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**ORGANIZATIONAL IDENTIFICATION:
CONCEPTUALIZATION MEASUREMENT,
AND NOMOLOGICAL VALIDITY**

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Organizational Identification:
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and Nomological Validity*

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Abstract

We consider emerging views on organizational identification and propose a conceptualization based on the degree of overlap between one's self-concept and his or her representation of the organization. Appropriate measures are developed, and the representation and role of organizational identification in the experience of work behavior are tested in a study of employees of a food service company in Italy. Two antecedents of organizational identification investigated are construed external image and perceived organizational identity. Three consequences of organizational identification examined are organization commitment, organization-based self-esteem, and organizational citizenship behavior. Hypotheses are tested, generalizability of measures inspected, and predictions cross-validated by use of structural equation models.

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Organizational Identification: Conceptualization, Measurement, and Nomological Validity

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What is the relationship between an individual's identity and his or her organization membership? An emerging consensus finds that organizational identification performs a central role in the linkage between the person and the organization (e.g., Ashforth and Mael, 1989; Dutton, Dukerich, and Harquail, 1994). But a number of conceptual issues remain unresolved. Is identification primarily cognitive or affective or both? Is it distinct from commitment, citizenship behavior, and organizational-based self-esteem? What are the antecedents and consequences of identification with the organization? Is identification fundamentally a psychological or social process? What exactly is the nature of the linkage between the person and the organization?

Likewise, a number of empirical issues remain undetermined. Specifically, how should identification be measured? The answer to this, of course, must pay heed to the conceptualization of identification. If the concept of identification is too broad, encompassing phenomena antecedent and consequent to it, the risk is high that hypotheses containing the concept will be circular. If it is too narrow, important aspects of the concept will go undetected, and hypotheses based on the operationalization will be incomplete. Only recently have researchers begun to examine the empirical aspects of identification (e.g., Dukerich, Golden, and Shortell, 1995; Mael and Ashforth, 1992).

In this paper, we consider (a) the theoretical representation of organizational identification, (b) its measurement, (c) factors that shape identification, and (d) implications of identification for the organization. The ideas considered herein are then expressed in hypotheses and tested on data collected in a study of a food service company. Particular attention is paid to issues of reliability, validity, and prediction by use of a structural equation methodology.

The Conceptualization of Organizational Identification

The idea of identification was first developed in a systematic way by Freud (1922) who addressed the process whereby a person assimilates oneself to other persons or objects (Gleason, 1983: 915). This rather psychological and reductionistic point of view was later applied to group behavior where identification came to signify one's attachment to the group (e.g., Rothman, 1965), one's acceptance of a role in the group and self-reference to the group as an expression of identity (e.g., Foote, 1951), and one's adoption of the attitudes of an admired person or reference group (Kelman, 1958).

Simon (1947) was one of the first organization theorists to introduce the concept of organizational identification, highlighting its importance for organizational decisions: "(i)dentification is the process whereby the individual substitutes organizational objectives ... for his own aims as the value-indices which determine his organizational decisions" (p. 218). Later March and Simon (1958) developed these ideas further, suggesting a

theory that considers four types of identification (extra-organizational, organizational, task, and sub-group identification) and argues that "the stronger the individual's identification with a group, the more likely that his goals will conform to his perception of group norms" (p. 65). March and Simon (1958) proposed five basic factors affecting group identification: prestige of the group, extent to which goals are perceived as shared, frequency of interaction, number of individual needs satisfied, and amount of competition between members. This is largely a psychological point of view on organizational identification and has received very little empirical research to date (cf., Brown, 1969; Hall, Schneider, and Nygren, 1970; Lee, 1971; O'Reilly and Chatman, 1986).

Organization theorists have recently taken a more explicitly social view on identification. Starting with social identity theory (e.g., Tajfel and Turner, 1985), Ashforth and Mael (1989: 21-22) specify four "principles" as a basis for organizational identification:

1. "(I)dentification is viewed as a perceptual cognitive construct that is not necessarily associated with any specific behaviors or affective states" (emphasis added).
2. "(S)ocial/group identification is seen as personally experiencing the successes and failures of the group" (emphasis in original).
3. "(S)ocial identification is distinguishable from internalization" in that it "refers to self in terms of social categories" whereas internalization "refers to the incorporation of values, attitudes, and so forth within the self".
4. Through "identification ... one partly defines oneself in terms of a social referent".

Within an organization, a person is thought to identify with the organization as a social category. The categorization process orders the social environment and provides a sense of where one is located in that environment. One's identification is experienced as a matter of degree, however, in the sense that a variable overlap is perceived between one's own self identity and the identity of the organization.

A slightly different conceptualization is taken by Dutton et al (1994: 29) who maintain that "(o)rganizational identification is the degree to which a member defines him- or herself by the same attributes that he or she believes define the organization". This might be characterized as an atomistic conceptualization in that the overlap between self and organization is explicitly tied to specific characteristics shared by the person and the organization. For example, the perceived overlap between one's own social consciousness (e.g., "I am a person who helps the poor or persons in need") and the philanthropic practices of a firm for similar causes (e.g., providing financial support to the United Way) would be one defining basis for organizational identification under the definition proposed by Dutton et al (1994).

By contrast, Ashforth and Mael (1989) take a more molecular view and conceive of organizational identification as a summary or global perception of degree of overlap. That is, the overlap is not one based on

perceptions of direct correspondence of individual attributes between one's own personal and the organization's characteristics, per se, but rather is based on an overall subjective sense of conformance between identities. Hence, Ashforth and Mael (1989: 22, 21) stress that "organizational identification is a specific form of social identification" and "is the perception of oneness with or belongingness to some human aggregate". Dutton et al (1994: 242) nevertheless share the view with Ashforth and Mael (1989) that organizational identification is a cognitive, as opposed to affective, process: "organizational identification ... (is) a cognitive link between the definitions of the organization and the self".

There are thus two issues to resolve with the conceptualization of organizational identification. The first concerns the basis for, or processes underlying, organizational identification. Is identification a direct function of the comparison of individual attributes associated with one's own and the organization's identity, or is it a function of a comparison between categories, where the categories are aggregates or other complex constructions? Second, is organizational identification itself a purely cognitive process? If not, what is the role of affect, if any? We turn now to each of these questions.

A central aspect of organizational identification is the nature of social categories in the mind of perceivers and how people come to categorize themselves in these categories. We can think of the role of categorization in two senses. First, people form categories of themselves and of the environment around them in order to simplify and cope with information and to interpret its meaning for them personally. Basic research in psychology shows that categories are formed when within-category similarity among attributes is maximized and between-category similarity among attributes is minimized (e.g., Rosch, 1978; Rosch and Mervis, 1975). However, the number of attributes and the precise level of each do not constitute a rigid specification of any category. Rather, people perceive and experience categories as prototypes. A prototype is an abstraction in the mind of the perceiver that summarizes the category as a cluster of attributes, such that any particular member of the prototype need not necessarily possess every attribute or, if it does, need not exhibit an ideal level of each attribute. Indeed, a particular prototype need not describe an actual instance of the category; a candidate must only be sufficiently similar to the prototype to be assigned to the category. Prototypes have been found to define categories for objects (Rosch and Mervis, 1975) as well as for types of persons (Cantor and Mischel, 1979).

When an individual categorizes him- or herself as a type of person, he or she typically forms a self-schema (Markus, 1977). A self-schema is a knowledge structure of one's abilities, beliefs, dispositions, and other personal characteristics which are organized as interconnected nodes in memory (e.g., Hastie, 1981). In a similar manner, persons form conceptualizations of groups and organizations, including those to which they

belong. The category recognized as the organization to which one belongs (i.e., one's organization-schema) consists of a knowledge structure of the rules, procedures, functions, goals, and other characteristics of the organization deemed salient by the member of the organization.

Both the self-schema and the organization-schema are experienced as prototypes. Rather than processing the individual attributes that constitute each prototype and combining the attributes directly into summary judgments, such as specified in, say, information integration theory (e.g., Anderson, 1981), an atomistic aggregation procedure, people construct unified overall impressions of the information at hand (e.g., Fiske and Taylor, 1991, ch. 4). It thus appears that personal and social categorizations proceed in molecular, as opposed to atomistic, ways.

In addition to functioning as a basis for information processing and structuring one's perception of the world and one's place in it, categorization processes function as boundary conditions for organizational identification. Organizational identification occurs to the extent that a member of the organization perceives that the self-schema and organization-schema share a common prototype. Turner (1985: 99-100) notes that the process entails a certain degree of depersonalization, where people perceive themselves more in terms of shared stereotypes that define a social category than in terms of individual attributes. The identity of the person undergoes a contextual change from personal identity to social identity. Turner (1985: 100) portrays this depersonalization as "a shift towards the perception of self as an interchangeable exemplar of some social category and away from the perception of self as a uniquely differentiated person". We can think of social categorization as thus proceeding from the integration of attributes of oneself into a prototypic self-schema and attributes of the organization into a prototypic organization-schema. But as the schemas are compared and come to overlap, the member of the organization then views him- or herself as an exemplar of a social entity, the organization. In one sense, the abstraction of the prototypes or schemas is transformed into a meaningful concrete instance of identification with the organization, which becomes the basis for social behavior: "group behavior is simply individuals acting in terms of a shared social identity" (Turner and Oakes, 1989: 240, emphasis in original omitted).

The motivation for identification is twofold (e.g., Hogg and Abrams, 1990). One is believed to identify with an organization, in part, because it enhances self-esteem. Ashforth and Mael (1989: 22) maintain that increased self-esteem results from partaking in the "successes and status" of the organization and the subgroups within it. The impetus for identification with the organization also stems from a need for cognitive coherence or what Hogg and Abrams (1990: 43) call, the "human desire to make one's experiences and one's self

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a) meaningful". One's social world is made meaningful by reducing inconsistencies between self and in-group,
internalizing social stereotypes and norms, and discriminating against out-groups, among other social processes.

The second broad issue in need of resolution is whether the nature of identification itself is cognitive, affective, or both. Ashforth and Mael (1989) and Dutton et al (1994) clearly maintain that organizational identification is a cognitive state or process, although they allow for emotional or evaluative antecedents and consequences of identification. A possible limitation of construing identification solely in cognitive terms is that it is difficult to explain the emotive power of identification, if any. Cognitions, by themselves, cannot move one to act, yet theorists hypothesize that identification influences behavior. For example, citizenship behaviors, in-group cooperation, seeking greater contact with the organization, and competitive actions toward out-group members have all been hypothesized to be dependent on organizational identification (Dutton et al, 1994). Cognitions may be necessary for action but seemingly lack motivational content. Perhaps for this reason, Billig (1985) pointed out the need for a cognitive-motivational interpretation of social identity theory.

As a matter of fact, Tajfel (1972: 31) seems to have had in mind just such a conceptualization of social identity, which he defined as "the individual's knowledge that he [she] belongs to certain groups together with some emotional value and significance to him [her] of this group membership". The knowledge that one belongs to certain groups is obviously a cognitive aspect of social identity and is manifest through categorization processes. As a consequence, we see that Tajfel construed social identity to be a combination of cognitive and emotional content. However, he never developed this conceptualization further, and we are left with the problem of deciding how to integrate cognitions and affect.

On the surface, it therefore seems that two competing views exist for conceiving organizational identification: a purely cognitive one and an affective-cognitive one. We feel that such a choice is not needed, however, and that a framework can be offered for reconciling the two points of view.

It is possible to think of organizational identification in a three-part way. The first two we have already described: namely, the categorization of self and organization and the estimation of shared meaning, which are cognitive processes. The representation of one's social identity, as revealed in the degree of identification with the organization, can be depicted in a social schema. That is, one's identification with the organization is manifest in memory as a knowledge structure of the degree of overlap between self- and organizational identity. Attached to any such knowledge structure, depending on prior experience and the centrality of the shared identity for one's well-being, will be emotional reactions which make the identification meaningful in terms of the consequences of one's social identity through membership in the organization. For instance, one's social

identity in the organization might be linked in memory to feelings of pride in the organization's accomplishments, joy in specific working relationships with coworkers, frustration with a subordinate, anxiety stemming from anticipated inroads by a competitor, and love of the espoused values and ideals of the organization.

Psychologists have termed such cognitive-emotional structures, "affect-laden schemas" (Fiske and Taylor, 1991: 427). Research reveals that the thought of a schema, whether stimulated internally or externally, can elicit emotions connected to the schema. This has been termed "schema-triggered affect" in the literature (e.g., Fiske, 1982). Likewise, the direct excitation of an emotion attached to a knowledge structure can spread out from the point of excitation and influence inferences and the associations among thoughts in the knowledge structure, as well as other emotions connected to it (e.g., Bower, 1981; Bower and Cohen, 1982).

Hence, once organizational identification takes place, the cognitive representation of the identification activates emotional content. But because either will be activated when the other comes to mind -- where the likelihood of such an activation will be a function of the strength of association in memory between cognitive and emotional elements -- the measurement of organizational identification can be accomplished by use of indicators of either cognitive or affective markers from the mental representation of record. It is important, however, to distinguish between emotions that directly give organizational identification meaning and therefore are part of the schema of social identity, on the one hand, and emotions that influence or are influenced by the schema, on the other hand. As we shall see below, the failure to differentiate the concept of organizational identification from its causes and effects has led to measurements with a certain degree of ambiguity.

The Measurement of Organizational Identification

Little research exists on the operationalization of organizational identification, and only one scale has received a certain amount of scrutiny. Mael (1988) developed a six-item scale to measure identification (see Appendix). Impressive levels of reliability have been found, including coefficient alpha values of 0.81 for employed business and psychology students (Mael, 1988), 0.83 for managers (Ashforth, 1990), 0.83-0.87 for U.S. Army squad members and leaders (Mael, 1989), 0.87 for college alumni (Mael and Ashforth (1992), 0.90 for physicians (Dukerich, Golden, and Shortell, 1995), and 0.87 for members of a museum (Bhattacharya, Rao, and Glynn, 1995). Other than examining internal consistency for the measures, however, no attempt has been made to investigate the validity of the items in the scale.

