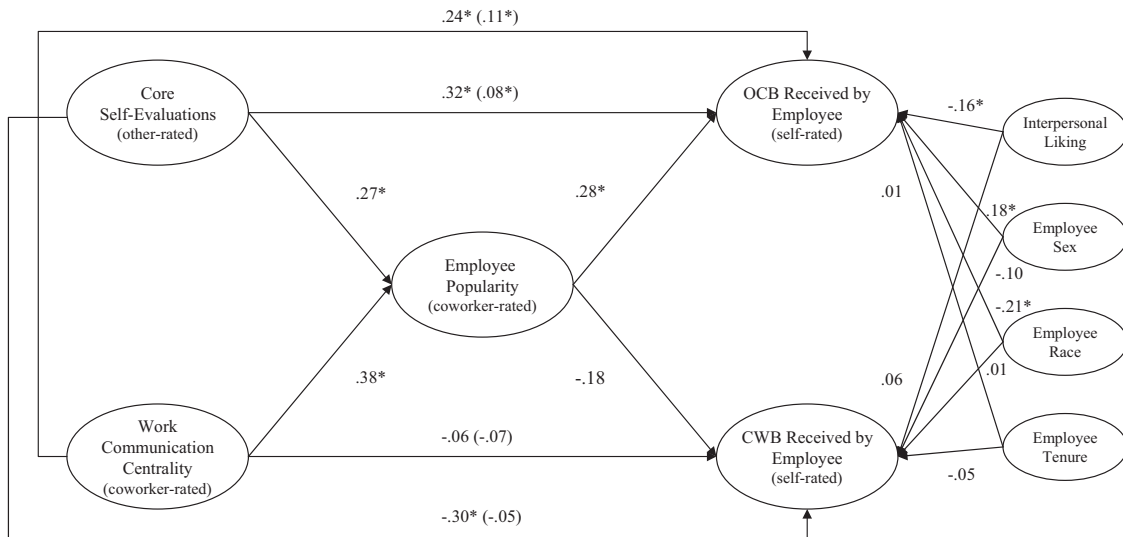


Figure 2. Structural model results predicting organizational citizenship behavior (OCB) and counterproductive work behavior (CWB) received by an employee with employee popularity, employee core self-evaluations, and work communication centrality,  $\chi^2(792, N = 139) = 1,518.32, p < .001$ , comparative fit index = .91, standardized root-mean-square residual = .087. Values shown are standardized regression coefficients. Indirect effects are shown in parentheses. \*  $p < .05$ .

model in which these paths were freely estimated,  $\Delta\chi^2(349, N = 139) = 606.15, p < .001$ .

H6 predicted that popularity partially mediates the relationships between core self-evaluations, work communication centrality, and OCB and CWB received from coworkers. We first contrasted the fit of a fully mediated model (without paths from the antecedents to the outcomes) to the fit of a partially mediated model (with paths from the antecedents to the outcomes). As judged by a chi-square difference test, the partially mediated model fit the data significantly better than the fully mediated model,  $\Delta\chi^2(4, N = 139) = 12.36, p < .05$ . Figure 2, which shows the partially mediated model, includes both the total and the indirect effects of the antecedents on the two outcomes (each direct effect can be calculated by subtracting the indirect effect from the total effect). According to MacKinnon, Lockwood, Hoffman, West, and Sheets (2002), mediation is supported when the indirect effect of the predictor on the outcome is significant (see also Sobel, 1982), which is calculated by multiplying the effect of the predictor on the mediator by the effect of the mediator on the outcome.

As Figure 2 shows, the total effect of core self-evaluations on received OCBs was positive and significant ( $\beta = 0.32, p < .05$ ), and the indirect effect was significant ( $\beta = 0.08, p < .05$ ). Although the total effect of core self-evaluations on received CWBs was negative and significant ( $\beta = -0.30, p < .05$ ), the indirect effect was not significant ( $\beta = -0.05$ ). For work communication centrality, the total effect on received OCBs was positive and significant ( $\beta = 0.24, p < .05$ ), and the indirect effect was significant ( $\beta = 0.11, p < .05$ ). However, the total effect of work communication centrality on received CWBs was not significant ( $\beta = -0.06$ ), leaving no effect to be mediated by popularity. Taken together, these results provide partial support for H6: Popularity partially mediated the relationships between core self-evaluations, work communication centrality, and received OCBs,

but did not mediate the relationships between these antecedents and received CWBs.

