COGNITIVE AND AFFECTIVE IDENTIFICATION

IN ORGANIZATIONAL SETTINGS

ABSTRACT

Social identity research in organizational settings has adopted a distinctively cognitive focus, thus neglecting the affective dimension of social identification. In a series of three studies, we develop new measures of cognitive and affective identification and examine their interrelationships with various antecedents, related attitudes, and outcomes. We find that cognitive identification is consistently predicted by organizational prestige, cognitive ability, and neuroticism, and that affective identification is predicted by prestige and extraversion. Moreover, we find that the two identification dimensions provide independent predictive validity of organizational commitment, organizational involvement, and organizational citizenship behaviors.

Social identity has its roots in social psychology, but has emerged as an important research construct in the organizational sciences. Identification with the organization has been linked to numerous relevant organizational outcomes, including turnover intentions (Ashforth & Saks, 1996; Saks & Ashforth, 1997; van Knippenberg & van Schie, 2000; Wan-Huggins, Riordan, & Griffeth, 1998), actual turnover (Mael & Ashforth, 1995), organizational citizenship behaviors (Bartel, 2001; Bergami & Bagozzi, 2000), job involvement (van Knippenberg & van Schie, 2000), job satisfaction (Ashforth & Saks, 1996; Mael & Ashforth, 1992; Mael & Tetrick, 1992; Saks & Ashforth, 1997), and self-reported performance (Ashforth & Saks, 1996).

Original conceptualizations of social identity included both cognitive and affective dimensions. Tajfel (1972: 292) defined social identity as "that part of an individual's self-concept which derives from his *knowledge* of his membership of a social group (or groups) together with the *value* and *emotional* significance attached to that membership" (emphasis added). Cognitively, social identities provide a way for individuals to place themselves and others in society such that individuals define themselves as organization members (Albert et al., 1998). Affectively, social identities provide a sense of pride in and belongingness to the group, and reflect the value of that identity to the group member (Albert et al., 1998). According to Tajfel (1981), individuals will identify with groups that provide an affective sense of belongingness, but they will lower their identification with groups they judge to be inferior and not providing belongingness.

In contrast, Turner (1982) redefined social groupings as an exclusively *cognitive* process of self-categorization. For Turner, social identities (along with personal identity) are an integral part of the cognitive structure of the self-concept. Social behavior, then, is a matter of switching the individual's locus of control from the personal identity to the relevant social identity.

Interestingly, however, Turner allowed that it was likely that a theoretical conceptualization of social groups would include both cognitive and affective dimensions, but argued that a pendulum "must swing both directions before it can come to rest" (17). Organizational researchers have largely adopted this more cognitive approach to social identity (Ashforth & Mael, 1989).

Yet Deaux (1996) suggested that emotion played a more central role in social identity theory for Tajfel than it did in other versions of the theory, and that identity operates affectively through self-esteem. She discussed Tajfel's concerns about Turner's extremely cognitive approach, when Tajfel questioned whether it could do justice to the intensity individuals sometimes feel in the process of social identification, citing examples of self-immolation by Buddhist monks and self-starvation by prisoners in Northern Ireland.

Unfortunately, Tajfel's concerns about affective issues have been largely ignored (Deaux, 1996). It may be that the strong emphasis on cognition in organizational identity theory and research merely reflected the "cognitive revolution" in psychological research. Some argue that we are now undergoing an "affective revolution" in organizational behavior (Barsade, Brief, & Spataro, 2003). Indeed, nine key identity researchers, "agreed that one pressing next step was to integrate emotions and behaviors into our definitions and models" (Albert et al., 1998: 223). Therefore, the purpose of this series of studies was to develop a measure of social identification that explicitly separates cognitive and affective identification, and then examine the differential relationships of cognitive and affective identification with a number of antecedents, related attitudes, and behavioral outcomes.

STUDY 1: DEVELOPING A MEASURE OF COGNITIVE AND AFFECTIVE IDENTIFICATION

Defining Identification

Because organizational research on identity has taken a decidedly cognitive focus, it is not surprising that most of the definitions of organizational identification have focused on thoughts or beliefs about identities. In this vein, Dutton, Dukerich, and Harquail (1994: 239) suggested, "When a person's self-concept contains the same attributes as those in the perceived organizational identity, we define this cognitive connection as organizational identification." Similarly, Pratt (1998: 172) defined organizational identification as, "when an individual's beliefs about his or her organization become self-referential or self-defining." These definitions reflect one dimension of identification—the cognitive dimension—which encompasses individuals' thoughts or beliefs about themselves as members of the organization. This cognitive process is part of the individual's self-definition where the personal identity overlaps with the identity of the organization (or another social referent). Thus, cognitive identification can be defined as *the thoughts or beliefs regarding the extent to which individuals define themselves on the basis of a social referent.*

Affective identification, on the other hand, reflects individuals' feelings about being members of the organization. Specifically, affective identification is associated with *positive* feelings about one's membership, including pride, enthusiasm, and a sense of affiliation or "belongingness" with others (Albert et al., 1998). This emotional experience of identification also reflects the "value significance" of the social identity, in the sense that individuals evaluate their membership positively or negatively (Tajfel, 1978). In fact, the nine key identification researchers cited above defined affective identification as "the degree to which an individual values having a specific organizational identity" (Albert et al., 1998: 225). Both the direct experience of emotions and the personal value of one's identity make up affective identification, defined here as *the feelings individuals experience about themselves in relation to the social*

referent and the value they place on that social identity.

Measuring Identification

At least five measures of organizational identification have been published in the past decade (Abrams, Ando, & Hinkle, 1998; Bergami & Bagozzi, 2000; Mael & Ashforth, 1992; Riordan & Weatherly, 1999; Smidts, Pruyn, & van Riel, 2001). Most of the identification scales appear to tap into a more cognitive base of identification, but a few items in the scales also appear to tap into a more affective base of identification. The cognitive items primarily draw from the theoretical stream of Turner (1989). For example, Mael and Ashforth's (1992) scale has items like "I am very interested in what others think about my organization" and "This school's successes are my successes;" both of these items capture the more cognitive aspect of identification, involving thoughts and beliefs and the process of self-categorization. Similarly, Bergami and Bagozzi's (2000) graphical scale captures the degree to which one perceives an overlap between one's personal identity and the organizational identity. A smaller stream of research has intentionally incorporated items that are more affective in nature. Abrams, Ando, and Hinkle's (1998) scale, foe example, included affectively-oriented items like "I feel strong ties to this company" and "I am glad to be a member of this company."