How well do the six measures of the scale developed by Mael (1988) and recently used by Mael and Ashforth (1992) capture the theoretical meaning of organizational identification? One answer to this question

can be gained by inspecting the face validity of the items. Although Ashforth and Mael (1989; see also Mael and Ashforth, 1992) posit that organizational identification is a cognitive concept, they employ operationalizations that are strongly emotional: "feels like a personal insult", "feels like a personal compliment", "I would feel embarrassed". Moreover, only three items are cognitive, and among these only two refer to an overlap between self-identity and organizational identity, and then only in an indirect way (i.e., use of "we" rather than "they" in reference to the organization, and acknowledgment that the organization's "successes are my successes"). The domains for the emotional and cognitive items are rather restrictive as well. To feel insulted, complimented, or embarrassed in relation to the organization represents a subset of meaningful emotions, which might include among others, attachment to, liking for, pride in, gladness toward, joy through, anger toward, frustration with, disappointed in, guilty toward, shamed by, worried about, and fearful in relation to the organization. Likewise, cognitive reactions could entail varied instances of shared characteristics (e.g., mutual values), associative or means-ends relationships (e.g., connections to environmental causes, social responsibility, political orientations), and common outcomes (e.g., profit sharing).

A major limitation of the six-item scale used to date is that it is a poor representation of the overlap between one's self-schema and one's organization-schema as implied by identification processes. The items focus primarily on reactions to threats to one's social identification (e.g., feel embarrassed or insulted when the organization is criticized), implications of identification (e.g., expressing oneness with the organization through use of "we"), and factors shaping identification (e.g., what others think of the organization; construing the organization's successes as one's own). The items fail to capture fully the shared identities between self and organization.

In sum, the six-item scale is both too broad and too narrow. It is too broad in the sense of encompassing antecedents and consequences of organizational identification. It is too narrow in the sense of focusing upon limited subsets of cognitive aspects of identification. And it fails to capture the holistic sense of organizational identification but instead emphasizes primarily atomistic properties of the concept. The above problems make for an ambiguous scale and most likely account for the unsatisfactory fit ($AGFI = .825$) reported in Ashforth and Mael (1989: 23) for the two-factor model of organizational identification and organizational commitment in Mael's dissertation (1988).

Dukerich, Golden, and Shortell (1995) recently explored a more direct measure of organizational identification by use of a combination visual and verbal item attributed to Bagozzi and Bergami (Bagozzi, 1995). This measure is shown in Figure 1. The presumed advantages of this measure are that it directly

addresses the overlap between one's own personal identity and the identity of the organization, it is formulated at the level of a self-schema in that it refers to one's unified, overall impression and thus is consistent with the meaning of prototypes and their shared content, and it is parsimonious and easy to understand even by respondents with less education or verbal skills.

Dukerich, Golden, and Shortell (1995) found that the Bagozzi and Bergami item correlated 0.65 with the Mael and Ashforth (1992) scale in their study of physicians in a health care system. In the present study, we also employ both operationalizations of organizational identification. But to provide a fuller and more valid assessment of the measurement of identification, we investigate different direct operationalizations (i.e., cognitive, affective, and affective-cognitive representations) and employ multiple measures of each. Because the Bagozzi and Bergami measure is only a single item, Dukerich, Golden, and Shortell (1995) could not assess its reliability. In addition, the method Dukerich, Golden, and Shortell (1995) used to evaluate the correlation between the Mael and Ashforth (1992) scale and the Bagozzi and Bergami item did not correct for measurement error. We utilize a methodology -- structural equation modeling -- that permits us to examine criterion related validity and to correct for measurement error in the measures of organizational identification.

Antecedents of Organizational Identification

What factors shape or influence organizational identification? We examine two key determinants of identification herein: attractiveness of perceived construed external image and perceived organizational identity (e.g., Ashforth and Mael, 1989; Dutton et al, 1994).

Attractiveness of construed external image. Construed external image is an organization member's perception of how outsiders see the organization. The attractiveness of construed external image refers to how important is other people's perceptions of one's own membership in the organization for the self. There are thus two aspects of the social effect of membership in the organization. One is the judgment that other people believe that being a member of the focal organization is a worthy and socially beneficial endeavor. That is, to the extent that others evaluate the organization as a well-known, respected, admired, and prestigious organization, the basis will exist for the reinforcement or enhancement of one's identification with the organization. However, the perceptions of others are not sufficient to influence one's identification. A member must also place some importance on what meaningful referents believe about the organization. Hence, Dutton and Dukerich (1991; see also Dutton et al, 1994) make a distinction between organizational reputation -- what outsiders believe about the distinctiveness of the organization -- and attractiveness of construed external image -- what members feel about these beliefs. Thus, construed external image consists of the awareness that others regard membership in

the organization as noteworthy, weighted by how important the opinions of these others are for oneself as a member of the organization.

The attractiveness of construed external image influences organizational identification in a number of ways (Dutton et al., 1994; c.f., Albert and Whetten, 1985: 264-280). The construed external image of one's organization enhances or depresses the social value of affiliation with the organization. It does this by affecting one's (a) self-continuity (i.e., one receives external confirmation or disconfirmation of the value of identification to the self-image), (b) self-distinctiveness (i.e., one obtains information on the degree of uniqueness that membership in the organization entails), and (c) self-enhancement (i.e., one acquires evidence about his or her character or other attributes; for example, one may feel more competent, morally virtuous, or important to the extent that the construed external image is favorable, Dutton and Dukerich, 1991; Gecas, 1982). In sum, the greater the attractiveness of an organization's construed external image, the stronger a member's organizational identification.

Organizational identity. Perceived organizational identity signifies the beliefs that particular members have of their organization that are distinctive, central, and enduring. In other words, characteristics of the organization that are unique, important to its members, and have longevity combine to define what the identity of the organization is to each member. The salient characteristics will be idiosyncratic to any particular organization and might include such attributes as progressive, fair, innovative, responsive to customers or clients, has opportunities for advancement, is a safe and fun place to work, and so forth.

The perceived identity of the organization affects identification through the three principles of self-definition: self-continuity, self-distinctiveness, and self-enhancement (Dutton et al., 1994). Let us consider each.

To the extent that an organization exhibits attributes that are valued by a member, he or she has a basis for reinforcing self-esteem. Valued organizational attributes constitute self-relevant information (Markus and Wurf, 1987) that not only is easy and natural to process, but provides a basis for self-expression. A member of an organization will be able to maintain a coherent and ongoing sense of self when the characteristics of the organization are valued and are in concert with one's own sense of integrity (Gecas, 1982; Steele, 1988). Research by O'Reilly, Chatman, and Caldwell (1991) supports the importance for one's self-concept of the fit between characteristics of the organization and people within it, as a function of value congruence.

Likewise, perceived organizational identity can be a catalyst for self-distinctiveness. To the degree that one's organization possesses attributes that set it off from other organizations, a person will have an opportunity

to differentiate oneself from others and in the process bolster or question one's self-esteem, depending on the favorability or unfavorability of the comparisons. A positive outcome arising from distinctiveness should enhance organizational identification. Mael and Ashforth (1992) report support for this hypothesis in their study of college alumni.

Finally, the attractiveness of perceived organizational identity will lead directly to self-enhancement to the extent that the organization harbors positively valenced attributes. Dutton et al., (1994: 247) explain this as follows: "Association with an organization possessing these qualities enhances members' self-esteem because this affiliation provides them with an opportunity to see themselves with these positive qualities, strengthening the degree to which a member likes him- or herself". The result is that the schemas for self and organization come to overlap, and because of the accentuation of self-esteem and establishment of cognitive coherence, the member sees him- or herself as an exemplar of a social category and identifies with the organization. Research consistent with this hypothesis was found by Dutton and Dukerich (1991) in their study of the Port Authority of New York and New Jersey.

Consequences of Organizational Identification

Organizational identification has a number of implications for the organization as an object of thought, for the way people think and feel about themselves and others in the organization, and for the actions they take on behalf of the organization and its members (Ashforth and Mael, 1989; Dutton et al., 1994). Three consequences we consider herein are organizational commitment, organization-based self-esteem, and citizenship behaviors.

Commitment to the organization. Early definitions of commitment were quite broad and encompassed aspects of other phenomena, some of which may be antecedent or consequent to it. For example, Porter, Steers, Mowday, and Boulian (1974: 604) early on defined commitment as "the strength of an individual's identification with and involvement in a particular organization". The measures used to operationalize this conceptualization included items for motivation, intent to remain, and acceptance of and overlap with the values and goals of the organization (e.g., Mowday, Steers, and Porter, 1979).

O'Reilly and Chatman (1986: 493) more narrowly defined commitment as "the psychological attachment felt by the person for the organization" (see also Caldwell, Chatman, and O'Reilly, 1990). Nevertheless, they operationalized commitment with items measuring three dimensions: identification (i.e., involvement based on a desire for affiliation), internalization (i.e., involvement predicated on congruence between individual and organizational values), and compliance (i.e., instrumental involvement for specific,

extrinsic rewards). A close examination of the measures and results reported in O'Reilly and Chatman (1986) reveals that what they label as identification is not the categorization and cognitive processes discussed herein but rather pride in affiliation with the organization. O'Reilly and Chatman's (1986) dimension of internalization is somewhat similar to what has been described herein as perceived organizational identity, one of the bases for or antecedents to identification. The measures of compliance studied by O'Reilly and Chatman (1986) loaded inconsistently on factors across their two investigations and in each case were on the third and weakest factor. Two of four measures of compliance that loaded highly, and then only for the first investigation, indicated the perception of how well effort expended is linked to rewards.

Allen and Meyer (1990) developed a three component view of organizational commitment that represents a member's emotional, moral, and behavioral attachment to the organization. This conceptualization is well-suited for specifying factors which organizational identification potentially influences and we use it to organize the discussion below. Although organizational theorists have recently taken care to distinguish identification from commitment (e.g., Ashforth and Mael, 1989: 23), the theory behind the identification-commitment linkage has not received attention.

Emotional commitment might be summarized as "the attachment of an individual's fund of affectivity and emotion to the group" (Kanter, 1968: 507). We can think of a member of an organization as feeling affect toward the organization as an abstraction and toward the members within it. How might organizational identification influence affect toward the organization and its members? One mechanism occurs as a result of depersonalization and the degree of cognitive fusing and interchangeability between the self- and organization-schema. To the degree of identification, one's self-worth, sense of coherence, and personal integrity will be reinforced by positively evaluating the organization to which one belongs. Liking for the organization might be influenced by assimilation and contrast effects where positive attributes of the organization are exaggerated and negative ignored, and vice a versa for other organizations chosen for comparative purposes (e.g., Lombardi, Higgins, and Bargh, 1987; Newman and Uleman, 1990; Sherif and Hovland, 1961). Positive affect toward the organization, and especially toward those within it, will also be bolstered to the extent that others with whom one works have similar social identities (e.g., Hogg and Abrams, 1988). Similarities of identities lead to greater attraction for members. Likewise, the evaluation of members and the organization will be accentuated to the extent that in- and outgroup stereotypes are formed.

Moral commitment, or what Allen and Meyer (1990) term, normative commitment, can be thought of as one's felt obligation or responsibility to the organization. Organizational identification leads to a greater sense

of normative commitment in one or both of two ways. As one identifies with a social category and sees him- or herself as an exemplar of it, the properties of the shared schemas, including group values and normative expectations, become assimilated or attributed to the self through categorization processes (Turner, 1985). Similarly, the basis for a transference of group values and normative expectations are provided through in-group cohesion and the facilitation of communication and cooperation, which also depend in part on social identification processes (Turner, 1984).

The third component of commitment entails a behavioral predisposition to leave or remain with the organization. Allen and Meyer (1990) term this continuance commitment. Generally, we might expect that the greater the identification with the organization, the stronger the commitment to remain with it. For those who identify with the organization, membership is seen as a means to maintain one's coherence, continuity, and positive self-worth. However, identification is not necessarily related to continuance commitment because alternative employment may be available that better satisfies one's needs. As Ashforth and Mael (1989: 23) point out:

"Organization's goals and values may be shared by other organizations ... an individual can score high on commitment not because he or she perceives a shared destiny with the organization but because the organization is a convenient vehicle for personal career goals. If another organization proved more convenient, such an individual could transfer to it without sacrificing his or her goals."

Therefore, one expects that organizational identification will lead to continuance commitment only when the gain from remaining with the organization is greater than the gain from leaving for another.

Two recent studies provide some support for a relationship between organizational identification and commitment. Becker (1992) found that organizational identification correlated 0.65 with commitment to top management. In a reanalysis of the data reported in Becker (1992), Hunt and Morgan (1994) showed that organizational identification influenced commitment. However, because commitment was measured with the Mowday et al. (1979) scale, which includes items measuring organizational identity, and because the measures of identification were based on the Mael and Ashforth (1992) scale and therefore suffer the limitations noted above, we should regard the findings to date relating organizational identification to commitment as inconclusive.

Organization-based self-esteem. In addition to its impact on the organization as an object of attachment in feeling, normative, and behavioral senses, organizational identification potentially affects self-esteem. Here we are not speaking about personal self-esteem, which constitutes a motive for identification in the first place and is reflected in the need for individual self-enhancement and cognitive coherence. Rather, we hypothesize

that identification with the organization has implications for self-esteem as a member of the organization.

Organization-based self-esteem answers the question, what does working for the organization make me feel about myself? Personal self-esteem as manifest in a motive for identification is a product of categorization and the interpretation of overlap between self- and organization-schemas, among other things. It entails anticipatory and vicarious appraisals of the meaning of identification. Organization-based self-esteem is an outcome of actual identification with the organization.

At least three aspects of self-esteem can be identified as a function of being a member of an organization. Working for an organization can enhance or highlight positive aspects of one's self-worth. For example, it can make one feel confident about one's abilities and that others respect and admire oneself. By contrast, working for the organization can accentuate or draw attention to negative aspects of one's self-worth. It might, for example, cause one to feel anxious about making mistakes or feel inferior to others. The third aspect of self-esteem as a consequence of organization membership does not refer to qualities of the self, per se, but rather to what one accomplishes or produces on the job. Being frustrated about one's performance or worrying about whether one is regarded as a success or failure are examples.

Organizational identification is expected to influence perceptions of positive self-worth, as a consequence of working for the organization, but to not necessarily be related to negative self-worth or performance outcome attributions to the self. Stronger identification should lead to greater perceptions of positive self-worth and no relation to negative self-worth, as a consequence of organization membership, because positive information about the self is more easily recalled and efficiently processed than negative (e.g., Kuiper et al., 1985) and positive information about the self is more adaptive (e.g., Taylor and Brown, 1988). Moreover, people have been found to exaggerate their own role in their successes and to deny responsibility for failures in what is termed the "self-serving attributional bias" in the literature (e.g., Bradley, 1978; Fletcher and Ward, 1988). Finally, people have a need to maintain a positive self-image, and there is a tendency to process information and think of self-schemas in a manner enhancing cognitive consistency and validating one's self-worth (Greenwald and Pratkanis, 1984; Hastie, 1981). Because objective performance outcomes are not only a function of the self in most situations, but frequently are determined in part by chance and outside influences, organizational identification is not necessarily expected to relate to the attribution of outcomes to the self as a consequence of membership in the organization.