## General Discussion

It has been stated that “the workplace is not a popularity contest” (Joyce, 2006). Although the workplace may not be a popularity contest per se, clearly there are winners and losers. In two studies, we examined the popularity of employees, embedding the concept in a framework of personal and situational antecedents and work-relevant outcomes. Overall, some key findings consistently emerged. Both studies revealed that coworkers reliably agree on who within their work groups is popular and who is not and that an employee’s popularity is associated with the receipt of favorable treatment from those coworkers, even after status cues and interpersonal liking are taken into account. In addition, results from both studies provided evidence that popularity is related to yet distinct from interpersonal liking.

Study 2 extended the findings of Study 1 by demonstrating that an employee’s personality (core self-evaluations) and situational position (work communication centrality) are both associated with popularity. Although popularity partially mediated the relationships between core self-evaluations, work communication centrality, and received OCBs, popularity did not mediate the relationships between these antecedents and received CWBs. Of the antecedents, only core self-evaluations were associated with the receipt of CWBs from coworkers, which suggests that mechanisms other than popularity may be responsible for the effect. As we noted above, it could be that interactions with individuals low in core self-evaluations elicit negative emotions in coworkers such as anger and hostility, which in turn motivate coworkers to engage in CWB (see Spector & Fox, 2002). The nonsignificant relationship

between popularity and CWB in Study 2 was likely also a contributing factor to the null results for mediation.

Taken together, our findings provide both optimism and caution for the study of popularity in the workplace. On the optimistic side, our results show that popularity may be an important concept to consider in organizational behavior, and our findings can help provide a foundation on which future studies of popularity can be built. On the cautious side, however, there were several incidents of failing to support hypothesized linkages, suggesting that the stability of this foundation should be improved as future research proceeds. For example, the mixed findings for the relationship between popularity and CWBs received from coworkers may imply that features of the organization should be considered when examining popularity. It may be that popularity exerts a stronger influence on individuals' behaviors in some organizations than in others. Superficial qualities such as popularity may matter less in organizations in which workloads and interdependencies are high, such as the health care site used for Study 2. In essence, the organizational context may influence the relevance of popularity in a top-down manner, and such factors should be taken into consideration as the study of popularity moves forward. In addition, given that we examined antecedents of popularity only in Study 2, and given that the results for mediation were rather weak (especially for CWBs, where there was no mediation), the foundation for the study of popularity could be strengthened by considering a broader list of antecedents and outcomes that are theoretically linked to popularity. We provide some suggestions along these lines below.

### *Limitations*

Several limitations merit discussion. First, like most field studies, the presumed causal ordering among the variables is open to question. Although the two studies certainly do not meet all requirements to support causal inference, we did attempt to preserve temporal precedence by having participants complete the outcome measures after coworkers completed the popularity measure, and to avoid the interpretational problems associated with same-source bias by using multiple measures (coworker, self-, and significant other reports). Despite these efforts, the causal caveats involved in interpreting the results of field research should be kept in mind here.

A second limitation is that we did not control for objective measures of performance or network centrality (with physical position or some other objective measure). Although objective measures would have been advantageous, research has indicated that subjective reports of network centrality correspond closely to observational data (Freeman, Romney, & Freeman, 1987). The omission of objective measures of performance is perhaps a more serious omission. Although such a measure was not feasible in either of the studies, as we note shortly, including task performance is an important area for future research.

A third limitation is the nature and size of the samples. Although a limitation of Study 1 was the nature of the sample (students working part time), this was not a limitation that was repeated in Study 2 (which consisted of full-time employees). In addition, one potential drawback of Study 1 is that participants chose to whom their coworker surveys were given, and participants may have asked only those coworkers with whom they have a good relation-

ship. Although this limitation was avoided in Study 2 because the vast majority of coworkers completed the coworker survey, the means of popularity in both studies were relatively high, suggesting potential range restriction (although not sufficient to render the popularity results nonsignificant). Finally, the sample size for each study was relatively small, which raises the question of whether there was sufficient power to detect significant effects. To explore this issue, we conducted post hoc power analyses for each study. For Study 1, following the procedure of Cohen, Cohen, West, and Aiken (2003), we calculated the power associated with the observed  $R^2$  values for each regression. With alpha at .05 (two sided), the estimated power of the OCB and CWB regressions was .99 and .90, respectively. For Study 2, following the procedure outlined by Satorra and Saris (1985), the estimated power of the structural equation model was .99. Thus, it appears that there was adequate power to detect significant effects.