Yet no research has assessed the convergent or discriminant validity between scales that appear to tap into the cognitive and affective dimensions of identification. Moreover, no research has examined these as separate dimensions. The closest published study was by Bergami and Bagozzi (2000), who examined the relationship between the cognitive dimension of organizational identification and affective commitment measures. They found that there was a strong positive relationship between organizational identification and a measure representing "joy" (I would be very happy…, I enjoy…), and a strong positive relationship between

organizational identification and a measure representing "love" or attachment to the organization. Although we expect that there will generally be moderate correlations between thoughts of identifying with an organization and the feelings that individuals have toward their organization, we suggest that these are conceptually distinct and will be empirically distinct.

Beyond the failure to separate affective from cognitive identification, however, an additional limitation of existing identification measures is that some are target-specific. That is, they were designed with a specific social target in mind (e.g., the organization) and are not easily adapted to social referents that are larger or smaller in size (e.g., a work group or a profession). For example, Mael and Ashforth's scale includes the item, "If a story in the media criticized the organization, I would feel embarrassed." Clearly, it would be difficult to apply this item to a smaller target like a workgroup. Riordan and Weatherly's (1999) scale includes the item, "In my work group, there is a lot of team spirit among the members." Scaling this item up to the organizational level may not make sense in some contexts. Although these scales work well assessing identification with the targets for which they were written, social identity theory holds that individuals identify with multiple targets (e.g., workgroup, organization, profession, etc.; Tajfel, 1981; Turner, 1982), and recent empirical research has begun to examine this notion (van Knippenberg & van Schie, 2000). In order to empirically examine identification with multiple targets, it is necessary to use measures that can be easily adapted to multiple social referents. Drawing on this rich history of measuring identification, then, we developed scales specifically designed to measure both the cognitive and affective dimensions of identification, without limiting the measure to a specific target.

STUDY 1 METHOD

Participants and Procedure

As part of a larger study, 112 undergraduates enrolled in an upper-level Management course at a large Midwestern university participated in exchange for course credit. 51.8% were men, 86.6% were Caucasian, and the average age was 20.75 (*SD*=.91).

Measure Development

As noted above, no published scales exist that are designed to explicitly measure the cognitive and affective dimensions of identification. Thus, we developed new scales based on established scale-validation procedures (Haladyna, 1999; Hinkin, 1998). Using the definitions articulated earlier, the two authors independently wrote multiple items for both dimensions. Three guidelines were followed in writing these items. First, items designed to measure cognitive identification were required to explicitly reference beliefs, knowledge, or other cognitions an individual might have about a particular social entity. Second, items designed to measure affective identification were required to explicitly reference emotions or feeling an individual might have about a particular social entity. Third, existing identification measures were examined to determine if particular items could be used or adapted for either scale.

Following these guidelines yielded a large number of items for each dimension that were then discussed by the two authors. This discussion sought to clarify ambiguities and otherwise refine the items. This discussion process and subsequent item revision resulted in a reduction of the original item set to 11 items for each dimension. These 22 items were then administered to the participants. In this study, we used the university as the target of identification because it represented a relevant social target for the participants.

STUDY 1 RESULTS AND DISCUSSION

We conducted a principal components analysis with varimax rotation on the responses to these items. The initial factor loadings of each item are displayed in Table 1. Kaiser's criterion

indicated four-component solution with eigenvalues greater than one, but examination of the scree plot, the variance explained by each component, and the pattern of high cross-loadings appeared to support a two-component solution. Additionally, examination of the items that loaded on components three and four indicates that they reflect similarity to the target and transient mood in relation to the target, respectively, and not true identification with the target.

Therefore, we conducted a second factor analysis that specified that only two factors be extracted. Through an iterative process, we then removed items that either had low loadings on their primary component or high cross-loadings on the other component. This process resulted in a clean two-component solution with four items each representing the two dimensions; the retained items are shown in bold in Table 1. Coefficient alpha for the cognitive identification scale was .81. For the affective identification scale it was .84. Although the components were significantly related ($r = .40$, $p < .01$), this correlation is not so great as to suggest that these forms of identification are isomorphic. Thus, from an initial set of twenty-two items (eleven per dimension), we were able to create two four-item scales that had adequate reliability.

STUDY 2: ANTECEDENTS, RELATED ATTITUDES, AND BEHAVIORAL OUTCOMES

The purpose of Study 2 was to establish the construct validity of the new scales. Specifically, we examined the relationship of the new identification scales with individual differences, organizational prestige, commitment, satisfaction, organizational citizenship behaviors, and two involvement behaviors. This allowed us to place cognitive and affective identification within a nomological network of related constructs. The theoretical model on which this is based is found in Figure 1. Two comments must be made about this figure. First, although we recognize that some of the relationships are likely recursive (e.g., identification

leads to OCBs which leads to greater identification), we have placed what we believe to be the primary causal paths between the constructs. Second, we have only placed causal arrows leading to or from identification; although there are causal paths between the other constructs that have been previously established, these paths are outside of the purview of the current study.

Finally, in order to determine if the separation of identification into cognitive and affective components yields any predictive gains, we compared the predictive validity of the new measures to that of Mael and Ashforth's (1992) measure, the most commonly used identification measure in the literature. This enables a direct examination of the usefulness of the new measures, as well as an assessment of convergent validity between the new and existing measures.