Organizational citizenship behaviors. Organizational citizenship is defined as "behavior that is above and beyond the call of duty and is therefore discretionary and not rewarded in the context of an organization's

formal reward structure" (Konovsky and Pugh, 1994: 656). Konovsky and Pugh (1994) identify five dimensions of citizenship behavior: conscientiousness, altruism, sportsmanship, courtesy, and civic virtue (see also Van Dyne, Graham, and Dienesch, 1994). We hypothesize that organizational identification will positively influence the five dimensions of citizenship behavior.

The rationale for our hypothesis is as follows. As one comes to identify with the organization, differences with other organizations and outsiders tend to be discovered and even exaggerated, and similarities with coworkers tend to be accentuated. This leads to in-group cohesiveness, greater liking for coworkers, and greater cooperation (e.g., Hogg and Turner, 1985; Kramer, 1991). In addition, as one's identity and the organization's become fused, the sense increases that the successes and failures of the organization become one's own (Ashforth and Mael, 1989). Helping others is akin to helping the self, and the self is moreover dependent on others in the organization and benefits from them (Shamir, House, and Arthur, 1993). Citizenship behaviors not only are an expression of mutuality but have long-run instrumental consequences for the welfare of the organization, the self, and fellow workers. Thus "... effort directed toward preserving, supporting, and improving the organization proceeds naturally from the congruence between a member's self-definition and the organization's definition" (Dutton et al., 1994: 256). This hypothesis has not been tested before but will be examined herein.

Method

Subjects and Procedure

All employees of the Camst company were surveyed. Camst is a food service company that primarily supplies lunches to schools, hospitals, and private companies. It also has a small number of restaurants that cater to the afternoon trade only and also accept vouchers from local companies (many institutions in Italy provide either lunches or vouchers for their employees). Camst is headquartered in Bologna, Italy, and most of its business is conducted in the north-central region of the country.

A total of 2700 surveys was distributed within the company. The survey was accompanied by a letter from the President of Camst urging people to participate but indicating that the survey was conducted on an anonymous basis and would be collected and handled by the authors in cooperation with their universities. This was in fact the case.

Nine hundred and fifty-one employees responded to the survey, for an overall response rate of 35.2%. A total of four hundred and nine people completed the questionnaire, which was rather lengthy and took approximately one hour and ten minutes to fill-out.

To get a sense of how representative the sample was of the total population of the firm, we compared the two groups on the socio-demographic and work-related information we had for both. The firm includes 77% women and 23% men employees; 51% who work part-time and 49% who work full-time; 25% unmarried, 64% married, and 11% widowed, legally separated, or divorced; and 20%, 44%, 34%, and 2% who completed elementary, middle, and secondary schools and college, respectively. The sample consisted of 69% women ($N = 282$) and 31% men ($N = 127$); 45% who work part-time and 55% who work full-time; 26% unmarried, 62% married, and 12% widowed, legally separated, or divorced; and 12 1/2%, 43 1/2%, 41%, and 3% who completed elementary, middle, and secondary schools and college, respectively. Overall, the sample compares well to the total firm population.

Measures

A total of 432 items appeared on the questionnaire, but only the one's pertinent to the study at hand will be described. The remaining items included 20 open-ended responses, 23 self-ratings on general characteristics and 23 corresponding importance ratings, 192 emotional responses toward various targets, 37 judgments about the general services provided by the company, and 37 miscellaneous items concerning the company. The aforementioned items appeared throughout the questionnaire, and the 100 focal items were interspersed amongst these. Below is a description of the focal items, where English translations are provided from the original Italian version.

Organizational identification. An indirect measure of organizational identification was provided by use of six items proposed by Mael and Ashforth (1992). The items are listed in the Appendix. Mael and Ashforth (1992) report an alpha of .87 for the scale in their study of college alumni. A factor analysis of the items in the present study demonstrated that they loaded on a single factor (eigenvalue = 3.52, percent of variance explained = 59; range of loadings = .73 - .83).

Four items were developed as direct measures of organizational identification. Dutton et al., (1994: 258) suggested the need for directly measuring the overlap between self- and organization-identity. For the cognitive representation, two measures were used. Figure 1 illustrates the first: a visual and verbal report of organizational identification, wherein respondents were asked to express their perceived overlap between their own self-identity and the identity of the organization. The second cognitive measure, which appeared 33 items later in the questionnaire, stated: "Please indicate to what degree your self-image overlaps with Camst's image". A seven-point scale was used to record responses, anchored by "not at all" and "very much", with "moderately" in the middle. For the affective significance of organizational identification, two questions were

asked: "How pleased are you with the degree of identification you just expressed with Camst?" and "How happy are you with the degree of overlap between your self-image and Camst's image?" Seven-point scales were used for both items; the first had "not at all" and "very much" as end-points and "moderately" in the middle; the second had "not at all" and "completely" as end points and "moderately" in the middle. The affective measures followed the respective cognitive items and were thus separated in the questionnaire by 33 items. A factor analysis of the items showed that all loaded on a single factor (eigenvalue = 2.72, percent variance explained = 68, and range of loadings = .77 - .85).

[Figure 1 about here]

Construed external image. We employed eight items to measure construed external image (see Appendix). The items, which are somewhat similar to Mael and Ashforth's (1992) measures of "perceived organizational prestige", refer to either "my relatives and people close or in some other way important to me" or "people generally" and focus upon four aspects of external image: being well-known, respected, admired, and prestigious. A five-point scale was used: 1 = "not at all", 2 = "a little bit", 3 = "moderately", 4 = "quite a bit", and 5 = "very much". Factor analysis revealed a unidimensional scale (eigenvalue = 5.49, percent of variance explained = 69; range of loadings = .71 - .87). The importance of each construed external image item for the member of the organization was also measured on five-point "not at all important" to "very much important" items to obtain a version of construed external image weighted by importance (i.e., attractiveness of construed external image). The construed external image x importance items yielded the same substantive results as the analyses with use of only the construed external image items, and because of the scaling problem with product terms pointed-out by Evans (1991), we chose to present the findings using the construed external image items alone and not the product terms.

Organizational identity. To identify characteristics of the organization perceived attractive to different degrees by employees, interviews were performed with twenty-six people. For each of the twelve main job descriptions (e.g., chief chef, cook, cashier, bar tender, local director, top management), one or two people were selected and interviewed for up to two hours. An open-ended elicitation procedure was used, and a total of 23 distinct characteristics were determined (see Appendix). Respondents in the main study were then asked to indicate how well each characteristic described the company. A five-point scale was used: 1 = "not at all", 2 = "a little bit", 3 = "moderately", 4 = "quite a bit", and 5 = "very much". A factor analysis showed that one factor was supported (eigenvalue = 9.85, percent variance explained for the eight items loading highly on this

factor = 43, range of loadings = .45 - .79). The eight items included: sincere, lively, efficient, sensitive, honest, cooperative, family, and participative.

Organizational commitment. The 24 item organizational commitment scale developed by Allen and Meyer (1990) was administered (see Appendix). The items measure affective, continuance, and normative commitment. Responses were recorded on seven-point, "strongly disagree" to "strongly agree", measures. A factor analysis revealed that five factors existed (eigenvalues ranged from 1.04 to 5.93, with 61 percent of total variance explained, range of loadings = .50 - .84). Two affective factors resulted: one tapping positive reactions (items # 1, 2, 3, & 7), the second capturing attachment deficits (items # 5, 6, & 8). Two continuance factors were found: one reflecting the losses one would experience by leaving the firm (items # 10, 11, & 12), the second referring to availability of other employment (items # 14 & 15). For normative commitment, the fifth factor consisted of five items (items # 17, 20, 21, 22, & 23).

Organizational-based self-esteem. Heatherton and Polivy's (1991) 20-item state self-esteem scale was adapted for use in the present study. Rather than indicating their self-esteem in general and not in relation to any specific context as done under the original scale, respondents were instructed to express to what extent working at Camst made them feel in various ways about themselves (see Appendix). Responses were recorded on five-point scales: 1 = "not at all", 2 = "a little bit", 3 = "moderately", 4 = "quite a bit", and 5 = "very much". Three factors were identified (eigenvalues = 6.38, 3.52, and 1.26, percent variance explained = 56, range of loadings = .49 - .81). The first factor reflects negative aspects of one's self in the sense that these reduce self-esteem or prevent it from being enhanced (items # 10, 13, & 15-20). The second factor encompasses positive aspects of one's self in the sense that these reinforce or promote favorable self-esteem (items # 1, 3, 6, 8, 9, 11, 12, & 14). The third factor does not refer to one's self, per se, but rather to performance outcomes with potential impact on the self-image (items # 2, 4, & 5).

Citizenship behavior. We used Konovsky and Pugh's (1994) organizational citizenship behavior scale for this study. Five dimensions of citizenship behavior underlie the scale: conscientiousness, altruism, sportsmanship, courtesy, and civic virtue. Based on the nature of the firm under study, three items were selected for each dimension from Konovsky and Pugh's (1994) original 32-item scale. The resulting 15 items are listed in the Appendix. Respondents were asked to indicate to what extent the items described them personally using the following scale: 1 = "not at all", 2 = "a little bit", 3 = "moderately", 4 = "quite a bit", 5 = "completely". A factor analysis confirmed the presence of the hypothesized five factors (eigenvalues = 1.14, 3.50, 1.72, 1.21, and 2.01, respectively, percent explained variance = 64, range of loadings = .42 - .86).

Tests of Hypotheses

Structural equation models (SEMs) were used to test hypotheses. Under SEMs, latent variables correspond to the constructs under consideration (e.g., organizational identification, commitment, or citizenship behaviors), and hypothesized relationships amongst constructs are tested with parameters analogous to regression coefficients. In addition, means of latent variables can be compared across meaningful groups (e.g., men versus women).

Operationalizations or indicators of latent variables are formed as composites of items (i.e., sums) from the items hypothesized and found to load on the respective factors by use of exploratory factor analysis. This procedure has been advocated by psychometricians and used to investigate similar hypotheses in the personality field (e.g., Hull, Lehn, and Tedlie, 1991; Marsh and Hocevar, 1985). The particular SEMs investigated herein have been termed "partial disaggregation" models in the structural equation modeling literature (e.g., Bagozzi and Heatherton, 1994). The partial disaggregation model represents a compromise between the most aggregative approach, characterized by simply summing all items in a scale, and the so-called "total disaggregation" approach, characterized by allowing all items to load individually on their respective factors.

Although frequently used in the organizational studies literature, the most aggregative practice does not provide for an explicit representation of measurement error and the corresponding correction for attenuation in parameters under tests of hypotheses. The disaggregation models do take into account measurement error formally. The total disaggregation approach has the drawbacks of requiring larger sample sizes (in order to achieve recommended ratios of sample size to number of parameters to be estimated in the proportion of 5:1 or greater) and being especially sensitive to measurement error (because random error of individual items is typically greater than for composites). Because the number of items per scale used herein is as many as 24 and the number of parameters to be estimated per model would be as many as 60, the sample size required for use of the total disaggregation model would be 300 or greater. As hypotheses are tested on samples as small as 115, the total disaggregation model is not feasible, and the partial disaggregation model was therefore used.

The main drawback with the partial disaggregation model concerns the basis for aggregating items into composites. The rule used herein was to perform an exploratory factor analysis to identify which items load on the factors, and then, based on the findings, form composites by summing items within factors, wherein the items were selected at random for each indicator from all items loading highly on the factor, until all items were utilized. For latent variables where 4 to 6 items existed per variable, this meant summing pairs or triplets of items, respectfully, to form two indicators. For latent variables where only 3 items existed per factor, two items

were summed for one indicator and the third was used as the second indicator. If only 2 items existed per latent variables, the individual items served as indicators. When more than 6 items were available per latent variable, more than two indicators per latent variable were formed where feasible. For example, the 8 items for construed external image were used to form 4 indicators.

Measurement of organizational identification. Figure 2 shows the model for representing reliability, criterion-related validity, and generalizability of the measures of organizational identification. In this model, the two latent variables are drawn as ellipses and correspond to the proposed direct representation and indirect representation of organizational identification, respectively. Each latent variable is connected to two boxes, which are the indicators or measures of the latent variables (in this instance, the indicators are either individual items or composites of items). Each indicator has two arrows terminating into it. The arrows from latent variables to indicators stand for sources of variance in the indicators that are due to the respective concept of identification; the four λ_j s adjacent to the arrows are factor loadings relating latent variables to indicators. The four short arrows with δ_j s at their origins depict variation in the indicators due to error. The λ_j s and estimates of error variances can be used to compute internal consistency measures of reliability. Finally, the curved line connecting the latent variables and designated as ϕ_{21} stands for the correlation between the direct and indirect representations of organizational identification (i.e., it is a measure of criterion-related validity). As a consequence of the estimation procedure used to infer values for ϕ_{21} , the correlation is corrected for attenuation due to the extent of unreliability in the indicators of identification. Generalizability will be discussed below.

[Figure 2 about here]

Impact of construed external image and organizational identity on organizational identification. Figure 3 illustrates the model for testing the effects of construed external image (e.g., "My relatives and people close or in some other way important to me think that Camst is a prestigious company.") and perceived organizational identity (e.g., "innovative, progressive, secure") on organizational identification. In order to circumvent the problems of multicollinearity between construed external image and organizational identity, organizational identification was regressed on a second-order factor (see ξ in Figure 3), with construed external image and organizational identity loading on this factor. The parameter, γ_3 , represents the joint effect of construed external image and organizational identity on organizational identification. The relative contributions of construed external image and organizational identity are roughly proportional to γ_1 and γ_2 , respectively.