Finally, although the research reported in this investigation arguably represents, to the best of our knowledge, the most comprehensive investigation of employee popularity to date, the studies hardly exhaust the list of variables that should be studied. For example, mediators of the links between popularity and receipt of OCB and CWB should be investigated. Do popular employees receive better treatment from others because they develop more or higher quality coworker exchanges (Sherony & Green, 2002)? Or do popular employees receive more help (and less harm) from their coworkers because these coworkers perceive popular people as powerful and therefore worthy targets of ingratiation so as to receive valued positions or benefits that only the powerful can bestow (Westphal & Stern, 2006)? Future research should also examine other antecedents (e.g., other traits such as sociability) and outcomes (e.g., career success) of popularity.

### *Practical Implications and Further Suggestions for Future Research*

These results have implications for organizations and for individuals within these organizations. For organizations, the popularity-to-outcomes results may be perplexing in the sense that whereas popularity certainly would not qualify as a bona fide occupational qualification for any job, neither would it be recognized as something wholly irrelevant to the social nature of many jobs. If popular employees are better treated—as they appear to be—does that suggest a lack of fairness in coworker interactions? If two employees perform the core tasks of their jobs equally well, is it fair that one is advantaged because he or she is more popular than the other? On one hand, one might well argue that the result is fair because many jobs have a social component and that employees who are popular are better at facilitating the social aspects of work. On the other hand, organizations are not country clubs, and by valuing popularity organizations may be promoting a certain “clubby” atmosphere that mimics school cultures, but in a setting that one would hope has matured beyond the adolescent milieu. Although social relationships at work have been cited as an exemplar in positive organizational scholarship (Dutton & Ragins, 2007), social relations have their pitfalls, one of which may be that it unfairly disadvantages those employees who may otherwise be valued members of an organization, but who are not popular.

Wrzesniewski and Dutton (2001) argued that marginalized individuals often make critical contributions to organizational effec-

tiveness in ways that are unrecognized by management. Although Roberts (2006) was not writing with specific reference to popularity, she noted the tendency of organizations to devalue the inputs of marginalized employees, arguing, "By rendering these acts invisible, scholars and practitioners may disempower those individuals who perform them" (p. 299). This suggests that for optimal organizational effectiveness and fairness, managers may need to make special efforts to recognize the contributions of less popular but otherwise valued employees because their contributions are likely to be marginalized.

For individuals, the results suggest that being unpopular has costs in the form of receiving fewer positive and more negative acts from one's peers. The findings suggest that one way to receive more favorable (or less unfavorable) treatment, of course, is to strive to become more popular. Our results provide some indirect suggestions for how this might be accomplished (increased communication so as to raise network centrality, and emphasizing positive interactions with coworkers). However, some individuals may be uninterested or unable to play the popularity game. Given the marginalization dangers reviewed above, such individuals will need to take special care in "job crafting" (Wrzesniewski & Dutton, 2001) their work in such a way as to visibly contribute to organizational effectiveness. In short, popularity is not the only means by which one can be an effective member of an organization. As Wrzesniewski and Dutton (2001) noted, job crafting is a proactive process by which employees become architects of their own work and thereby attain their own behavioral accomplishments. Although job crafting is important, it does not seem unreasonable to argue that such efforts are likely to be especially important for less popular employees.

In terms of future research, although the breadth and inherent positivity of core self-evaluations made it a reasonable first choice as a dispositional antecedent of popularity, future research should examine more narrow dispositions. Given calls for more research on specific traits (Hough & Oswald, in press), future research should determine whether the individual traits making up core self-evaluations, such as neuroticism, are more important than the broad core self-evaluations factor in predicting popularity. Besides neuroticism, other traits of the Big Five (Goldberg, 1990), such as agreeableness and extraversion, are likely associated with popularity. Agreeable individuals are friendly, warm, and motivated to get along with others (Barrick, Stewart, & Piotrowski, 2002), and extraverted individuals are high in positive affect and motivated to gain social attention (Ashton, Lee, & Paunonen, 2002). As a result, high levels of these traits may be predictive of popularity.