Antecedents

In the recent literature, the two best predictors of organizational identification have been tenure (Bartel, 2001; Bhattacharya, Rao, & Glynn, 1995; Mael & Ashforth, 1992; Wan-Huggins et al., 1998), and organizational image (Bergami & Bagozzi, 2000; Bhattacharya et al., 1995; Mael & Ashforth, 1992; Wan-Huggins et al., 1998). Dutton, Dukerich, and Harquail (1994) proposed that the members' perceptions of both the organization's identity (how members perceive the organization) and image (the members' perceptions of what people outside the organization think of it), in terms of both attractiveness and distinctiveness, will affect members' organizational identification, which will in turn affect in-group cooperative behaviors and out-group competitive behaviors. Their model was also recursive in that increased organizational identification would in turn cause the members' perceptions of the organizational identity and image to become more attractive. Empirically, the positive relationship between organizational prestige and identification has been supported in numerous studies (Bergami & Bagozzi, 2000;

Bhattacharya et al., 1995; Mael & Ashforth, 1992; Wan-Huggins et al., 1998). For our purposes, we simply expected that perceptions of organizational prestige would predict both cognitive and affective identification.

H1: Perceptions of organizational prestige are positively related to both cognitive and affective identification.

Less studied has been the impact of individual differences on identification. Only two studies that we are aware of examined the relationships between attributes of the individual and identification with the organization. Wiesenfeld, Raghuram, and Garud (2001) found that the need for affiliation in virtual workers significantly predicted their organizational identification, and that this relationship was moderated by the perceived social support in the organization. This suggests that workers who have low need for affiliation may have strong organizational identification if there is strong social support in the organization. Wan-Huggins, Riordan, and Griffeth (1998) found that both race and gender were significantly related to organizational identification, in that African-Americans had higher organizational identification than other races, and men had higher organizational identification than women in their sample.

This lack of attention to individual differences in the prediction of identification is unfortunate for two reasons. First, it has been suggested that people may differ in their "propensity to identify" (Albert et al., 1998: 238). Some individuals may simply be more likely than others to identify with any social group. Second, individual differences have been shown to predict many attitudinal variables. Most notably, job satisfaction has been shown to be a function not simply of situational variables, but also of dispositional factors, including dispositional affect and personality (Judge, Heller, & Mount, 2002). Similar dispositional effects have been found in relation to organizational commitment (Kammeyer-Mueller & Wanberg, 2003), attitudes toward

organizational change (Judge et al., 1999), and psychological contracts (Raja, Johns, & Ntalianis, 2004). Theoretically, then, it may be that social identification is not simply the result of situational determinants like prestige, but is also caused by individual differences. This implies that organizations can only do so much work on their organizational identity in order to increase their employees' identification; instead, identification may be as much a function of employee selection as it is of the organization's image. Thus, we examined several potential individual difference predictors of identification.

Personality. The "Big Five" model of personality factors has been a particularly fruitful avenue for assessing the effects of individual differences on various outcomes. No published study, however, has examined the possibility that one or more of these personality factors may contribute to social identification. We suggest, however, that three of the five personality factors are likely to predict levels of identification: extraversion, agreeableness, and neuroticism. In essence, these factors may make an individual more likely to identify with social groups in general, regardless of the dynamics surrounding any particular social group. Moreover, we suggest that some of these factors will show differential relationships with the two dimensions of identification.

Extraversion has been shown to be moderately to strongly related to various group process variables, such as cohesion, communication, flexibility, and conflict (Barrick et al., 1998; Barry & Stewart, 1997). Extraverted people enjoy working in groups and like to be in the presence of other people (Costa & McCrae, 1992). This enjoyment appears to make extraversion a likely candidate for predicting affective identification. As noted above, affective identification emphasizes a feeling of belongingness to the group (Tajfel, 1981); extraverted people should, in general, have stronger feelings of belongingness to the groups they are members because of their

preference to be in group situations. Similarly, we expect that extraversion is related to cognitive identification. As noted above, cognitive identification represents a self-categorization of the self as a member of the group; extraverts' preference for being in groups is likely to increase this self-definition as well.

H2: Extraversion is positively related to both cognitive and affective identification.

Agreeableness is also likely to be related to affective identification. Agreeable people are altruistic, unselfish, sympathetic, and eager to help others (Costa & McCrae, 1992). Barrick, Stewart, and Piotrowski (2002: 44) suggested and demonstrated empirically that agreeableness is "the fundamental trait associated with the intention to strive for communion with others." This seems commensurate with the idea of affective identification as feelings of belongingness to the group. On the other hand, we do not expect agreeableness to be related to cognitive identification. None of the descriptors of agreeableness would suggest that the trait would predict the process of self-categorization.

H3: Agreeableness is positively related to affective identification, but unrelated to
cognitive identification.

Finally, neuroticism is likely to be related to individuals' general disposition toward identification with social groups. Neuroticism is associated with an individual's tendency to experience anxiety and insecurity (Judge et al., 2002). People with high levels of neuroticism feel unsure of themselves and often worry about their behavior in social situations. Social identification should provide a sense of security for these people, as they may perceive that there is "safety in groups." Additionally, identification with a social group may be one way for people high in neuroticism to reduce the uncertainty of social situations, because the group prescribes the appropriate behavior. This leads us to expect that neuroticism is positively related to

cognitive identification, as categorizing one's self as a member of the social group should accomplish both of these.

Neuroticism has also been shown to be related to affect (Judge & Ilies, 2002), and we expect that neuroticism is negatively related to affective identification because affective identification involves feelings of belongingness to the group. Although people high in neuroticism should be more likely to define themselves on the basis of the social group with which they identify, they will not feel entirely secure in that identification; instead, they are likely to worry that they don't quite fit in, or are not completely accepted by the other group members. Empirical research offers tentative support for this distinction between the two forms of identification. Neuroticism has been shown to be negatively related to affective commitment, which bears some similarity to affective identification (Naquin & Holton, 2002; Raja et al., 2004), but positively related to continuance commitment (Naquin & Holton, 2002). Similarly, people high on neuroticism were less likely to engage in relational psychological contracts, but were more likely to engage in transactional ones (Raja et al., 2004).

H4: Neuroticism is positively related to cognitive identification, but negatively related to affective identification.

Cognitive Ability. In contrast to personality, cognitive ability (*g*) has been shown to be an excellent predictor of job performance (Schmidt & Hunter, 1998), but has generally been unrelated to attitudinal variables. For example, numerous studies have found no virtually relationship between cognitive ability and job satisfaction (Boudreau et al., 2001; Colarelli, Dean, & Konstans, 1987; Lipsett & Wilson, 1954; Trevor, 2001; see Judge et al., 1999, for an exception). Similarly, Johnson and Stokes (2002) found no relationship between cognitive ability and job involvement or career commitment. Colarelli et al. (1987) did find a significant negative

correlation between cognitive ability and organizational commitment, but this relationship disappeared when controlling for career goals.