[Figure 3 about here]

Impact of organizational identification on commitment. Figure 4 depicts the effects of organizational identification on the five components of organizational commitment: affective #1, affective #2, continuance #1, continuance #2, and normative commitment. For simplicity, the correlated errors amongst the errors in equations (i.e., the ζ s) are not shown in the figure. Affective commitment #1 reflects positive emotional feeling toward the organization (e.g., "I would be very happy to spend the rest of my career with Camst."). The hypothesis is that organizational identification will be positively related to affective commitment #1 (i.e., $\gamma_1 > 0$). Affective commitment #2, in contrast, captures negative emotional feelings toward the organization (e.g., "I do not feel a strong sense of belonging to Camst."). The hypothesis is that organizational identification will be negatively related to affective commitment #2 (i.e., $\gamma_2 < 0$). Continuance commitment #1 summarizes the losses one would experience if he or she were to leave the firm (e.g., "It would be too costly for me to leave Camst now."). The greater the identification with the organization, the greater the losses from leaving the organization (i.e., $\gamma_3 > 0$). Continuance commitment #2, on the other hand, reflects the opportunities outside the firm (e.g., "I feel that I have few options to consider leaving Camst."). The greater the identification with the firm, the fewer the perceived options (i.e., $\gamma_4 > 0$). Finally, normative commitment indicates the dutybound attachment to the firm (e.g., "One of the major reasons I continue to work for Camst is that I believe that loyalty is important and therefore feel a sense of moral obligation to remain."). The hypothesis is that organizational identification will be positively related to normative commitment (i.e., $\gamma_5 > 0$).

[Figure 4 about here]

Impact of organizational identification on self-esteem. Figure 5 shows the effects of organizational identification on the three dimensions of organizational-based self-esteem: positive self-image, negative self-image, and performance-related outcomes. Positive self-image reflects aspects of the self promoting favorable self-esteem (e.g., "Working for Camst makes me feel good about myself."). The stronger the identification with the firm, the greater the positive self-image (i.e., $\gamma_1 > 0$). Negative self-image indicates aspects of the self reducing one's self-esteem or preventing its enhancement (e.g., "Working for Camst makes me feel that I have less ability right now than others."). No necessary relation was expected between identification and negative self-image, although a small negative might occur to the extent that one was open to information about one's less desirable qualities (i.e., $\gamma_2 < 0$). Performance-related self-image captures the extent that the person feels badly about his or her accomplishments on the job (e.g., "Working for Camst makes me feel frustrated or rattled about my performance."). No necessary relationship is expected between identification and performance-related

self-image. A low negative relationship (i.e., $\gamma_3 < 0$) might occur if one attributes more of one's performance to the self as opposed to chance or external factors.

[Figure 5 about here]

Impact of organizational identification on citizenship behavior. Figure 6 illustrates the effects of organizational identification on the five facets of citizenship behavior: conscientiousness, altruism, sportsmanship, courtesy, and civic virtue. Conscientiousness refers to conformity to formal and informal norms in the organization (e.g., "I am always on time."). The hypothesis is that, the greater the identification with the organization, the more conscientious one will be (i.e., $\gamma_1 > 0$). Altruism represents the degree of unselfish regard for coworkers (e.g., "I help others who have been absent from work."). The stronger the identification with the organization, the more altruistic one will be toward others in the organization (i.e., $\gamma_2 > 0$).

Sportsmanship describes the tendency to react in a disparaging or negative way toward the organization (e.g., "I always find fault with what the organization is doing."). The hypothesis is that the greater the identification with the organization, the less the tendency to disparage it ($\gamma_3 < 0$). Courtesy signifies consideration or generosity in actions taken in relation to others (e.g., "I consult with others who might be affected by my actions or decision."). The stronger the identification with the organization, the more considerate or generous the actions (i.e., $\gamma_4 > 0$). Finally, civic virtue captures the willingness to look after the needs and interests of the organization (e.g., "I offer suggestions for ways to improve operations."). The greater the identification with the organization, the more one acts to meet the needs and interests of the organization ($\gamma_5 > 0$).

[Figure 6 about here]

Estimation of Models and Assessment of Fit

The SEMs were estimated by use of LISREL8 (Jöreskog & Sörbom, 1993). One measure of model fit that was used is the likelihood ratio chi-square statistic, which can be used to test the null hypothesis that a specified model reproduces the population covariance matrix of the observed variables. By convention, an acceptable model is one where the p value is greater than or equal to .05. Reliance on the chi-square test as the sole measure of fit is not recommended because of its dependence on sample size. For example, in large samples even trivial deviations of a hypothesized model from a true model can lead to rejection of the hypothesized model, or for very small samples, large deviations of a hypothesized model may go undetected. Therefore, it is desirable to examine other measures of fit not as sensitive to sample size. Another limitation with the chi-square

test is that it does not directly provide an indication of the degree of fit such as is available with indices normed from 0 to 1.

An additional approach to the assessment of goodness of fit is to use an index that is based on the comparison of the fit of a hypothesized model to the fit of a baseline model, such as the null model, where the latter assumes that all variables are uncorrelated (i.e., only error variances are estimated). Such an approach is termed an incremental fit index in that a hypothesized model is compared with a more restricted, nested model. The best known index in this regard is the comparative fit index (CFI) developed by Bentler (1990; see also the

relative noncentrality index (RNI) developed by McDonald and Marsh, 1990):
$$CFI = \frac{(\chi_0^2 - df_0) - (\chi_f^2 - df_f)}{\chi_0^2 - df_0}$$

where χ_0^2 and χ_f^2 are for the null and focal models, respectively. The CFI is normed in the population and thus has values bounded by zero and 1. Equally important, the CFI provides an unbiased estimate of its corresponding population value, and therefore it should be independent of sample size. Monte Carlo studies show that the CFI performed well for sample sizes varying from 50 to 1,600, in the sense of producing unbiased estimates and estimates low in variability (e.g., Bentler, 1990).

From an intuitive perspective, the CFI can be thought of as a measure of how much variation in measures is accounted for from a practical standpoint. A rough rule of thumb is that CFI should be greater than or equal to .90 where values less than .90 suggest that significant amounts of variance remain to be explained and values greater than or equal to .90 imply that further relaxation of parameter constraints are not warranted and might lead to over fitting.

Generalizability

To the extent that organizational identification and the other constructs and the hypothesized relationships amongst these generalize, the validity of the models tested herein will be enhanced. Generalizability was investigated by comparing (1) men and women and (2) full-time and part-time employees. For each model shown in Figures 2-6, we tested first the equality of factor patterns. The question addressed here is whether the same factors underlie the measures across groups. A failure to reject this hypothesis was followed by a test of the equality of factor loadings. Equal factor loadings imply that the correspondence between factors and indicators is the same for men and women and for full- and part-time employees. Given equal factor loadings, it is meaningful to test for the invariance of error variances. A failure to reject this hypothesis and the hypothesis of equal factor loadings, suggests that the measures are equally reliable across

groups. Next, given equal error variances, we can test for the equality of variances and covariances amongst factors for men and women and for full- and part-time employees. Finally, the invariance of causal paths can be tested across groups.

The aforementioned sequence of hypotheses is evaluated by use of chi-square difference tests and constitutes increasingly demanding tests of generalizability. The most powerful evidence for generalizability results when the factor pattern, factor loadings, error variances, variances and covariances for factors, and/or hypothesized relationships amongst constructs are invariant. All hypotheses noted above were performed on covariance matrices (e.g., Cudeck, 1989).

Structured Means

The tests of generalizability discussed above address the measurement properties, associations, and predictions of the models for men and women and for full- and part-time employees. It is also interesting to examine differences in mean levels of key variables across gender and across full- and part-time employees. To do this, we use the structured means procedure described in Jöreskog and Sörbom (1989). The main predictions are that organizational identification, construed external image, organizational identity, commitment, organization-based self-esteem, and organizational citizenship behavior will be greater for full- versus part-time employees. Full-time employees have a greater investment and dependence on the organization than part-time employees. No specific predictions are made for men versus women on structured means, and the tests done here are for descriptive purpose.

Results

Measurement of Organizational Identification

The findings for the model in Figure 2 are summarized in Table 1. In this and each succeeding table, hypotheses are tested separately for each of the three operationalizations of organizational identification: the cognitive, affective, and combined (i.e., cognitive and affective) measures. The results in the left column in Table 1 show that the model fits the data satisfactorily for all three operationalizations, based upon the CFI values. The reliability of measures is also satisfactory in each case (see second column in Table 1, $\rho = .70 - .83$). Computed from the factor loadings and error variances, the measures of reliability are internal consistency representations and are analogous to Cronbach Alpha. Finally, as shown in column three in Table 1, the proposed direct representation of organizational identification correlates positively and highly ($\phi = .82$) with the Mael-Ashforth scale, for the cognitive operationalizations and positively and somewhat less in magnitude for the

affective ($\phi = .60$) and combined ($\phi = .72$) operationalizations. These findings of association between the representations of organizational identification provide evidence for criterion-related validity.

Further evidence for the validity of the measures of the proposed direct representation of organizational identification can be seen in tests of generalizability, which provide a type of cross-validation of the model in Figure 2. The top half of Table 2 summarizes the findings for tests of invariance of key parameters across full- and part-time employees. The first row in Table 2 presents the results for the baseline model, which is a test of the factor patterns for the two groups. It can be seen that the two factor model in Figure 2 fits well for both groups, for each of the operationalizations of organizational identification. The second row in Table 2 presents the findings for the test of invariance of factor loadings across full- and part-time employees. The chi-square difference tests comparing models M_1 and M_2 reveal that the factor loadings are invariant across groups for each of the operationalizations. This means that the relationships between factors (i.e., representations of organizational identification) and their respective measures are identical for full- and part-time employees. The third row in Table 2 summarizes the findings for the test of invariance of error variances across full- and part-time employees. The results show that the error variances are invariant across groups. Equal factor loadings and equal error variances across groups imply that the measures of organizational identification are equally reliable for full- and part-time employees. The fourth row in Table 2 shows the findings for the test of invariance of the correlation between factors across groups. The results indicate that the correlation is invariant. That is, criterion-related validity is the same for full- and part-time employees. In sum, the key parameters in the hypothesized model (Figure 2) generalize across full- and part-time employees.

The top half of Table 3 summarizes the findings for tests of invariance of key parameters across gender. As shown in the first row, the factor pattern is the same for women and men, across all operationalizations of the proposed representation of organizational identification. Likewise, the findings in the second through fourth rows indicate that factor loadings, error variances, and the correlation between the proposed and Mael-Ashforth representations are invariant for women and men. Thus the key measurement and validity parameters for the model in Figure 2 generalize across gender.

[Tables 1-3 about here]

The bottom halves of Tables 2 and 3 reveal the differences in factor means for the representations of organizational identification for full- versus part-time employees and for women versus men, respectively. It can be seen in Table 2 that full-time employees express significantly stronger levels of identification with the organization than part-time employees, as hypothesized. This occurs for both the proposed and the Mael-

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Ashforth representations. Table 3 shows that men experience significantly higher levels of identification than women under the proposed model, but for the Mael-Ashforth representation, the differences in means, while greater for men than women, only approach significance at the $p < .10$ level.

Impact of Construed External Image and Organizational Identity on Organizational Identification

The findings for the model in Figure 3 are presented in Table 4. It can be seen in the first column that the model fits the data satisfactorily for all three operationalizations of organizational identification, based upon the CFIs. The second column in Table 4 shows that moderately high levels of explained variance result in organizational identification as a function of construed external image and perceived organizational identity ($R^2 = .53 - .65$). The third and fourth columns in Table 4 suggest that organizational identity contributes more to the prediction of organizational identification than construed external image. Nevertheless, construed external image has substantial effects upon organizational identification. In sum, the greater one perceives that others believe the firm is prestigious and the greater that one perceives that the firm exhibits valued characteristics, the stronger one's identification with the firm.

Table 5 summarizes the findings for the tests of generalizability of the model in Figure 3 across employment status. It can be seen that the factor pattern, factor loadings, error variances of measures, and regression paths (i.e., $\gamma_1 - \gamma_3$) are invariant between full- and part-time employees. This is true for all three operationalizations of organizational identification. Thus not only are the measurement properties of the model invariant for full- and part-time employees, but so too are the effects of construed external image and organizational identity on identification, as hypothesized.

[Tables 4-6 about here]

Similarly, Table 6 presents the findings for the tests of generalizability of the model in Figure 3 across gender. It is apparent that the factor pattern, error variances, and regression paths are invariant across women and men for all three operationalizations of organizational identification. The factor loadings are invariant across women and men for the cognitive and combined measures of organizational identification but not for the affective measures. Hence the model of Figure 3 generalizes across gender in most senses.

The tests of differences in factor means reveal that neither full- and part-time employees nor women and men differ in terms of their mean levels of construed external image and perceived organizational identification (see bottom of Tables 5 and 6). By contrast, the tests of structured means indicate that full-time employees

identify more strongly with the organization than part-time employees, and men identify more strongly with the organization than women.

Impact of Organizational Identification on Commitment

Table 7 summarizes the findings for the model in Figure 4. Based on the CFIs, it can be seen that the model fits the data well for each operationalization of organizational identification (see top row in Table 7). Next, the middle panel in Table 7 shows the effects of organizational identification on each component of commitment. All paths have the predicted sign and are statistically significant. Organizational identification has the largest impact on affective commitment #1 (i.e., positive emotions toward the organization) in every case. Large effects of organizational identification can be seen as well on affective commitment #2 (negative emotions toward the organization) and on normative commitment (i.e., one's dutybound attachment to the firm). Organizational identification also has statistically significant effects on continuance commitment #1 & #2, but the magnitudes of these effects are small. The bottom panel in Table 7 shows the explained variance in each component of commitment, where the values range from very small ($R^2 = .02$) to high ($R^2 = .68$) and parallel the pattern of effects coefficients presented in the middle panel of the table.

Table 8 summarizes the findings for the tests of generalizability of the model in Figure 4 across employment status. The results show that the factor pattern, factor loadings, and paths from organizational identification to affective commitment #1 & #2, continuance commitment #2, and normative commitment are invariant for full- and part-time employees. This occurred for all operationalizations of organizational identification. The path from organizational identification to continuance commitment #1 was not invariant. However, the path is small in all cases, and little variance is explained in continuance commitment #1. Therefore, key measurement properties and most regression paths generalize for the model in Figure 4 across employment status.

The results for the tests of generalizability of the model in Figure 4 across gender are presented in Table 9. It can be seen that the factor pattern, factor loadings, and paths from organizational identification to affective commitment #1 & #2, continuance commitment #2, and normative commitment are invariant for women and men. This was the case for all operationalizations of organizational identification. The path from organizational identification to continuance commitment #1 was not invariant. Nevertheless, the path is small in all cases, and little variance is explained in continuance commitment #1. Thus key measurement properties and most regression paths generalize across gender for the model in Figure 4.