Another topic for future research would be to examine the possible boundary conditions of popularity. Is popularity more important in some environments than in others? When work relationships are embedded under conditions of high task interdependence (Wageman, 1995), is popularity more (interactions are more frequent or intense; interdependency is higher) or less (because task demands overwhelm any "culture of personality") important? Likewise, do popular employees help or hinder group cohesiveness? It could be that popular employees are adept at bringing individuals together, especially in times of conflict. However, it could also be that high levels of social stratification keep groups from becoming cohesive. Another possible boundary condition is individual or group task performance. For individual task performance, one might imagine moderation in either direction. On one

hand, popularity might compensate for poor prior performance in that popular employees can use their popularity to deflect criticism or blame. On the other hand, popularity might amplify the effects of performance. If popular employees are widely known, then both the good and the bad should be more salient. A similar mechanism may operate for group performance: Although popular employees may receive disproportionate share of the credit when things are going well, they may be particular targets of blame when things go poorly.

In addition, like many variables in the organizational sciences such as job attitudes (e.g., Judge et al., 2006), popularity may ebb and flow over time. If popularity does vary both between and within individuals, it would be interesting to determine what dynamic factors predict within-individual fluctuations in popularity. One can imagine popularity being predicated on certain work events or critical incidents, by particular configurations of network structures (and thus popularity changes when a social network experiences a change in membership), or by the vicissitudes of time itself.

Finally, future research should examine the possible disadvantages of being popular. For example, although gossip at work has received scant attention from organizational scholars (see Waddington, 2005), given that one would expect popular employees to be disproportionate targets of work gossip, it would be seem to be a particularly worthwhile topic for future research.

## References

- American heritage dictionary of the English language* (4th ed.). (2000). Boston: Houghton Mifflin.
- Ashton, M. C., Lee, K., & Paunonen, S. V. (2002). What is the central feature of extraversion? Social attention versus reward sensitivity. *Journal of Personality and Social Psychology*, *83*, 245–252.
- Bacharach, S. B., Bamberger, P., & Mundell, B. (1993). Status inconsistency in organizations: From social hierarchy to stress. *Journal of Organizational Behavior*, *14*, 21–36.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173–1182.
- Barrick, M. R., Stewart, G. L., & Piotrowski, M. (2002). Personality and job performance: Test of the mediating effects of motivation among sales representatives. *Journal of Applied Psychology*, *87*, 43–51.
- Bass, B. M. (1962). Further evidence on the dynamic character of criteria. *Personnel Psychology*, *15*, 93–97.
- Berger, J., Cohen, B. P., & Zelditch, M., Jr. (1972). Status characteristics and social interaction. *American Sociological Review*, *37*, 241–255.
- Blau, P. M. (1964). *Exchange and power in social life*. New York: Wiley.
- Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions* (pp. 349–381). San Francisco: Jossey-Bass.
- Bornstein, R. F. (1989). Exposure and affect: Overview and meta-analysis of research, 1968–1987. *Psychological Bulletin*, *106*, 265–289.
- Bowler, W. M., & Brass, D. J. (2006). Relational correlates of interpersonal citizenship behavior: A social network perspective. *Journal of Applied Psychology*, *91*, 70–82.
- Bowling, N. A., & Beehr, T. A. (2006). Workplace harassment from the victim's perspective: A theoretical model and meta-analysis. *Journal of Applied Psychology*, *91*, 998–1012.
- Brass, D. J., & Burkhardt, M. E. (1993). Potential power and power use:

- An investigation of structure and behavior. *Academy of Management Journal*, 36, 441–470.
- Brooke, P. P., Russell, D. W., & Price, J. L. (1988). Discriminant validation of measures of job satisfaction, job involvement, and organizational commitment. *Journal of Applied Psychology*, 73, 139–145.
- Bukowski, W. M., & Hoza, B. (1989). Popularity and friendship: Issues in theory, measurement, and outcome. In T. Berndt & G. W. Ladd (Eds.), *Peer relationships in child development* (pp. 15–45). New York: Wiley.
- Bunderson, J. S. (2003). Recognizing and utilizing expertise in work groups: A status characteristics perspective. *Administrative Science Quarterly*, 48, 557–591.
- Cardy, R. L., & Dobbins, G. H. (1986). Affect and appraisal accuracy: Liking as an integral dimension in evaluating performance. *Journal of Applied Psychology*, 71, 672–678.
- Chan, D. (1998). Functional relations among constructs in the same content domain at different levels of analysis: A typology of composition models. *Journal of Applied Psychology*, 83, 234–246.
- Cialdini, R. B., Borden, R. J., Thorne, A., Walker, M. R., Freeman, S., & Sloan, L. R. (1976). Basking in reflected glory: Three (football) field studies. *Journal of Personality and Social Psychology*, 34, 366–375.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah, NJ: Erlbaum.
- Coie, J. D., Dodge, K. A., & Coppotelli, H. (1982). Dimensions and types of social status: A cross-age perspective. *Developmental Psychology*, 18, 557–571.
- Dalal, R. S. (2005). A meta-analysis of the relationship between organizational citizenship behavior and counterproductive work behavior. *Journal of Applied Psychology*, 90, 1241–1255.
- Daniels, E., & Leaper, C. (2006). A longitudinal investigation of sport participation, peer acceptance, and self-esteem among adolescent girls and boys. *Sex Roles*, 55, 875–880.
- DeRosier, M., Kupersmidt, J., & Patterson, C. (1994). Children's academic and behavioral adjustment as a function of the chronicity and proximity of peer rejection. *Child Development*, 65, 1799–1813.
- Dutton, J. E., & Ragins, B. R. (2007). Moving forward: Positive relationships at work as a research frontier. In J. E. Dutton & B. R. Ragins (Eds.), *Exploring positive relationships at work: Building a theoretical and research foundation* (pp. 387–400). Mahwah, NJ: Erlbaum.
- Eder, D. (1985). The cycle of popularity: Interpersonal relations among female adolescents. *Sociology of Education*, 58, 154–165.
- Farmer, T. W., & Rodkin, P. C. (1996). Antisocial and prosocial correlates of classroom social positions: The social network centrality perspective. *Social Development*, 5, 174–188.
- Freeman, L. C. (1979). Centrality in social networks: Conceptual clarification. *Social Networks*, 1, 215–239.
- Freeman, L. C., Romney, A. K., & Freeman, S. C. (1987). Cognitive structure and informant accuracy. *American Anthropologist*, 89, 310–325.
- Funder, D., Kolar, D., & Blackman, M. (1995). Agreement among judges of personality: Interpersonal relations, similarity, and acquaintanceship. *Journal of Personality Assessment*, 69, 229–243.
- Glick, W. H. (1985). Conceptualizing and measuring organizational and psychological climate: Pitfalls in multilevel research. *Academy of Management Review*, 10, 601–616.
- Goldberg, L. R. (1990). An alternative “description of personality”: The Big-Five factor structure. *Journal of Personality and Social Psychology*, 59, 1216–1229.
- Gouldner, A. W. (1960). The norm of reciprocity: A preliminary statement. *American Sociological Review*, 25, 161–178.
- Hogan, R. (1983). A socioanalytic theory of personality. In M. M. Page (Ed.), *1982 Nebraska Symposium on Motivation* (pp. 55–89). Lincoln: University of Nebraska Press.