We believe, however, that cognitive ability does have a relationship with social identification, such that it is negatively related to cognitive identification. Support for this can be found in research on the "basking in reflected glory" phenomenon, which has shown that people engage in image maintenance processes by increasing their association with people or groups that are successful and decreasing their association with people or groups that are unsuccessful (Cialdini et al., 1976; Cialdini & Richardson, 1980; Snyder, Lassegard, & Ford, 1986). Early research in this area found that a higher percentage of students wore clothing or buttons identifying them with their university on the Monday after their university's football team won, relative to when the team lost; students also used the term "we" more frequently when the team won (i.e., "*we* won"). Presumably, people enhance their self-esteem through this process.

Subsequent research, however, has shown that people are selective in their social comparisons. They choose "upward" comparison targets (targets that are more successful than one's self) "that facilitate *identification* and being like the comparison targets" (Marsh, Kong, & Hau, 2000: 338, emphasis added), but not when one will have to compare one's personal attributes to those in the group. That is, people will identify more with groups that are better than themselves as long as they will not be compared to others in the group. Conversely, people choose "downward" targets when they will be compared to others in the group, but not when the comparison emphasizes identification with the group or being similar to others in the group. Marsh et al.'s (2000) study of students in Hong Kong high schools found that although higher ability students attended more prestigious schools, the highest achieving students within each school tended to view their school as less prestigious than did the lower achieving students

within the same school. Lower achieving students could bask in the reflected glory of the higher achieving students within their school, but higher achieving students could not.

In this study, we examined students' identification with the university. We expected that the same phenomenon that Marsh et al. (2000) discovered in terms of perceived prestige would also play out in terms of social identification: students are likely to identify more highly with the university the lower they are in terms of ability. Specifically, students are likely to define themselves more on the basis of their membership in the university if they are low on cognitive ability, because this upward comparison allows them to bask in the reflected glory of the university. Conversely, students who are higher on cognitive ability are not as likely to identify with the university, because this would represent a downward comparison. There is no theoretical reason to believe that cognitive ability is related to affective identification.

H5: Cognitive ability is negatively related to cognitive identification, but unrelated to affective identification.

Related Attitudes

A large source of confusion about organizational identification has been its relationship with organizational commitment. Although it is not the purpose of the paper to separate these two constructs, a few comments about their distinction are necessary. The Organizational Commitment Questionnaire (Mowday, Steers, & Porter, 1979) defines organizational commitment as "the relative strength of an individual's identification with and involvement in a particular organization." As Ashforth and Mael (1989) point out, however, Mowday et al. (1979) viewed commitment as encompassing internalization, behavioral intentions, and affect, but not the present formulation of organizational identification. Ashforth and Mael (1989) emphasize that unlike organizational identification, internalization and commitment need not be

organizationally-specific, as an organization's goals and values may be shared by other organizations. Mael and Tetrick (1992) lent empirical support for this distinction, showing that although, "identification with a psychological group" in college students was positively related to job satisfaction, organizational satisfaction, and job involvement, it had significantly less overlap with these constructs than organizational commitment. For our purposes, we simply expect:

H6: Cognitive and affective identification are positively related to, and independently predict, organizational commitment.

Satisfaction with the organization and job satisfaction have been shown to significantly correlate with organizational identification in various settings (Ashforth & Saks, 1996; Mael & Ashforth, 1992; Mael & Tetrick, 1992; Saks & Ashforth, 1997; van Knippenberg & van Schie, 2000). Although several of these studies model satisfaction as an antecedent of organizational identification, it is not clear whether satisfaction leads to organizational identification, or that organizational identification leads to satisfaction. It may be that the relationship is to some extent recursive, similar to the theorized relationship between organizational identification and organizational image. Again for our purposes, we simply expect that:

H7: Cognitive and affective identification are positively related to, and independently predict, organizational satisfaction.

A final issue that we raise as a research question rather than a hypothesis is whether the new scales predict as well or better than the most commonly used identification measure in the organizational literature. Mael and Ashforth's scale (1992) has been used in numerous studies, and has been shown to be a valid predictor of organizational commitment (Ashforth & Saks, 1996; Bergami & Bagozzi, 2000; Saks & Ashforth, 1997), job satisfaction (Ashforth & Saks,

1996; Mael & Tetrick, 1992; Saks & Ashforth, 1997; van Knippenberg & van Schie, 2000),

organizational citizenship behaviors (Bergami & Bagozzi, 2000), and organizational

involvement (Bhattacharya, Rao, & Glynn, 1995; Mael & Ashforth, 1992; Mael & Tetrick, 1992;

van Knippenberg & van Schie, 2000). Thus, this study provides a direct test of the predictive

validity of the new scales compared to the Mael and Ashforth scale.

> *Research question: To what extent does the new cognitive and affective identification*
>
> *scales predict related attitudes and behavioral outcomes as well as the Mael and*
>
> *Ashforth scale?*

Outcomes

Various behaviors can be expected to arise out of a sense of organizational identification.

Although we do not preclude the possibility that there may be a recursive relationship between

identification and the behaviors we examined, we proceeded with the assumption that the

primary path is from identification to behavior, and not the other way around.

Dutton and Dukerich (1991: 550) theorized that the members' perceptions of the

organization's identity and image (the members' perceptions of what people outside the

organization think of it), "suggest a very personal connection between organizational action and

individual motivation." They propose that members who, "have a stake in directing

organizational action" will act in ways that are consistent with what they believe to be the

essence of the organization, and act in ways that support the organization. Several empirical

studies have supported this proposition. Bergami and Bagozzi (2000) found that identification

significantly predicted organizational citizenship behaviors. Similarly, Bartel (2001) found a

moderately strong relationship between self-report organizational identification and supervisor-

reported cooperation, helping behaviors, work effort, and advocacy participation. In a similar

vein, organizational identification has been shown to predict supportive behaviors by non-employees. Mael and Ashforth (1992) showed that college alumni who identified more highly with their alma mater ranked higher on contributions to the college, and were more willing to advise their own children and others to attend the school. Bhattacharya et al. (1995) found that organizational identification had a small, but significant relationship between organizational identification and a dummy-coded variable on whether members of an art museum were also donors. In our sample of university students, we expected that:

>*H8: Cognitive and affective identification are positively related to, and independently predict, organizational citizenship behaviors and organizational involvement behaviors.*

STUDY 2 METHOD

Participants and Procedure

749 upper-level undergraduates (juniors and seniors) enrolled in the College of Business at a large Midwestern university participated voluntarily. 56.5% were men and 84.2% were Caucasian. Whereas the social target in Study 1 was the university as a whole, in this study we asked the participants to consider their identification with the College of Business. All of the scales except the individual difference items were on one survey form. The individual difference measures were gathered at different times over the previous two years and were matched with the survey data.