[Tables 7-9 about here]

The tests of differences in factor means show that affective commitment #1 is higher for full- versus part-time employees when the affective and combined measures of organizational identification are used in the model, and all means differ for continuance commitment #2 across employment status. No other means differ between full- and part-time employees for the components of commitment. Similarly, only the means for continuance commitment #2 differ across gender.

Impact of Organizational Identification on Organization-based Self-esteem

The results for the model in Figure 5 are presented in Table 10. As shown in the first row of the table, the model fits the data well for all three operationalizations of organizational identification, based upon the CFIs. The second row in Table 10 reveals that the primary impact of organizational identification is upon one's positive self-image in the organization as hypothesized, where the effects in every case are substantial. The more one identifies with the firm, the stronger that positive self-worth is tied to membership in the organization. By contrast, organizational identification affects negative self-image and performance self-esteem to a very small extent and, in fact, significantly influences these aspects of self-esteem only when the affective measures of organizational identification are employed. In the latter case, the stronger one identifies with the firm, the less that negative self-worth is tied to membership in the organization and the less badly one feels about his or her accomplishments on the job. The bottom panel of Table 10 shows that a moderate amount of explained variance exists in positive self-esteem as a function of organizational identification, but very small amounts are found for negative self-esteem and performance self-esteem.

Table 11 summarizes the findings for the tests of generalizability of the model in Figure 5 across employment status. It can be seen that the factor pattern, factor loadings, and regression paths (i.e., $\gamma_1 - \gamma_3$) are invariant between full- and part-time employees. This is the case for all three operationalizations of organizational identification. Hence, the hypothesized impact of organizational identification generalizes fully across employment status.

Similarly, Table 12 presents the findings for the tests of generalizability of the model in Figure 5 across gender. With one exception, it is apparent that the factor pattern, factor loadings, and regression paths are invariant between women and men. The exception occurs for the test of invariance of factor loadings when the affective measures of organizational identification are used only.

The tests of differences in factor means show that neither full- and part-time employees nor women and men differ in terms of their mean levels of positive and negative self-esteem. Likewise, women and men do not

differ with respect to their mean levels of performance self-esteem. In contrast, part-time employees feel less badly about their accomplishments on the job than full-time employees.

[Tables 10-12 about here]

Impact of Organizational Identification on Citizenship Behavior

Table 13 summarizes the findings for the model in Figure 6. Based on the CFIs, it can be seen that the model fits the data well for each operationalization of organizational identification (see top row in Table 13). Next, the middle panel in Table 13 shows the effects of organizational identification on each component of citizenship behavior. All paths (i.e., $\gamma_1 - \gamma_5$) except one are statistically significant and in the predicted direction. Only the effect of organizational identification on conscientiousness was found to be nonsignificant and then only under the affective operationalization of organizational identification. Large effects were shown for identification on sportsmanship. The stronger the identification with the firm, the less the tendency to disparage or act negatively toward the firm. Likewise, relatively large effects were found for identification on civic virtue, especially for the cognitive and combined operationalizations of identification. The stronger the identification, the more one acts to meet the needs and interests of the organization. Although 14 of 15 coefficients shown in Table 13 are significant as forecast, their magnitude is relatively small as can be seen in the finding for explained variance in the bottom panel of Table 13. Indeed, moderate amounts of explained variance occur only for civic virtue and then only when the cognitive and combined operationalizations of identification are employed.

Table 14 presents the results for the tests of generalizability of the model in Figure 6 across employment status. It is apparent that the factor pattern, factor loadings, error variances of measures, and regression paths are invariant between full- and part-time employees. Hence, generalizability is established for the measurement properties of constructs and the predictions of citizenship behaviors as a function of identification.

Similarly, Table 15 summarizes the findings for the tests of generalizability of the model in Figure 6 across gender. The factor pattern, factor loadings, error variances of measures, and regression paths can be seen to be invariant across women and men for all operationalizations of identification save one. The lone exception occurs for the test of invariance of error variances under the operationalization of identification by affective measures, where the test nearly showed that the parameters were equal across gender.

The tests for differences in factor means reveal that full-time employees exhibit greater civic virtue on average than part-time employees (see Table 14). Men show higher levels of sportsmanship and civic virtue

than women (see Table 15). No other significant differences were found on the remaining components of citizenship behavior between full- and part-time employees or between women and men.

[Tables 13-15 about here]

Discussion

Based on social identity theory, it was argued herein that organizational identification is the degree of overlap between the self-schema of a member of an organization and his or her organization-schema. This representation received considerable empirical support in the present study.

The proposed measures of organizational identification were shown to be highly reliable, to exhibit convergent validity, and to achieve criterion-related validity with measures proposed by Mael and Ashforth (1992). At the same time, a number of antecedents were found to influence organizational identification, and organizational identification was found to influence a number of consequences, according to theory. The measures of organizational identification thus exhibited a certain degree of nomological validity. Moreover, the representation of organizational identification was found to generalize across part- and full-time employees and across men and women. This provides evidence for cross-validation of the measures. Finally, predictions were corroborated on expected differences between levels of organizational identification for part- and full-time employees. Full-time employees have more contact with the organization and greater investment in it than part-time employees, and thus have greater opportunity and motivation for identification, as the results confirmed. This finding, too, lends support to the measures and representation of organizational identification.

All measures of organizational identification – cognitive, affective, and combined cognitive-affective – demonstrated satisfactory measurement properties and validity outcomes. However, some differences should be pointed out. The use of the cognitive measures generally resulted in higher coefficients in predictions of consequences and in associations with antecedents and in greater explained variance than use of the affective and cognitive-affective measures. As hypothesized, this is a consequence of the close correspondence between the cognitive measures of organizational identification and the categorization processes upon which it is based. Nevertheless, because emotional reactions to identification would be expected to be connected to self-schemas and organization-schemas, thinking about one's identification with an organization should stimulate schema-triggered affect, and measures of cognitions and affect should be highly correlated. Yet, since the psychological distance between the cognitive representation of identification and its antecedents and consequences is less than the psychological distance between the affect triggered by a schema and the same antecedents and consequences,

we would expect stronger coefficients and higher explained variance to occur when using the cognitive measure in comparison to the affective and cognitive-affective measures.

In sum, the measures of organizational identification were found to be reliable and valid. In comparison to the Mael and Ashforth (1992) scale, the proposed measures are more parsimonious, (i.e., two versus six measures are sufficient), they more directly capture the overlap between self- and organization schemas implied by the conceptualization of organizational identification, they avoid inclusion of antecedents and consequences as part of their content, and they apply to a wider spectrum of people, including those with less education and verbal skills (in the present study 12.5% completed elementary school, 43.5% middle school, 41% secondary school, and only 3% college).

The findings also demonstrate the larger role of organizational identification in the experience of work behavior. In this regard, it is useful to scrutinize the relationships between organizational identification and its antecedents and consequences.

Construed external image was a strong antecedent of organizational identification. March and Simon (1958: 66) long ago hypothesized a similar relationship, and Ashforth and Mael (1989) and Dutton et al. (1994) developed the rationale further. Yet the hypothesis has only been tested once before, where a small positive relationship (standardized beta = .26) was found (Mael and Ashforth, 1992). Mael and Ashforth (1992) used multiple regression in their study and therefore measurement error in construed external image was not taken into account. We were able to correct for the unreliability in measures of construed external image and found a strong impact for the variable on organizational identification (standardized coefficient = .63). The more members believed that others whose opinions they valued thought that the organization was a well-known, respected, admired, and prestigious company, the greater the degree of identification with it.

Likewise, perceived organization identity was found to strongly influence organizational identification. Perceived organizational identity signifies the beliefs that particular members have of their organization that are distinctive, central, and enduring (Albert and Whetten, 1985; Dutton et al., 1994). The organization under study herein exhibited 8 characteristics so identified by members: sincere, lively, efficient, sensitive, honest, cooperative, family, and participative. The findings revealed that perceived organizational identity had a strong impact on organizational identification. Indeed, although we examined only two antecedents of organizational identification -- construed external image and perceived organizational identity -- 65 per cent of the variance in organizational identification was accounted for by these two variables, when the cognitive measures of identification were employed. Organizational identity contributed more to the explanation of identification than

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did construed external image, although the latter still was an important predictor. It appears that the antecedents of identification promote self-continuity, self-distinctiveness, and self-enhancement.

One of the most important implications of organizational identification is its consequences and meaning for organizational commitment. Organizational commitment was operationalized with Allen and Meyer's (1990) scale which captured aspects of affective, continuance, and normative commitment. We predicted and found significant effects of identification on each of five components of commitment: positive affect toward the organization arising from membership in it, negative affect as a consequence of lack of affiliative feelings toward the organization, losses felt if one should leave the organization, the availability of other employment, and one's sense of responsibility or obligation to the organization. The stronger the identification with the organization, the greater the effects on commitment. The magnitude of effects varied by type of commitment. The most powerful influence of identification was on positive affect toward the organization where up to 68 per cent variance was explained, depending on the operationalization of identification. Somewhat less, but nevertheless strong effects, were found on negative affect and normative commitment. The explained variance here due to identification was 37 and 31 per cent, respectively, when the cognitive operationalization was used. Small amounts of explained variance were found for the two components of continuance commitment (i.e., up to 3 per cent). Yet even here, the coefficients for predictors were highly significant. The decision to stay or leave the organization is a function of many personal, institutional, and competitive factors, which not only are not measured well by the items employed herein, but would be expected to vary considerably across people.

Commitment reflects ties to the organization. We also investigated what members get from the organization. Organizational-based self-esteem reflects feelings of self-worth attributed to being a member of the organization. It answers the question, what does the organization make me feel about myself? We found that being identified with the organization enhanced or highlighted positive aspects of members' self-worth but was generally unrelated with negative aspects of self-worth or the accomplishment outcomes one attributed to the self. As much as 34 per cent of the variance was explained in measures of positive self-image (e.g., feeling confident about one's abilities; believing that others respect and admire oneself), when cognitive measures of identification were employed. The main reasons for the differential impact of organizational identification lie in the way people process information and maintain their self-image. People pay attention to, encode, and retrieve positive information about the self better than negative information. They tend to over attribute their successes to themselves and their failures to others or the circumstances. And they satisfy their need to maintain a positive

self-image by interpreting the world around them in a manner cognitively consistent with their self-image and validating their self-worth.

A final implication of organizational identification we examined was its repercussions for organizational citizenship behaviors. We found that identification significantly influenced all five senses of citizenship: courtesy, altruism, sportsmanship, conscientiousness, and civic virtue. However, the explained variance was generally low, with the highest amount occurring for civic virtue (21 per cent variance explained), when the cognitive measures of identification were used. Therefore, although a portion of the reasons for citizenship behaviors can be attributed to identification with the organization, it is likely that the primary impetus for such behaviors lies in personal values and social and interpersonal exchange mechanisms between self and supervisors and amongst peers. Organization norms may also play a role.

Conclusions

Limitations of study

The present study shows a number of conceptual and methodological shortcomings. Consider first the conceptualization of organizational identification. We considered both cognitive and affective senses of identification but did not clarify the interdependence, if any, between the two. Our notion of organizational identification as a self-schema presumes that identification is a cognitive category or prototype with affect attached to it -- the so-called "affect laden schema" from the social cognition literature (e.g., Fiske, 1982). Therefore, identification was represented primarily as a cognitive construct with affect providing evaluative significance but only in a secondary or subordinate sense. The question can be asked, however, whether it is the schema that triggers affect as assumed in social cognition or whether affect is prepotent and influences the knowledge content of identification.

Another limitation of our study is that the number of antecedents of identification we considered was rather limited. We investigated only perceived external image and organization identity, but other determinants assuredly exist. For example, the nature of the job, job tenure, one's profession, leadership style, and social interactions within the organization all potentially influence identification. One's position in particular social networks within the organization can also affect identification in the sense that two or more individuals with similar number and type of relations tend to identify in similar ways according to Bergami, Corrado, and Lomi (1996).

A final limitation to mention is that other consequences of organizational identification could have been considered in addition to commitment, self-esteem, and citizenship behavior. For instance, in-group cohesion,

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job satisfaction, conflict and cooperation, and goal or value internalization are possible consequences of identification.

Implications for Theory and Managerial Practice

Contemporary organization theories explain employee behavior through the effect of such constructs as organization climate, compensation and incentives, leadership, organization fit, empowerment, and quality of working life. Organizational identification constitutes a complementary force for affecting motivation, effort, and job performance. Rather than depending upon externally imposed and monitored stimuli and cues, per se, the use of identification processes relies more on self-regulatory mechanisms for motivating people. These, in turn, depend in part on the emotional significance of identification and its impact on affective commitment. Moreover, as a consequence of affective commitment, involvement and performance-related behaviors should be enhanced.

In a related way, organizational identification functions as an integrative mechanism. This is a direct consequence of in-group cooperation (e.g., Tajfel and Turner, 1985; Turner, 1984) and citizenship behavior (e.g., Konovsky and Pugh, 1994; Van Dyne, Graham, and Dienesch, 1994). It seems reasonable to expect that in a group in which identification is strong there will be relatively less need for formal hierarchy and standardization of work processes and procedures.

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Appendix

Measures used in Study (see Method for response formats)

1. Organizational identification (see Method for additional measures).
 1. When someone criticizes Camst, it feels like a personal insult.
 2. I am very interested in what others think about Camst.
 3. When I talk about Camst, I usually say "we" rather than "they".
 4. Camst's successes are my successes.
 5. When someone praises Camst, it feels like a personal compliment.
 6. If a story in the media criticized Camst, I would feel embarrassed.

2. Construed external image.
 1. My relatives and people close or in some other way important to me think that Camst is a well-known company.
 2. My relatives and people close or in some other way important to me think that Camst is a respected company.
 3. My relatives and people close or in some other way important to me think that Camst is an admired company.
 4. My relatives and people close or in some other way important to me think that Camst is a prestigious company.
 5. People generally think that Camst is a well-known company.
 6. People generally think that Camst is a respected company.
 7. People generally think that Camst is an admired company.
 8. People generally think that Camst is a prestigious company.