- Holland, P. W., & Leinhardt, S. (1973). The structural implications of measurement error in sociology. *Journal of Mathematical Sociology*, 3, 85–111.
- Hollander, E. P. (1965). Validity of peer nominations in predicting a distant performance criterion. *Journal of Applied Psychology*, 49, 434–438.
- Hough, L. M., & Oswald, F. L. (in press). Personality testing and I-O psychology: Asking questions, offering answers, discussing unknowns, and providing direction. *Industrial and Organizational Psychology: Perspectives on Science and Practice*.
- Hunsley, J., & Meyer, G. J. (2003). The incremental validity of psychological testing and assessment: Conceptual, methodological, and statistical issues. *Psychological Assessment*, 15, 446–455.
- Jöreskog, K. G., & Sörbom, D. (1996). *LISREL 8: User's reference guide*. Chicago: Scientific Software International.
- James, L. R. (1982). Aggregation bias in estimates of perceptual agreement. *Journal of Applied Psychology*, 67, 219–229.
- James, L. R., Demaree, R. J., & Wolf, G. (1993).  $r_{wg}$ : An assessment of within-group interrater agreement. *Journal of Applied Psychology*, 78, 306–309.
- Jones, D. A., & Skarlicki, D. P. (2005). The effects of overhearing peers discuss an authority's fairness reputation on reactions to subsequent treatment. *Journal of Applied Psychology*, 90, 363–372.
- Joyce, A. (2006, March 5). Able versus amiable. *Washington Post*, p. F01.
- Judge, T. A., & Colquitt, J. A. (2004). Organizational justice and stress: The mediating role of work–family conflict. *Journal of Applied Psychology*, 89, 395–404.
- Judge, T. A., Erez, A., Bono, J. E., & Thoresen, C. J. (2003). The core self-evaluations scale: Development of a measure. *Personnel Psychology*, 56, 303–331.
- Judge, T. A., Locke, E. A., & Durham, C. C. (1997). The dispositional causes of job satisfaction: A core-evaluations approach. In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational behavior* (Vol. 19, pp. 151–188). Greenwich, CT: JAI Press.
- Judge, T. A., Scott, B. A., & Ilies, R. (2006). Hostility, job attitudes, and workplace deviance: Test of a multilevel model. *Journal of Applied Psychology*, 91, 126–138.
- Kilduff, M., & Krackhardt, D. (1994). Bringing the individual back in: A structural analysis of the internal market for reputation in organizations. *Academy of Management Journal*, 37, 87–108.
- Kline, R. B. (2005). *Principles and practice of structural equation modeling*. New York: Guilford Press.
- Kozlowski, S. W. J., & Bell, B. S. (2003). Work groups and teams in organizations. In W. C. Borman, D. R. Ilgen, & R. J. Klimoski (Eds.), *Handbook of psychology: Industrial and organizational psychology* (Vol. 12, pp. 333–375). New York: Wiley.
- Kozlowski, S. W. J., & Klein, K. J. (2000). A multilevel approach to theory and research in organizations. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions* (pp. 3–90). San Francisco: Jossey-Bass.
- LaFontana, K. M., & Cillessen, A. H. N. (1998). The nature of children's stereotypes of popularity. *Social Development*, 7, 301–320.
- Lease, A. M., Kennedy, C. A., & Axelrod, J. L. (2002). Children's social constructions of popularity. *Social Development*, 11, 87–109.
- Lee, K., & Allen, N. J. (2002). Organizational citizenship behavior and workplace deviance: The role of affect and cognitions. *Journal of Applied Psychology*, 87, 131–142.
- Locke, E. A. (2003). Good definitions: The epistemological foundation of scientific progress. In J. Greenberg (Ed.), *Organizational behavior: The state of the science* (2nd ed., pp. 415–444). Mahwah, NJ: Erlbaum.
- Lodahl, T. M., & Porter, L. W. (1961). Psychometric score patterns, social characteristics, and productivity of small industrial work groups. *Journal of Applied Psychology*, 45, 73–79.
- MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., &

- Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods*, 7, 83–104.
- Mehrabian, A. (1997). Analysis of affiliation-related traits in terms of the PAD temperament model. *Journal of Psychology*, 131, 101–117.
- Merriam-Webster's collegiate dictionary (11th ed.). (2003). Springfield, MA: Author.
- Mischel, W., & Shoda, Y. (1998). Reconciling processing dynamics and personality dispositions. *Annual Review of Psychology*, 49, 229–258.
- Mitchell, T. R., & Liden, R. C. (1982). The effects of social context on performance evaluations. *Organizational Behavior and Human Performance*, 29, 241–256.
- Newcomb, A. F., & Bagwell, C. L. (1995). Children's friendship relations: A meta-analytic review. *Psychological Bulletin*, 117, 306–347.
- Newcomb, A. F., Bukowski, W. M., & Pattee, L. P. (1993). Children's peer relations: A meta analytic review of popular, rejected, neglected, controversial, and average sociometric status. *Psychological Bulletin*, 113, 99–128.
- Ollendick, T. H., Weist, M. D., Borden, M. G., & Greene, R. W. (1992). Sociometric status and academic, behavioral, and psychological adjustment: A 5-year longitudinal study. *Journal of Consulting and Clinical Psychology*, 60, 80–87.
- Oxford English Dictionary*. (2005). London: Oxford University Press.
- Porath, C., Pearson, C., & Shapiro, D. L. (1999, August). *Turning the other cheek or an eye or an eye: Targets' responses to incivility*. Paper presented at the annual meeting of the Academy of Management, Chicago, IL.
- Porter, L. W., & Ghiselli, E. E. (1960). A self-description scale measuring sociometric popularity among manual workers. *Personnel Psychology*, 13, 141–146.
- Roberts, L. M. (2006). Shifting the lens on organizational life: The added value of positive scholarship. *Academy of Management Review*, 31, 292–305.
- Robinson, S. L., & Bennett, R. J. (1995). A typology of deviant workplace behaviors: A multidimensional scaling study. *Academy of Management Journal*, 38, 555–572.
- Rotundo, M., & Sackett, P. R. (2002). The relative importance of task, citizenship, and counterproductive performance to global ratings of job performance: A policy-capturing approach. *Journal of Applied Psychology*, 87, 66–80.
- Rubin, K. H., Bukowski, W., & Parker, J. G. (2006). Peer interactions, relationships, and groups. In W. Damon & R. M. Lerner (Series Eds.) & N. Eisenberg (Vol. Ed.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development* (6th ed., pp. 571–645). New York: Wiley.
- Sackett, P. R., & DeVore, C. J. (2001). Counterproductive behaviors at work. In N. Anderson, D. S. Ones, H. K. Sinangil, & C. Viswesvaran (Eds.), *Handbook of industrial, work, and organizational psychology* (Vol. 1, pp. 145–151). Thousand Oaks, CA: Sage.
- Sandstrom, M. J., & Coie, J. D. (1999). A developmental perspective on peer rejection: Mechanisms of stability and change. *Child Development*, 70, 955–966.
- Satorra, A., & Saris, W. E. (1985). The power of the likelihood ratio test in covariance structure analysis. *Psychometrika*, 50, 83–90.
- Schwartz, D. (2000). Subtypes of victims and aggressors in children's peer groups. *Journal of Abnormal Child Psychology*, 28, 181–192.
- Sherony, K. M., & Green, S. G. (2002). Coworker exchange: Relationships between coworkers, leader-member exchange, and work attitudes. *Journal of Applied Psychology*, 87, 542–548.
- Smith, C. A., Organ, D. W., & Near, J. P. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of Applied Psychology*, 68, 653–663.
- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological methodology* (pp. 290–312). Washington, DC: American Sociological Association.
- Sparrowe, R. T., Liden, R. C., Wayne, S. J., & Kraimer, M. L. (2001). Social networks and the performance of individuals and groups. *Academy of Management Journal*, 44, 316–325.
- Spector, P. E., & Fox, S. (2002). An emotion-centered model of voluntary work behavior: Some parallels between counterproductive work behavior and organizational citizenship behavior. *Human Resource Management Review*, 12, 269–292.
- Tharenou, P. (1979). Employee self-esteem: A review of the literature. *Journal of Vocational Behavior*, 15, 316–346.
- Tsui, A. S., & O'Reilly, C. A. (1989). Beyond simple demographic effects: The importance of relational demography in superior-subordinate dyads. *Academy of Management Journal*, 32, 402–423.
- Van Zelst, R. H. (1951). Worker popularity and job satisfaction. *Personnel Psychology*, 4, 405–412.
- Waddington, K. (2005). Using diaries to explore the characteristics of work-related gossip: Methodological considerations from exploratory multimethod research. *Journal of Occupational and Organizational Psychology*, 78, 221–236.
- Wageman, R. (1995). Interdependence and group effectiveness. *Administrative Science Quarterly*, 40, 145–180.
- Wasserman, S., & Faust, K. (1994). *Social network analysis: Methods and applications*. New York: Cambridge University Press.
- Watson, D. (2000). *Mood and temperament*. New York: Guilford Press.
- Wayne, S. J., & Ferris, G. R. (1990). Influence tactics, affect, and exchange quality in supervisor-subordinate interactions: A laboratory experiment and field study. *Journal of Applied Psychology*, 75, 487–499.
- Westphal, J. D., & Stern, I. (2006). The other pathway to the boardroom: Interpersonal influence behavior as a substitute for elite credentials and majority status in obtaining board appointments. *Administrative Science Quarterly*, 51, 169–204.
- Wrzesniewski, A., & Dutton, J. (2001). Crafting a job: Revisioning employees as active crafters of their work. *Academy of Management Review*, 26, 179–201.
- Young, M. R., & Rankin, B. M. T. (1998). Social withdrawal: Self-efficacy, happiness, and popularity in introverted and extraverted adolescents. *Canadian Journal of School Psychology*, 14, 21–35.
- Zajonc, R. B. (1968). Attitudinal effects of mere exposure. *Journal of Personality and Social Psychology Monographs*, 9, 1–27.

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