Measures

Cognitive and affective identification. The two identification dimensions were measured with the two four-item scales developed in Study 1. Coefficient alphas were .83 and .89, respectively. We also measured identification using a previously validated six-item scale (Mael & Ashforth, 1992) to help establish covergent validity of the new scales.

Personality. Extraversion, agreeableness, and neuroticism were measured using the Revised NEO Personality Inventory (Costa & McCrae, 1992). Each measure contained twelve statements, and participants responded using a five-point scale ranging from Strongly Disagree (1) to Strongly Agree (5). Coefficient alpha in our sample were: extraversion, .77; agreeableness, .79; and neuroticism, .80.

Cognitive ability. Cognitive ability was measured using the Wonderlic Personnel Test (WPT; Wonderlic, 1992). The WPT has been shown to be a reliable measure of cognitive ability across numerous samples and research contexts. Internal consistency reliabilities across forms of the WPT have ranged from .88 to .94 (Wonderlic, 1992).

Organizational prestige. Organizational prestige was measured with five items adapted from Mael and Ashforth (1992). The participants were asked to consider the prestige of the College of Business. A sample item is, "People in the university think highly of the College of Business." Coefficient alpha in our sample was .74.

Organizational commitment. Organizational commitment was measured with eight items adapted from Mowday et al. (1979). A sample item is, "I am willing to put in a great deal of effort beyond that normally expected in order to help the College of Business be successful." Coefficient alpha in our sample was .90.

Organizational satisfaction. Organizational satisfaction was measured with seven items adapted from Hackman and Oldham (1980). A sample item is, "Generally speaking, I am very satisfied with the College of Business." Coefficient alpha in our sample was .84.

Organizational citizenship behaviors. OCBs were measured with the interpersonal helping and loyal boosterism scales from Moorman and Blakely (1995). Sample items from each subscale are, "Go out of your way to help other students with school-related problems," and

"Encourage friends and family to attend the College of Business," respectively. Factor analysis indicated that these subscales were unidimensional in our sample, with an alpha of .95.

Organizational involvement behaviors. We assessed organizational involvement by asking participants to indicate the degree to which they had been involved in nine activities: organizations within the business school, student organization executive boards, student organization committees, career advising/direction, workshops/seminars offered by the business school, mock interviewing, a job placement system, assistance from the career center staff, and the career center overall. Factor analysis indicated two factors; the first three items—which all dealt with student organizations—loaded on one factor, and the other six—which all dealt with professional development activities—loaded on the second factor. We called the first factor *organizational involvement*, and the second factor *professional development*, and they each showed alphas of .79.

STUDY 2 RESULTS

We first ran a confirmatory factor analysis on the identification items to examine whether the new scales showed discriminant validity in this sample. The hypothesized two-factor solution showed excellent fit ($\chi^2_{19} = 43.51$, NNFI =.99, CFI = .99, RMSEA = .03). This fit much better than a one-factor solution ($\chi^2_{20} = 888.15$, NNFI =.58, CFI = .70, RMSEA = .24). Table 2 shows the means, standard deviations, and intercorrelations of all of the variables in the study. The identification dimensions showed a similar correlation ($r = .43$, $p < .01$) to Study 1. Cognitive identification correlated .61 ($p < .01$) and affective identification correlated .50 ($p < .01$) with the Mael and Ashforth identification scale. This provides some evidence for the construct validity of the scales and suggests that the Mael and Ashforth scale taps into both cognitive and affective dimensions of identification.

Hypothesis 1 predicted that organizational prestige would be positively related to both identification dimensions. It showed a small but significant correlation with cognitive identification ($r = .15$, $p < .01$), and a much larger correlation with affective identification ($r = .41$, $p < .01$). Thus, Hypothesis 1 was supported. We tested Hypotheses 2-5 by examining both bivariate correlations and using multivariate hierarchical regression. This way, we could examine both the relationships of the variables in isolation (bivariate) and while controlling for the other variables (multivariate). Hypothesis 2 predicted that extraversion is positively related to both scales. Extraversion correlated only .08 (*ns*) with cognitive identification but correlated .21 ($p < .01$) with affective identification; thus, Hypothesis 2 was partially supported. Hypothesis 3 predicted that agreeableness is positively related to affective but not cognitive identification; it did not correlate significantly with either dimension (.06 and .09, respectively, both *ns*), and thus Hypothesis 3 was not supported. Hypothesis 4 predicted that neuroticism is positively related to cognitive and negatively related to affective identification. It correlated .15 ($p < .01$) with cognitive but only -.05 (*ns*) with affective identification; thus, Hypothesis 4 was partially supported. Hypothesis 5 predicted that cognitive ability is negatively related to cognitive but not affective identification. It correlated -.19 ($p < .01$) with cognitive but only -.07 (*ns*) with affective identification; thus, Hypothesis 5 was supported.

In the multivariate regression analyses, we entered organizational prestige in the first step because it is one of the most established predictors of identification. In the second step, we entered the four individual difference predictors. For cognitive identification, neuroticism and cognitive ability were still significant (β=.16 and -.17, respectively, both $p < .01$); extraversion and agreeableness were still not significant, and the step accounted for 5.8% of the variance in cognitive identification. For affective identification, extraversion was still significant (β=.12, $p <$

.05), and the others still were not, with the step accounting for 2% of the variance in affective identification.