3. Organizational identity.

innovative	chaotic
well-rounded	a leader (in the industry)
sincere	honest
secure	dynamic
lively	green
cooperative	progressive
big	family
efficient	the best
qualified	participative
mechanical	democratic
caring	famous
sensitive	

4. Organizational commitment.

1. I would be very happy to spend the rest of my career with Camst.
2. I enjoy discussing Camst with people outside of it.
3. I really feel as Camst's problems are my own.
4. I think that I could easily become as attached to another organization as I am to Camst.
5. I do not feel like part of the family at Camst.
6. I do not feel emotionally attached to Camst.
7. Camst has a great deal of personal meaning for me.
8. I do not feel a strong sense of belonging to Camst.
9. I'm not afraid of what might happen if I quit Camst without having another job lined up.
10. It would be very hard for me to leave Camst right now, even if I wanted to.
11. Too much in my life would be disrupted if I decided I wanted to leave Camst now.
12. It would be too costly for me to leave Camst now.
13. Right now, staying with Camst is a matter of necessity as much as desire.
14. I feel that I have few options to consider leaving Camst.
15. One of the few serious consequences of leaving Camst would be the scarcity of available alternatives.
16. One of the major reasons I continue to work for Camst is that leaving would require a considerable personal sacrifice -- another organization may not match the overall benefits I have here.
17. I think that people these days move from company to company too often.
18. I do not believe that a person must always be loyal to his or her organization.
19. Jumping from organization to organization does not seem at all unethical to me.
20. One of the major reasons I continue to work for Camst is that I believe that loyalty is important and therefore feel a sense of moral obligation to remain.
21. If I got another offer for a better job elsewhere I would not feel it was right to leave Camst.
22. I was taught to believe in the value of remaining loyal to one organization.
23. Things were better in the days when people stayed with one organization for most of their career.
24. I do not think that wanting to be a "Camst man" or a "Camst woman" is sensible anymore.

5. Organizational-based self-esteem.

Working for Camst makes me:

1. feel confident about my abilities.
2. worried about whether I am regarded as a success or failure.
3. feel satisfied about how healthy I look.
4. feel frustrated or rattled about my performance.
5. feel that I am having trouble understanding things that I read.

6. feel that others respect and admire me.
7. dissatisfied about my image.
8. feel self-conscious.
9. feel as smart as others.
10. feel displeased with myself.
11. feel good about myself.
12. pleased with my appearance right now.
13. worried about what the other people think of me.
14. feel confident that I understand things.
15. feel inferior to others.
16. feel unattractive.
17. feel concerned about the impression I am making.
18. feel that I have less ability right now than others.
19. feel like I am not doing well.
20. worried about looking foolish.

6. Citizenship behavior.

1. I help others who have heavy work loads.
2. I help others who have been absent from work.
3. I help make other workers productive.
4. I respect the rights and privileges of others.
5. I consult with others who might be affected by my actions or decision.
6. I inform others before taking any important actions.
7. I complain a lot about trivial matters.
8. I always find fault with what the organization is doing.
9. I express resentment with any changes introduced by management.
10. I am always on time.
11. I always do more than I am required to do.
12. I give advance notice when unable to come to work.
13. I stay informed about developments in the company.
14. I attend and participate in meetings regarding the company.
15. I offer suggestions for ways to improve operations.

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Table 1 Internal Consistency and Criterion Related Validity for Measures of Organizational Identification --All Employees

Goodness-of-fit	Reliability of measures of proposed organizational identification	Correlation between proposed and Mael-Ashforth representations
A. Cognitive measures		
$\chi^2(1) = .03$ $p \cong .86$ CFI = 1.00	.70	.82(.04) ^a
B. Affective measures		
$\chi^2(1) = .78$ $p \cong .38$ CFI = 1.00	.77	.61(.04)
C. Combined measures		
$\chi^2(1) = .33$ $p \cong .57$ CFI = 1.00	.83	.73(.04)

^a Standard errors in parentheses.

Table 2 Generalizability of Measures of Organizational Identification -- Full-time versus Part-time Employees

Model	Cognitive measures			Affective measures			Combined measures		
	Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis	
M1: Baseline	$\chi^2(2) = 1.18$ $p \equiv .56$ CFI = 1.00	--	$\chi^2(2) = 6.36$ $p \equiv .04$ CFI = .99	--	$\chi^2(2) = 4.04$ $p \equiv .13$ CFI = 1.00	--			
M2: Factor loadings invariant	$\chi^2(6) = 1.58$	M2 - M1 $\chi^2_d(4) = .40$ $p > .98$	$\chi^2(6) = 15.58$	M2 - M1 $\chi^2_d(4) = 9.22$ $p > .06$	$\chi^2(6) = 9.17$	M2 - M1 $\chi^2_d(4) = 5.13$ $p > .28$			
M3: Error variances invariant	$\chi^2(10) = 5.11$	M3 - M2 $\chi^2_d(4) = 3.53$ $p > .47$	$\chi^2(10) = 20.24$	M3 - M2 $\chi^2_d(4) = 4.66$ $p > .33$	$\chi^2(10) = 13.11$	M3 - M2 $\chi^2_d(4) = 3.94$ $p > .43$			
M4: Factor correlation invariant	$\chi^2(11) = 5.34$	M4 - M3 $\chi^2_d(1) = .24$ $p > .63$	$\chi^2(11) = 21.65$	M4 - M3 $\chi^2_d(1) = 1.41$ $p > .24$	$\chi^2(11) = 13.80$	M4 - M3 $\chi^2_d(1) = .69$ $p > .43$			
Test of structured means									
Mean ^a									
Proposed model	$\mu_1 = -.43(.13)^b$								
Mael-Ashforth model	$\mu_2 = -.37(.11)$								
	$\mu_1 = -.38(.11)$								
	$\mu_2 = -.37(.11)$								

^a Mean of full time employees fixed to zero as a baseline. ^b Standard errors in parentheses.
 Note: Means that are significantly different are in bold face.

Note: Means that are significantly different are in bold face.

Table 3 Generalizability of Measures of Organizational Identification -- Women versus Men

Model	Cognitive measures		Affective measures		Combined measures	
	Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis
M1: Baseline	$\chi^2(2) = 10$ $p \leq .95$ CFI = 1.00	--	$\chi^2(2) = 4.60$ $p \leq .10$ CFI = 1.00	--	$\chi^2(2) = 3.05$ $p \leq .22$ CFI = 1.00	--
M2: Factor loadings invariant	$\chi^2(6) = 4.18$	M2 - M1 $\chi^2(4) = 4.08$ $p > .40$	$\chi^2(6) = 12.71$	M2 - M1 $\chi^2(4) = 8.11$ $p > .08$	$\chi^2(6) = 5.23$	M2 - M1 $\chi^2(4) = 2.18$ $p > .70$
M3: Error variances invariant	$\chi^2(10) = 9.54$	M3 - M2 $\chi^2(4) = 5.36$ $p > .25$	$\chi^2(10) = 21.41$	M3 - M2 $\chi^2(4) = 8.70$ $p > .07$	$\chi^2(10) = 10.96$	M3 - M2 $\chi^2(4) = 5.73$ $p > .21$
M4: Factor correlation invariant	$\chi^2(11) = 11.45$	M4 - M3 $\chi^2(1) = 1.91$ $p > .17$	$\chi^2(11) = 23.03$	M4 - M3 $\chi^2(1) = 1.62$ $p > .20$	$\chi^2(11) = 13.05$	M4 - M3 $\chi^2(1) = 2.09$ $p > .16$
Mean ^a	Test of structured means					
Proposed model	$\mu = .53(.14)$ ^b		$\mu = .38(.13)$		$\mu = .48(.12)$	
Mael-Ashforth model	$\mu = .26(.12)$		$\mu = .26(.12)$		$\mu = .26(.12)$	

^a Mean of women fixed to zero as a baseline. ^b Standard errors in parentheses. Note: Means that are significantly different are in bold face.

Table 4 Testing the Impact of Construed External Image and Perceived Organizational Identity on Organizational Identification
 -- All Employees

Operationalization of organizational identification	Goodness-of-fit	Explained variation in identification	Construed external image	Relative contribution of Organizational identity
A. Cognitive measures	$\chi^2(32) = 145.87$ CFI = .96	.65	.63	.90
B. Affective measures	$\chi^2(32) = 129.61$ CFI = .96	.53	.60	.94
C. Combined measures	$\chi^2(32) = 141.16$ CFI = .95	.61	.61	.92

Table 5. Generalizability of the Impact of Constructed External Image and Perceived Organizational Identity on Organizational Identification -- Full-time versus Part-time Employees

Model	Cognitive measures		Operationalization of organizational identification		Combined measures	
	Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis
M1: Baseline	$\chi^2(64) = 182.94$ $p \equiv .00$ CFI = .94	--	$\chi^2(64) = 166.13$ $p \equiv .00$ CFI = .95	--	$\chi^2(64) = 175.61$ $p \equiv .00$ CFI = .95	
M2: Factor loadings invariant	$\chi^2(71) = 186.26$ $M_2 - M_1$ $\chi^2_d(7) = 3.32$ $p > .85$		$\chi^2(71) = 169.43$ $M_2 - M_1$ $\chi^2_d(7) = 3.30$ $p > .80$		$\chi^2(71) = 178.27$ $M_2 - M_1$ $\chi^2_d(7) = 2.66$ $p > .90$	
M3: Error variances invariant	$\chi^2(81) = 199.79$ $M_3 - M_2$ $\chi^2_d(10) = 13.53$ $p > .20$		$\chi^2(81) = 184.50$ $M_3 - M_2$ $\chi^2_d(10) = 15.07$ $p > .10$		$\chi^2(81) = 189.14$ $M_3 - M_2$ $\chi^2_d(10) = 10.87$ $p > .37$	
M4: All regression paths invariant	$\chi^2(84) = 203.18$ $M_4 - M_3$ $\chi^2_d(3) = 3.39$ $p > .35$		$\chi^2(84) = 187.11$ $M_4 - M_3$ $\chi^2_d(3) = 2.61$ $p > .40$		$\chi^2(84) = 192.75$ $M_4 - M_3$ $\chi^2_d(3) = 3.61$ $p > .40$	
Mean ^a	Test of structured means					
Constructed external image	$\mu_1 = .01(.17)^b$		$\mu_1 = .00(.17)$		$\mu_1 = .00(.17)$	
Perceived organizational identity	$\mu_2 = .12(.15)$		$\mu_2 = .12(.15)$		$\mu_2 = .12(.15)$	
Organizational identification	$\mu_3 = -.42(.17)$		$\mu_3 = -.26(.15)$		$\mu_3 = -.86(.32)$	

^a Mean of full-time employees fixed to zero as a baseline. ^b Standard errors in parentheses. Note: Means that are significantly different are in bold face.

Table 6 Generalizability of the Impact of Construed External Image and Perceived Organizational Identity on Organizational Identification -- Women versus Men

Model	Operationalization of organizational identification			Test of hypothesis	Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis
	Cognitive measures	Affective measures	Combined measures							
M1: Baseline	$\chi^2(64) = 185.59$ $p \approx .00$ CFI = .94	$\chi^2(64) = 173.53$ $p \approx .00$ CFI = .95	$\chi^2(64) = 179.00$ $p \approx .00$ CFI = .95							
M2: Factor loadings invariant	M2 - M1 $\chi^2_d(7) = 11.12$ $p > .14$	M2 - M1 $\chi^2(71) = 189.81$	M2 - M1 $\chi^2(71) = 188.85$	M2 - M1 $\chi^2_d(7) = 16.28$ $p < .02$	M2 - M1	M2 - M1	M2 - M1	M2 - M1	M2 - M1	M2 - M1 $\chi^2_d(7) = 9.85$ $p > .20$
M3: Error variances invariant	M3 - M2 $\chi^2_d(10) = 17.94$ $p > .05$	M3 - M2 $\chi^2(81) = 207.60$	M3 - M2 $\chi^2(81) = 207.60$	M3 - M2 $\chi^2_d(10) = 17.79$ $p > .06$	M3 - M2	M3 - M2	M3 - M2	M3 - M2	M3 - M2	M3 - M2 $\chi^2_d(10) = 18.75$ $p \approx .05$
M4: All regression paths invariant	M4 - M3 $\chi^2_d(3) = 2.38$ $p > .12$	M4 - M3 $\chi^2(84) = 210.07$	M4 - M3 $\chi^2(84) = 211.08$	M4 - M3 $\chi^2_d(3) = 2.47$ $p > .49$	M4 - M3	M4 - M3	M4 - M3	M4 - M3	M4 - M3	M4 - M3 $\chi^2_d(3) = 3.48$ $p > .06$
Mean ^a	Test of structured means									
Construed external image	$\mu_1 = -.02(.17)^b$	$\mu_1 = -.02(.17)$	$\mu_1 = -.02(.18)$							
Perceived organizational identity	$\mu_2 = -.05(.16)$	$\mu_2 = -.05(.16)$	$\mu_2 = -.05(.16)$							
Organizational identification	$\mu_3 = .44(.17)$	$\mu_3 = .31(.16)$	$\mu_3 = .94(.34)$							

^a Mean of women fixed to zero as a baseline. ^b Standard errors in parentheses.

Model	Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis
Construed external image	$\mu_1 = -.02(.18)$		$\mu_1 = -.02(.17)$		$\mu_1 = -.02(.18)$	
Perceived organizational identity	$\mu_2 = -.05(.16)$		$\mu_2 = -.05(.16)$		$\mu_2 = -.05(.16)$	
Organizational identification	$\mu_3 = .94(.34)$		$\mu_3 = .31(.16)$		$\mu_3 = .94(.34)$	

Table 7

Table 7 Testing the Impact of Organizational Identification on Organizational Commitment
-- All Employees

	Operationalization of organizational identification		
	Cognitive measures	Affective measures	Combined measures
Goodness-of-fit	$\chi^2(39) = 106.02$ $p \leq .00$ CFI = .96	$\chi^2(39) = 101.18$ $p \leq .00$ CFI = .96	$\chi^2(39) = 104.24$ $p \leq .00$ CFI = .96
Effect of identification on			
affective #1 (γ_1)	.66 (.06) ^a	.46 (.05)	.58 (.05)
affective #2 (γ_2)	-.52 (.06)	-.40 (.06)	-.47 (.06)
continuance #1 (γ_3)	.15 (.06)	.13 (.06)	.12 (.05)
continuance #2 (γ_4)	.12 (.06)	.17 (.06)	.13 (.06)
normative (γ_5)	.48 (.06)	.44 (.06)	.42 (.06)
commitment			
Explained variance in			
affective #1	.68	.35	.52
affective #2	.37	.23	.30
continuance #1	.03	.02	.02
continuance #2	.02	.03	.02
normative	.31	.25	.24
commitment			

^aStandard errors in parentheses.

Note: Significant coefficients in bold face.

^a Mean of women fixed to zero as a baseline. ^b Standard errors in parentheses.
Note: Means that are significantly different are in bold face.