Hypotheses 6, 7, and 8 predicted that the two identification dimensions would be positively related to and independently predict organizational commitment (6), organizational satisfaction (7), and organizational citizenship and organizational involvement behaviors (8). The results of the simultaneous regression equations testing these hypotheses are shown in Table 3. Because regression controls for each of the other independent variables in the model, the beta weights reflect the independent prediction of each variable. Additionally, because the scales were moderately intercorrelated, this provides a relatively stringent test (because there is less unique variance left to predict). Regarding commitment, both cognitive ($\beta = .21$, $p < .01$) and affective identification ($\beta = .62$, $p < .01$) were significant, accounting for 53.1% of the variance and supporting Hypothesis 6. Regarding satisfaction, only affective identification was significant ($\beta = .53$, $p < .01$), accounting for 29.6% of the variance, partially supporting Hypothesis 7. Regarding OCBs, both cognitive ($\beta = .16$, $p < .01$) and affective identification ($\beta = .29$, $p < .01$) were significant, accounting for 14.7% of the variance. Regarding organizational involvement, both cognitive ($\beta = .11$, $p < .01$) and affective identification ($\beta = .14$, $p < .01$) were significant, accounting for 4.5% of the variance. Similarly, regarding professional development activities, both cognitive ($\beta = .12$, $p < .01$) and affective identification ($\beta = .10$, $p < .01$) were significant, accounting for 3.3% of the variance. Together, these results support Hypothesis 8.

The research question asked whether two new scales are comparable or better in their predictions of related attitudes and behavioral outcomes as the established Mael identification scale. The new scales in fact far exceeded the Mael and Ashforth scale in the prediction of other job attitudes, and were comparable in their prediction of the various behaviors. The new scales

accounted for 14.1% more variance in organizational commitment and 16.4% more variance in job satisfaction than the Mael and Ashforth scale. The new scales accounted for roughly the same amount of variance as the Mael and Ashforth scale in OCBs (14.7% vs. 15.3%, respectively), organizational involvement (4.5% vs. 3.8%), and professional development activities (3.3% vs. 4.2%). The scales, then, appear to be construct valid and are better predictors overall than the Mael and Ashforth scale.

STUDY 2 DISCUSSION

The purpose of Study 2 was to validate the new measures of cognitive and affective identification in a different sample through examining their relationships with various antecedents, related attitudes, and outcomes. Cognitive identification was predicted by cognitive ability and neuroticism, and affective identification was predicted by extraversion, even when controlling for organizational prestige and the other individual personality variables. Notably, prestige showed a much stronger relationship with affective identification than with cognitive identification.

The two identification dimensions showed independent predictive validity of every proposed correlate and outcome, except for organizational satisfaction (which was predicted by affective identification alone). In fact, post hoc hierarchical regressions revealed that the dimensions account for roughly equal amounts of variance in the attitudes and behaviors we examined. This should sound as a caution to identity researchers who only examine identification as a cognitive construct, because the emotional significance that people attach to their identities has at least as much predictive value as the cognitive dimension alone. Additionally, the new scales together were much better than an existing identification scale in predicting other job attitudes, and were comparable in predicting behaviors.

Although an alternative explanation for these findings may appear to be common method variance because the scales were all self-reports, we suggest that two characteristics of the data argue against this. First, as can be seen in Table 2, many of the correlations between the scales measured on this survey are near zero. Second, common method variance could not account for the fact that the identification scales provide independent predictive validity of most of the outcomes. By definition, variance that is shared by the predictors in simultaneous regression gets attributed to neither one (Cohen & Cohen, 1983). Therefore, the observed relationships are more likely due to true covariation between the constructs rather than to common method bias.

STUDY 3: FIELD VALIDATION

Both Study 1 and Study 2 were conducted on relatively homogeneous samples of undergraduate students. Thus, questions arise regarding the external validity of our findings, and specifically whether they will generalize to employees in work settings. Therefore, in Study 3, we examined how the new identification scales acted in a field sample of full-time workers the relationship between cognitive and affective identification and a reduced set of antecedents and outcomes.

STUDY 3 METHOD

Participants and Procedure

One hundred fifty-six employees of a large Midwestern university participated in the study. They were recruited through an e-mail request sent to a randomly selected group of members of two university unions, and were compensated $10 each for their participation. 73.1% were women, 70.3% were married, the mean age was 43.5 years ($SD = 9.9$), and their mean tenure at their current job was 9.8 years ($SD = 8.9$). Because tenure has been shown to be a valid predictor of identification in previous research, we entered it as a control variable in the

multivariate regression analyses. Participants completed the personality survey first, and then two weeks later completed the other measures. All surveys were Web-based.

Measures

  Cognitive and affective identification. The identification dimensions were measured using the scales developed in Study 1. In this study, we asked the participants to consider both their membership in their department and with the university as a whole. Thus, they completed each scale twice; once with the department as the target of identification, and once with the university as a target. Coefficient alphas for cognitive identification were both .88 for the department as a target and for the university as a target; alphas for affective identification were .90 for the department as a target and .84 for the university as a target.

  Personality. As in Study 2, extraversion, neuroticism, and agreeableness were measured using the 12-item scales of the NEO-PI-R.

  Job satisfaction. Job satisfaction was measured with a five-item measure from Brayfield and Rothe (1951). Coefficient alpha in our sample was .89.

STUDY 3 RESULTS AND DISCUSSION

  Table 4 displays the means, standard deviations, and intercorrelations of the variables in this study. Interestingly, the correlation between the two identification dimensions varied depending upon the target. With the department as the target of identification, the dimensions correlated at only .24 ($p < .01$), but with the university as the target, they correlated at .44 ($p < .01$). This suggests that as the referent becomes more proximal, cognitive and affective identification become more distinct from each other.

  The bivariate correlations of the identification scales with the personality factors were largely similar to those found in Study 2, but also showed some slight differences. Consistent

with our hypothesis, extraversion was positively correlated only with affective identification with both the department ($r = .19$, $p < .05$) and the university ($r = .22$, $p < .01$). With the department as the target of identification, neuroticism showed not only a significant positive correlation with cognitive identification ($r = .21$, $p < .01$), but as hypothesized, also a significant *negative* correlation with affective identification ($r = -.22$, $p < .01$). Second, and contrary to hypothesis, agreeableness showed significant *negative* correlations with cognitive identification with both the department ($r = -.22$, $p < .01$) and the university ($r = -.22$, $p < .01$). It is also interesting to note that tenure did not correlate significantly with any of the identification scales.

Regressing the identification scales on the personality factors also revealed some differences from the first two studies. Controlling for tenure, all three personality factors predicted cognitive identification with the department (extraversion: $\beta = .17$, $p < .05$; agreeableness, $\beta = -.19$, $p < .05$; neuroticism: $\beta = .23$, $p < .01$). Together, the three personality factors explained 10.3% of the variance in cognitive identification. Similarly, all three factors were significant in predicting cognitive identification with the university (extraversion: $\beta = .23$, $p < .01$; agreeableness, $\beta = -.21$, $p < .01$; neuroticism: $\beta = .20$, $p < .05$), accounting for 11% of the variance in cognitive identification. For affective identification with the department, only neuroticism ($\beta = -.21$, $p < .01$) remained a significant predictor. The step explained 7.2% of the variance in affective identification. For affective identification with the university, only extraversion was a significant predictor ($\beta = .25$, $p < .01$), with the step accounting for 5.9% of the variance in affective identification.

We then regressed job satisfaction on all four identification scales, and as in Study 2, only the affective scales predicted job satisfaction. Affective identification with the department was the best predictor ($\beta = .61$, $p < .01$), followed by affective identification with the university

(β = .13, p < .05), accounting for 43.9% of the variance in job satisfaction.

The purpose of Study 3 was to examine whether the new identification scales behaved similarly in a field sample of fulltime workers as they did in the samples of university undergraduates. The results largely replicated those in Studies 1 and 2, with the scales showing similar intercorrelations and relationships with the personality variables. Notably, however, neuroticism showed the hypothesized negative correlation with affective identification in this sample, whereas it did not in the student sample, and agreeableness showed a counter-hypothesized negative relationship with cognitive identification.

GENERAL DISCUSSION

The purpose of this series of studies was to develop a scale of two dimensions of social identification—cognitive and affective—and examine their relationships with various antecedents, related attitudes, and behavioral outcomes. Because no scales existed that expressly measured these dimensions, we developed new four-item scales that appear to be both reliable and valid measures.

Although the results of the effects of the individual differences on the two dimensions of identification varied slightly between the studies, three patterns emerged. First, extraversion appears to be a robust predictor of affective identification. In Studies 2 and 3, extraversion was significantly positively correlated with affective identification, and remained a significant predictor even with other variables in the model. This may reflect the interpersonal nature of affective identification, in that people who enjoy being in groups in general feel good about their membership in the specific organization we examined. Second, cognitive ability appears to be a good predictor of cognitive identification. In Study 2, cognitive ability was significantly negatively correlated with cognitive identification, and remained a significant predictor with

other variables in the model. This may reflect the "basking in reflected glory" dynamic, in that people with less cognitive ability define themselves more on the basis of the social referent in order to experience the successes of the group as their own. Third, neuroticism appears to be a robust predictor of cognitive identification. Neuroticism showed significant positive bivariate correlations with cognitive identification in both Studies 2 and 3, and became a highly significant predictor when controlling for the other variables. This may reflect the idea that people high on neuroticism find "safety in groups" and reduce the uncertainty of social situations because the group prescribes the appropriate behavior. The evidence for agreeableness was much more equivocal, with a significant positive correlation with affective identification in one study but not the other, and only one significant prediction in the regression equations.

Two of the studies examined the relationships of the identification dimensions with satisfaction. Both of these studies found that when various forms of satisfaction (organizational, job, and life) were regressed on both dimensions, only affective identification proved to be a significant predictor. Thus, it appears that the cognitive sense of social identity does not impact one's sense of satisfaction, but the emotional significance one attaches to one's social identity impacts satisfaction strongly. The other related attitudes and outcomes examined in Study 2 (commitment, OCBs, and organizational involvement behaviors), on the other hand, were predicted by both dimensions.

Limitations

Clearly, one concern in this series of studies could be common method variance. As Podsakoff et al. (2003: 887) point out, however, it is not always possible to separate sources and methods in psychological research. In particular, they note, "researchers examining the relationships between two or more employee job attitudes cannot obtain measures of these

constructs from separate sources." Therefore, where possible, we separated the measurement of predictor and criterion variables in time. Additionally, as pointed out in the discussion of Study 2, the near-zero correlations between some of the variables, and the fact that the identification scales provide independent predictive validity of many of the outcomes, argue against common method variance as an alternative explanation.

A second limitation of this series of studies is that all three samples were drawn from people in university communities. The concern of the homogeneity of the samples is alleviated somewhat by the fact that the sample in Study 3 was university employees, and not students. It may be, however, that the external validity of the findings may be limited if people in university communities are not fully representative of the population.

A third limitation is the cross-sectional nature of each of the studies. Because we were not able to capture repeated measures of the scales, the causal ordering of the variables is not definitive. Indeed, we recognize that many of the constructs in these studies likely have recursive relationships with each other. For example, cognitive and affective may give rise to organizational citizenship behaviors, and the enacting of these behaviors may in turn increase identification.

Directions for Future Research

Conceptually, social identities are not merely cognitive constructions; people also attach varying levels of emotional significance to their social identities. Yet most research on social identification—particularly in organizational settings—has ignored the affective dimension of social identification. We hope that our research, and in particular our development of reliable and valid scales of cognitive and affective identification, will spur further research that examines both dimensions of social identification. We offer three conceptual and one methodological

suggestion for future research on these dimensions.

First, social identity and self-categorization theories assert that social identities are enacted based on situational cues. We suggest that an interesting avenue of research would be to examine the unique effects of these situational cues on the two dimensions of identification. Some cues may cause both dimensions to become salient, whereas others may stimulate only one of the dimensions. For example, a threat against the social group from an outgroup may stimulate both dimensions, but an ingroup conflict may stimulate one or the other.

Second, the theories assert that people hold multiple social identities. For example, an individual may enact one social identity when at work, but another when out to lunch with friends. It would be interesting to examine whether different social identities held by the same person vary in their levels of cognitive and affective identification. One social identity may be very cognitively self-defining, but hold little emotional significance for the individual, and vice versa.