Table 8 Generalizability of the Impact of Organizational Identification on Organizational Commitment -- Full-time versus Part-time Employees

Model	Operationalization of organizational identification			Test of hypothesis	Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis
	Cognitive measures	Affective measures	Combined measures							
M1: Baseline	Goodness-of-fit $\chi^2(78) = 88.26$ $p \cong .22$ CFI = .99	Goodness-of-fit $\chi^2(78) = 126.79$ $p \cong .00$ CFI = .97	Goodness-of-fit $\chi^2(78) = 128.06$ $p \cong .00$ CFI = .97							
M2: Factor loadings of org. ident. invariant	M2 - M1 $\chi^2_d(2) = 5.71$ $p > .05$	M2 - M1 $\chi^2(80) = 129.81$	M2 - M1 $\chi^2(80) = 129.96$	M2 - M1 $\chi^2_d(2) = 3.02$ $p > .21$	M2 - M1 $\chi^2_d(2) = 1.90$					
M3: All regression paths invariant	M3 - M2 $\chi^2(85) = 127.61$ $\chi^2_d(5) = 33.64$ $p < .01$	M3 - M2 $\chi^2(85) = 143.08$	M3 - M2 $\chi^2(85) = 145.81$	M3 - M2 $\chi^2_d(5) = 13.27$ $p < .03$	M3 - M2 $\chi^2_d(5) = 15.85$					
M4: Paths $\gamma_1, \gamma_2, \gamma_4, \& \gamma_5$ invariant	M4 - M2 $\chi^2(84) = 97.50$ $\chi^2_d(4) = 3.53$ $p > .48$	M4 - M2 $\chi^2(84) = 136.77$	M4 - M2 $\chi^2(84) = 138.49$	M4 - M2 $\chi^2_d(4) = 6.96$ $p > .15$	M4 - M2 $\chi^2_d(4) = 8.53$					
Mean ^a	Test of structured means									
Affective commitment #1	$\mu_1 = -.55(.33)^b$	$\mu_1 = -.94(.28)$	$\mu_1 = -.63(.25)$							
Affective commitment #2	$\mu_2 = .03(.41)$	$\mu_2 = .38(.34)$	$\mu_2 = .15(.33)$							
Continuance commitment #1	$\mu_3 = .80(.49)$	$\mu_3 = .56(.39)$	$\mu_3 = .73(.40)$							
Continuance commitment #2	$\mu_4 = .77(.27)$	$\mu_4 = .77(.24)$	$\mu_4 = .74(.24)$							
Normative commitment	$\mu_5 = .58(.61)$	$\mu_5 = .16(.50)$	$\mu_5 = .39(.50)$							

^a Mean of full-time employees fixed to zero in the baseline model.

Table 9 Generalizability of the Impact of Organizational Identification on Organizational Commitment -- Women versus Men Employees

Operationalization of organizational identification	
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$\mu_5 = .38(.61)$ $\mu_5 = .16(.50)$ $\mu_5 = .39(.50)$ ^a Mean of full-time employees fixed to zero as a baseline. ^b Standard errors in parentheses.

Table 9 Generalizability of the Impact of Organizational Identification on Organizational Commitment -- Women versus Men Employees

Model	Operationalization of organizational identification			Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis	Combined measures	
	Cognitive measures	Affective measures	Combined measures								
M1: Baseline	$\chi^2(78) = 160.74$ $p \equiv .00$ CFI = .95	--	$\chi^2(78) = 146.69$ $p \equiv .00$ CFI = .96	$\chi^2(78) = 145.16$ $p \equiv .00$ CFI = .96	--	$\chi^2(78) = 145.16$ $p \equiv .00$ CFI = .96	--	$\chi^2(78) = 145.16$ $p \equiv .00$ CFI = .96	--	--	
M2: Factor loadings of org. ident. invariant	$\chi^2(80) = 163.96$ $\chi^2_d(2) = 3.22$ $p > .20$	M2 - M1	$\chi^2(80) = 150.23$ $\chi^2_d(2) = 3.54$ $p > .17$	M2 - M1	$\chi^2(80) = 145.78$ $\chi^2_d(2) = .62$ $p > .74$	M2 - M1	$\chi^2(80) = 145.78$ $\chi^2_d(2) = .62$ $p > .74$	M2 - M1	$\chi^2(80) = 145.78$ $\chi^2_d(2) = .62$ $p > .74$	M2 - M1	$\chi^2_d(2) = .62$ $p > .74$
M3: All regression paths invariant	$\chi^2(85) = 179.00$ $\chi^2_d(5) = 15.04$ $p < .01$	M3 - M2	$\chi^2(85) = 162.78$ $\chi^2_d(5) = 12.55$ $p < .03$	M3 - M2	$\chi^2(85) = 162.45$ $\chi^2_d(5) = 16.67$ $p < .01$	M3 - M2	$\chi^2(85) = 162.45$ $\chi^2_d(5) = 16.67$ $p < .01$	M3 - M2	$\chi^2(85) = 162.45$ $\chi^2_d(5) = 16.67$ $p < .01$	M3 - M2	$\chi^2_d(5) = 16.67$ $p < .01$
M4: Paths $\gamma_2, \gamma_3, \gamma_4, \& \gamma_5$ invariant	$\chi^2(84) = 169.36$ $\chi^2_d(4) = 5.40$ $p > .25$	M4 - M2	$\chi^2(84) = 152.51$ $\chi^2_d(4) = 2.28$ $p > .70$	M4 - M2	$\chi^2(84) = 151.44$ $\chi^2_d(4) = 5.66$ $p > .24$	M4 - M2	$\chi^2(84) = 151.44$ $\chi^2_d(4) = 5.66$ $p > .24$	M4 - M2	$\chi^2(84) = 151.44$ $\chi^2_d(4) = 5.66$ $p > .24$	M4 - M2	$\chi^2_d(4) = 5.66$ $p > .24$
Mean ^a	Test of structured means										
Affective commitment #1	$\mu_1 = -.37(.39)^b$		$\mu_1 = .21(.38)$		$\mu_1 = -.08(.34)$		$\mu_1 = -.08(.34)$		$\mu_1 = -.08(.34)$		$\mu_1 = -.08(.34)$
Affective commitment #2	$\mu_2 = -.01(.35)$		$\mu_2 = -.30(.31)$		$\mu_2 = -.14(.33)$		$\mu_2 = -.14(.33)$		$\mu_2 = -.14(.33)$		$\mu_2 = -.14(.33)$
Continuance commitment #1	$\mu_3 = -.29(.38)$		$\mu_3 = -.18(.37)$		$\mu_3 = -.22(.37)$		$\mu_3 = -.22(.37)$		$\mu_3 = -.22(.37)$		$\mu_3 = -.22(.37)$
Continuance commitment #2	$\mu_4 = -.57(.27)$		$\mu_4 = -.54(.27)$		$\mu_4 = -.58(.27)$		$\mu_4 = -.58(.27)$		$\mu_4 = -.58(.27)$		$\mu_4 = -.58(.27)$
Normative commitment	$\mu_5 = -.45(.52)$		$\mu_5 = -.16(.51)$		$\mu_5 = -.27(.50)$		$\mu_5 = -.27(.50)$		$\mu_5 = -.27(.50)$		$\mu_5 = -.27(.50)$

^a Mean of women employees fixed to zero as a baseline. ^b Standard errors in parentheses.

Note: Means that are significantly different are in bold face.

Table 10 Testing the Impact of Organizational Identification on Organization-based Self-esteem -- All Employees

	Operationalization of organizational identification		
	Cognitive measures	Affective measures	Combined measures
Goodness-of-fit	$\chi^2(29) = 65.06$ $p \leq .00$ CFI = .98	$\chi^2(29) = 75.24$ $p \leq .00$ CFI = .97	$\chi^2(29) = 78.68$ $p \leq .00$ CFI = .97
Effect of identification on			
positive self-image	.53 (.06) ^a	.50 (.06)	.51 (.05)
negative self-image	-.06 (.06)	-.13 (.06)	-.11 (.06)
performance	-.02 (.05)	-.13 (.05)	-.09 (.05)
Explained variance in			
positive self-image	.34	.31	.32
negative self-image	.00	.02	.02
performance	.00	.03	.01

^aStandard errors in parentheses.

Note: Significant coefficients in bold face.

Table 11 Generalizability of the Impact of Organizational Identification on Organization-based Self-esteem -- Full-time versus Part-time Employees

Model	Operationalization of organizational identification			Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis
	Cognitive measures	Affective measures	Combined measures						
M1: Baseline	$\chi^2(58) = 82.03$ $p \equiv .02$ CFI = .99	$\chi^2(58) = 93.44$ $p \equiv .00$ CFI = .99	$\chi^2(58) = 95.68$ $p \equiv .00$ CFI = .99						
M2: Factor loadings for org. ident. invariant	$M_2 - M_1$ $\chi^2_d(2) = .72$ $p > .70$	$M_2 - M_1$ $\chi^2_d(2) = 3.05$ $p > .20$	$M_2 - M_1$ $\chi^2_d(2) = 1.47$ $p > .49$						
M3: All regression paths invariant	$M_3 - M_2$ $\chi^2_d(3) = 3.52$ $p > .30$	$M_3 - M_2$ $\chi^2_d(3) = 3.49$ $p > .35$	$M_3 - M_2$ $\chi^2_d(3) = 5.38$ $p > .17$						
Mean ^a	Test of structured means								
Positive self-image	$\mu_1 = .01(.32)^b$	$\mu_1 = .02(.31)$	$\mu_1 = .02(.31)$						
Negative self-image	$\mu_2 = -.05(.29)$	$\mu_2 = -.23(.27)$	$\mu_2 = -.11(.27)$						
Performance self-image	$\mu_3 = .84(.23)$	$\mu_3 = .84(.23)$	$\mu_3 = .84(.23)$						

^a Mean of full-time employees fixed to zero as a baseline. ^b Standard errors in parentheses.

Note: Means that are significantly different are in bold face.

Table 12 Generalizability of the Impact of Organizational Identification on Organization-based Self-esteem -- Women versus Men Employees

Model	Operationalization of organizational identification			Test of hypothesis	Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis
	Cognitive measures	Affective measures	Combined measures							
M1: Baseline	$\chi^2(58) = 104.62$ $p \cong .00$ CFI = .97	--	--	$\chi^2(58) = 122.98$ $p \cong .00$ CFI = .96	$\chi^2(58) = 118.97$ $p \cong .00$ CFI = .97	--	--	--	--	--
M2: Factor loadings for org. ident. invariant	$M_2 - M_1$ $\chi^2_d(2) = 2.12$ $p > .36$	$M_2 - M_1$ $\chi^2(60) = 132.63$	$M_2 - M_1$ $\chi^2_d(2) = 9.65$ $p < .01$	$M_2 - M_1$ $\chi^2(60) = 120.15$	$M_2 - M_1$ $\chi^2_d(2) = 1.18$ $p > .55$					
M3: All regression paths invariant	$M_3 - M_2$ $\chi^2(63) = 107.38$	$M_3 - M_2$ $\chi^2(63) = 134.04$	$M_3 - M_2$ $\chi^2_d(3) = 1.41$ $p > .89$	$M_3 - M_2$ $\chi^2(63) = 120.58$	$M_3 - M_2$ $\chi^2_d(3) = .43$ $p > .93$					
Mean ^a	Test of structured means									
Positive self-image	$\mu_1 = -.02(.35)^b$			$\mu_1 = -.08(.34)$	$\mu_1 = -.08(.34)$					
Negative self-image	$\mu_2 = .06(.31)$			$\mu_2 = .12(.30)$	$\mu_2 = .06(.30)$					
Performance self-image	$\mu_3 = -.35(.26)$			$\mu_3 = -.43(.26)$	$\mu_3 = -.40(.26)$					

^a Mean of women fixed to zero as a baseline. ^b Standard errors in parentheses.
Note: No means are significantly different.

Table 13 Testing the Impact of Organizational Identification on Citizenship Behaviors

	Operationalization of organizational identification		
	Cognitive measures	Affective measures	Combined measures
Goodness-of-fit	$\chi^2(39) = 65.50$ $p \cong .01$ CFI = .98	$\chi^2(39) = 56.30$ $p \cong .04$ CFI = .98	$\chi^2(39) = 59.08$ $p \cong .02$ CFI = .98
Effect of identification on			
courtesy (γ_1)	.16 (.04)^a	.11 (.04)	.13 (.04)
altruism (γ_2)	.17 (.05)	.11 (.05)	.13 (.04)
sportsmanship (γ_3)	-.33 (.06)	-.30 (.06)	-.26 (.05)
conscientiousness (γ_4)	.13 (.05)	.08 (.05)	.09 (.04)
civic virtue (γ_5)	.29 (.05)	.13 (.04)	.25 (.05)
Explained variance in			
courtesy	.07	.03	.04
altruism	.05	.02	.03
sportsmanship	.06	.06	.06
conscientiousness	.06	.02	.03
civic virtue	.21	.05	.16

^aStandard errors in parentheses.

Note: Significant coefficients in bold face.

Table 14 Generalizability of the Impact of Organizational Identification on Citizenship Behaviors -- Full-time versus Part-time Employees

Model	Operationalization of organizational identification					
	Cognitive measures		Affective measures		Combined measures	
	Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis	Goodness-of-fit	Test of hypothesis
M1: Baseline	$\chi^2(78) = 113.11$ $p \leq .01$ CFI = .97	--	$\chi^2(78) = 109.49$ $p \leq .01$ CFI = .97	--	$\chi^2(78) = 108.42$ $p \leq .01$ CFI = .97	
M2: All factor loadings invariant	$\chi^2(85) = 121.78$	M2 - M1 $\chi^2_d(7) = 8.67$ $p > .27$	$\chi^2(85) = 119.15$	M2 - M1 $\chi^2_d(7) = 9.66$ $p > .20$	$\chi^2(85) = 119.76$	M2 - M1 $\chi^2_d(7) = 11.34$ $p > .16$
M3: All error variances of measures invariant	$\chi^2(97) = 136.49$	M3 - M2 $\chi^2_d(12) = 14.71$ $p > .25$	$\chi^2(97) = 134.12$	M3 - M2 $\chi^2_d(12) = 14.97$ $p > .24$	$\chi^2(97) = 138.90$	M3 - M2 $\chi^2_d(12) = 19.14$ $p > .08$
M4: All regression paths invariant	$\chi^2(102) = 139.67$	M4 - M3 $\chi^2_d(5) = 3.18$ $p > .68$	$\chi^2(102) = 144.44$	M4 - M3 $\chi^2_d(5) = 10.32$ $p > .07$	$\chi^2(102) = 143.39$	M4 - M3 $\chi^2_d(5) = 4.49$ $p > .48$
Mean ^a	Test of structured means					
courtesy	$\mu_2 = .00(.06)^b$		$\mu_2 = -.04(.06)$		$\mu_2 = -.02(.06)$	
altruism	$\mu_3 = .09(.10)$		$\mu_3 = .04(.10)$		$\mu_3 = .07(.10)$	
sportsmanship	$\mu_4 = -.09(.09)$		$\mu_4 = -.02(.09)$		$\mu_4 = -.06(.09)$	
conscientiousness	$\mu_5 = .01(.05)$		$\mu_3 = -.01(.05)$		$\mu_3 = .00(.05)$	
civic virtue	$\mu_6 = -.31(.09)$		$\mu_4 = -.39(.09)$		$\mu_4 = -.35(.09)$	

^a Mean of full-time employees fixed to zero as a baseline. ^b Standard errors in parentheses. Note: Means that are significantly different are in bold face.