Third, very little social identity research has examined the effects of social identities on non-attitudinal outcomes. It may be that one of the dimensions has a stronger relationship with these sorts of outcomes than the other. In particular, it would be interesting to see research that outlines the effect of the identification dimensions on task performance, absenteeism, and turnover.

Finally, we encourage longitudinal research that would help to sort out the causal order between social identification and other constructs. A fruitful line of research might be to track people's identification with social groups from when they first become members (e.g., new hires). Repeated measures of identification and other constructs over time may reveal whether these relationships truly are recursive.

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TABLE 1

Study 1 Component Loadings of All 22 Identification Items

Item	Component 1	Component 2	Component 3	Component 4
If the university were criticized, it would influence how I thought about myself.	**.733**	.180	-.079	.067
My membership in the university is very important to my sense of who I am.	**.732**	.197	.372	.031
My self-identity is based in part on my membership in the university.	**.715**	.160	.225	.145
My sense of self overlaps with the identity of the university.	**.669**	.207	.261	.047
When major events occur, I think about how they will affect the university.	.638	.107	-.047	.055
Being a student in the university makes me feel good about myself.	.570	.550	.289	.018
If someone were to speak negatively about the university, I would feel personally threatened.	.566	.360	.239	.131
When asked about who I am, being a student in the university is one of the first things I mention.	.542	.092	.499	-.098
I feel strong ties with the university.	.504	.498	.441	.045
I feel happy to be a student in the university.	.182	**.829**	.229	-.153
It feels good to be a student in the university.	.309	**.782**	.114	-.081
I am proud to be a student in the university.	.197	**.781**	.246	-.110
If I were forced to leave the university, I would be very disappointed.	.059	**.723**	.085	-.059
I feel a strong sense of connection to the university.	.416	.646	.417	-.044
I believe the university and I are very different.	-.003	.112	.796	-.041
I think that I am very similar to the university.	.088	.263	.758	.039
I think that the university and I value the same things.	.191	.222	.744	-.075
When I think about the university, I have a strong sense of identification	.321	.425	.639	.056

with it.				
I am a reflection of the university.	.408	-.049	.436	-.371
My sense of self is closely related to my thoughts about the university.	.342	.313	.424	.175
My mood often depends upon how I feel about the university.	.184	-.053	.057	.889
My feelings about myself often depend on how I feel about the university.	.207	-.059	.042	.886
I often regret that I belong to the university.	.116	.456	.208	-.658
Eigenvalue	9.127	2.760	1.613	1.354
% of variance	39.681	12.001	7.014	5.888

Retained items are in bold. Component 1 is cognitive identification; component 2 is affective

identification.

TABLE 2

Study 2 Means, Standard Deviations, and Intercorrelations

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Cognitive ID	3.20	.85	(.83)												
2. Affective ID	4.28	.61	.43**	(.87)											
3. Mael ID scale	3.42	.73	.61**	.50**	(.85)										
4. Cognitive ability	24.86	5.18	-.19**	-.07	-.14*	--									
5. Neuroticism	2.47	.58	.15**	-.05	.07	-.16**	(.80)								
6. Extraversion	3.71	.52	.08	.21**	.20**	-.04	-.19**	(.77)							
7. Agreeableness	3.70	.50	.06	.09	.11*	-.04	-.13*	.40**	(.79)						
8. Prestige	4.02	.62	.15**	.41**	.21**	.04	-.15**	.17**	.08	(.74)					
9. Commitment	3.78	.64	.47**	.70**	.63**	-.08	-.02	.20**	.06	.44**	(.90)				
10. Satisfaction	3.83	.62	.25**	.54**	.36**	.04	-.16**	.20**	.16**	.52**	.66**	(.84)			
11. OCBs	3.60	.84	.28**	.36**	.39**	-.07	.00	.18**	.15**	.37**	.51**	.46**	(.95)		
12. Org involvement	.98	1.06	.17**	.18**	.20**	-.10	.04	.16**	.09	.11**	.21**	.16**	.23**	(.79)	
13. Prof development	1.27	.86	.16**	.15**	.21**	-.11*	.05	.16**	.09	.09*	.22**	.19**	.21**	.51**	(.79)

N=749 for all correlations except those involving variables 4-7, where N=353. Coefficient alpha is on the diagonal. * p<.05. ** p<.01.

TABLE 3

Study 2 Effects of Identification on Various Constructs

	Commitment	Satisfaction	OCBs	Organizational involvement	Professional development activities
Cognitive identification	.17**	.00	.14**	.11**	.11**
Affective identification	.64**	.55**	.30**	.13**	.10*
F(2,734)	425.71**	157.44**	65.09**	16.15**	12.15**
R^2	.54	.30	.15	.04	.03

* p<.05. ** p<.01

TABLE 4

Study 3 Means, Standard Deviations, and Intercorrelations

	Mean	SD	1	2	3	4	5	6	7	8	9
1. Cognitive identification (department)	2.84	.99	(.88)								
2. Affective identification (department)	3.87	.82	.24**	(.90)							
3. Cognitive identification (university)	2.62	.94	.58**	.18*	(.88)						
4. Affective identification (university)	4.02	.64	.18*	.42**	.44**	(.84)					
5. Tenure	9.71	8.96	.11	-.02	.08	.05	--				
6. Neuroticism	2.49	.65	.21**	-.22**	.17*	-.09	-.12	(.84)			
7. Extraversion	3.50	.53	.05	.19*	.11	.22**	-.07	-.30**	(.79)		
8. Agreeableness	3.91	.47	-.22**	.01	-.22**	-.02	-.01	-.29**	.22**	(.78)	
9. Job satisfaction	3.86	.85	.13	.65**	.06	.34**	.01	-.31**	.26**	.02	(.89)

N=156. * p<.05. ** p<.01.

FIGURE 1

Nomological Network Of Cognitive And Affective Identification

Antecedents

Attitudes

Behavioral Outcomes

Situational
Determinants
Target prestige
Tenure with target

Individual
Differences
Extraversion
Agreeableness
Neuroticism
Cognitive ability

Commitment

Cognitive and affective identification

Satisfaction

OCBs

Involvement