Table 15 Generalizability of the Impact of Organizational Identification on Citizenship Behaviors -- Women versus Men Employees

Note: Means that are significantly different are in bold face.

Table 15 Generalizability of the Impact of Organizational Identification on Citizenship Behaviors -- Women versus Men Employees

Model	Operationalization of organizational identification			Combined measures		
	Cognitive measures	Affective measures	Combined measures	Cognitive measures	Affective measures	Combined measures
M1: Baseline	Goodness-of-fit $\chi^2(78) = 119.82$ $p \equiv .00$ CFI = .96	Test of hypothesis $\chi^2(78) = 106.52$ $p \equiv .02$ CFI = .97	Goodness-of-fit $\chi^2(78) = 114.22$ $p \equiv .00$ CFI = .97	Test of hypothesis	Goodness-of-fit	Test of hypothesis
M2: All factor loadings invariant	$M_2 - M_1$ $\chi^2_d(7) = 2.34$ $p > .94$	$M_2 - M_1$ $\chi^2_d(7) = 3.15$ $p > .86$	$M_2 - M_1$ $\chi^2_d(7) = 1.84$ $p > .97$	$M_2 - M_1$ $\chi^2(85) = 116.06$	$M_2 - M_1$ $\chi^2_d(7) = 1.84$ $p > .97$	$M_2 - M_1$ $\chi^2_d(7) = 1.84$ $p > .97$
M3: All error variances of measures invariant	$M_3 - M_2$ $\chi^2_d(12) = 15.53$ $p > .22$	$M_3 - M_2$ $\chi^2_d(12) = 21.08$ $p > .04$	$M_3 - M_2$ $\chi^2_d(12) = 17.31$ $p > .14$	$M_3 - M_2$ $\chi^2(97) = 133.37$	$M_3 - M_2$ $\chi^2_d(12) = 17.31$ $p > .14$	$M_3 - M_2$ $\chi^2_d(12) = 17.31$ $p > .14$
M4: All regression paths invariant	$M_4 - M_3$ $\chi^2_d(5) = 2.21$ $p > .81$	$M_4 - M_3$ $\chi^2_d(5) = 8.08$ $p > .15$	$M_4 - M_3$ $\chi^2_d(5) = 2.91$ $p > .70$	$M_4 - M_3$ $\chi^2(102) = 138.83$	$M_4 - M_3$ $\chi^2_d(5) = 2.91$ $p > .70$	$M_4 - M_3$ $\chi^2_d(5) = 2.91$ $p > .70$
Mean ^a	Test of structured means					
courtesy	$\mu_2 = -.05(.07)$ ^b	$\mu_2 = -.02(.07)$	$\mu_2 = -.03(.07)$	$\mu_2 = -.03(.07)$	$\mu_2 = -.03(.07)$	$\mu_2 = -.03(.07)$
altruism	$\mu_3 = .03(.10)$	$\mu_3 = .08(.10)$	$\mu_3 = .05(.10)$	$\mu_3 = .05(.10)$	$\mu_3 = .05(.10)$	$\mu_3 = .05(.10)$
sportsmanship	$\mu_4 = .32(.11)$	$\mu_4 = .27(.11)$	$\mu_4 = .29(.11)$	$\mu_4 = .29(.11)$	$\mu_4 = .29(.11)$	$\mu_4 = .29(.11)$
conscientiousness	$\mu_5 = -.03(.05)$	$\mu_5 = -.02(.05)$	$\mu_5 = -.03(.05)$	$\mu_5 = -.03(.05)$	$\mu_5 = -.03(.05)$	$\mu_5 = -.03(.05)$
civic virtue	$\mu_6 = .32(.10)$	$\mu_6 = .40(.11)$	$\mu_6 = .37(.10)$	$\mu_6 = .37(.10)$	$\mu_6 = .37(.10)$	$\mu_6 = .37(.10)$

^a Mean of women fixed to zero as a baseline. ^b Standard errors in parentheses. Note: Means that are significantly different are in bold face.

A. Imagine that one of the circles at the left in each row represents your own personal identity and the other circle at the right represents CAMST's identity. Please indicate which case (A, B, C, D, E, F, G, or H) best describes the level of overlap between your and CAMST's identities.

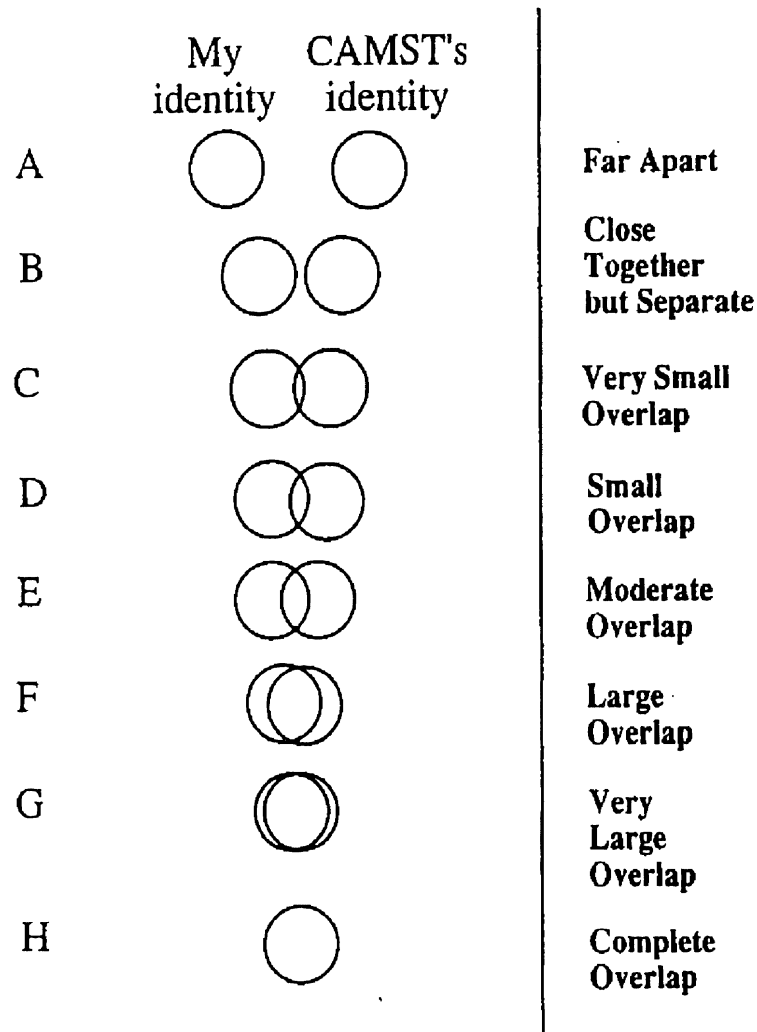


Figure 1. Direct Measure of Organizational Identification Based on Aided Visual Diagram of Degree of Overlap Between Own and Organizational Identity.

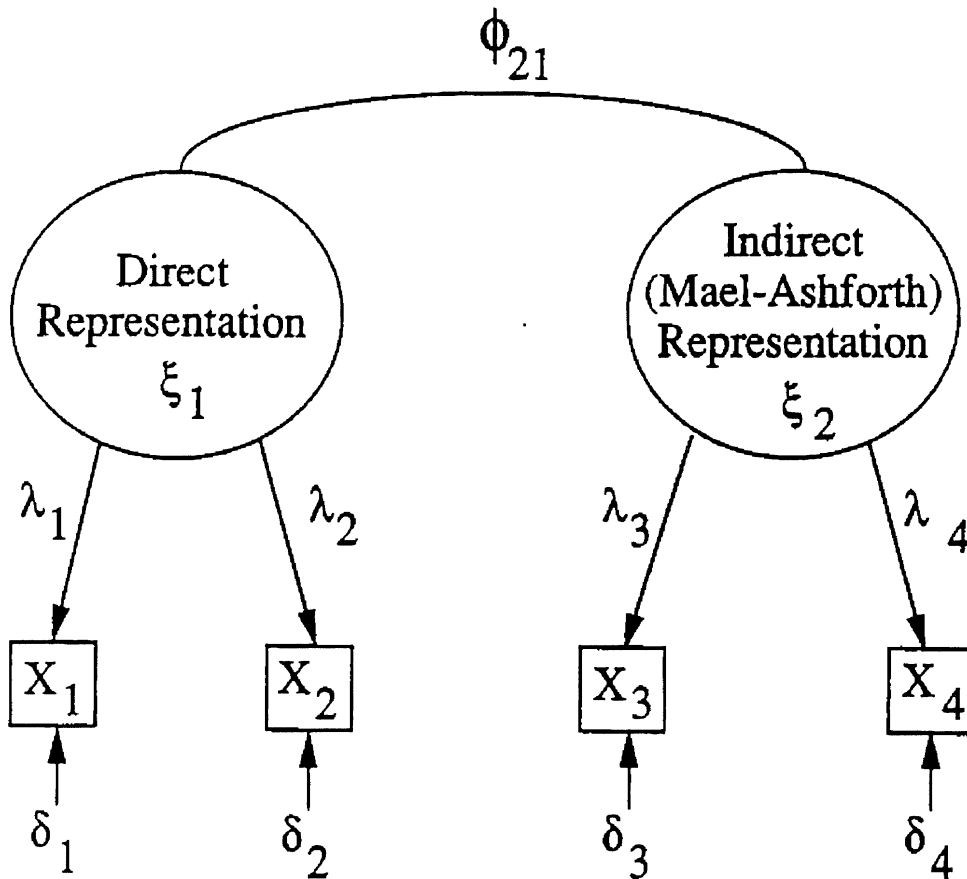


Figure 2. Confirmatory Factor Analysis Model for Examining Reliability, Criterion-related Validity, and Generalizeability of Organizational Identification Measures.

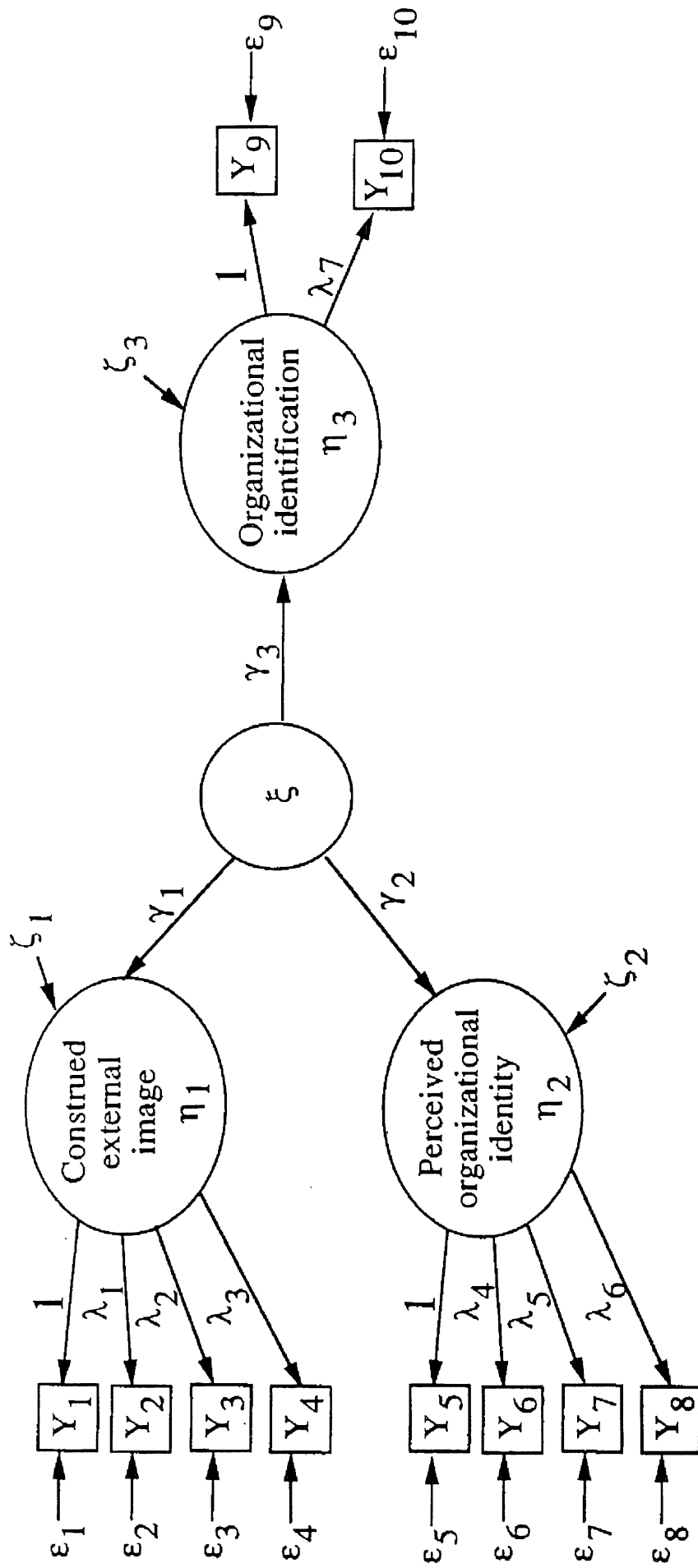
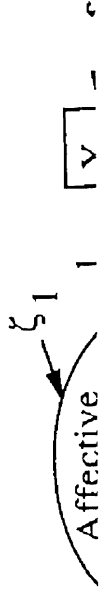


Figure 3. Structural Equation Model for Testing the Impact of Construed External Image and Perceived Organizational Identity on Organizational Identification



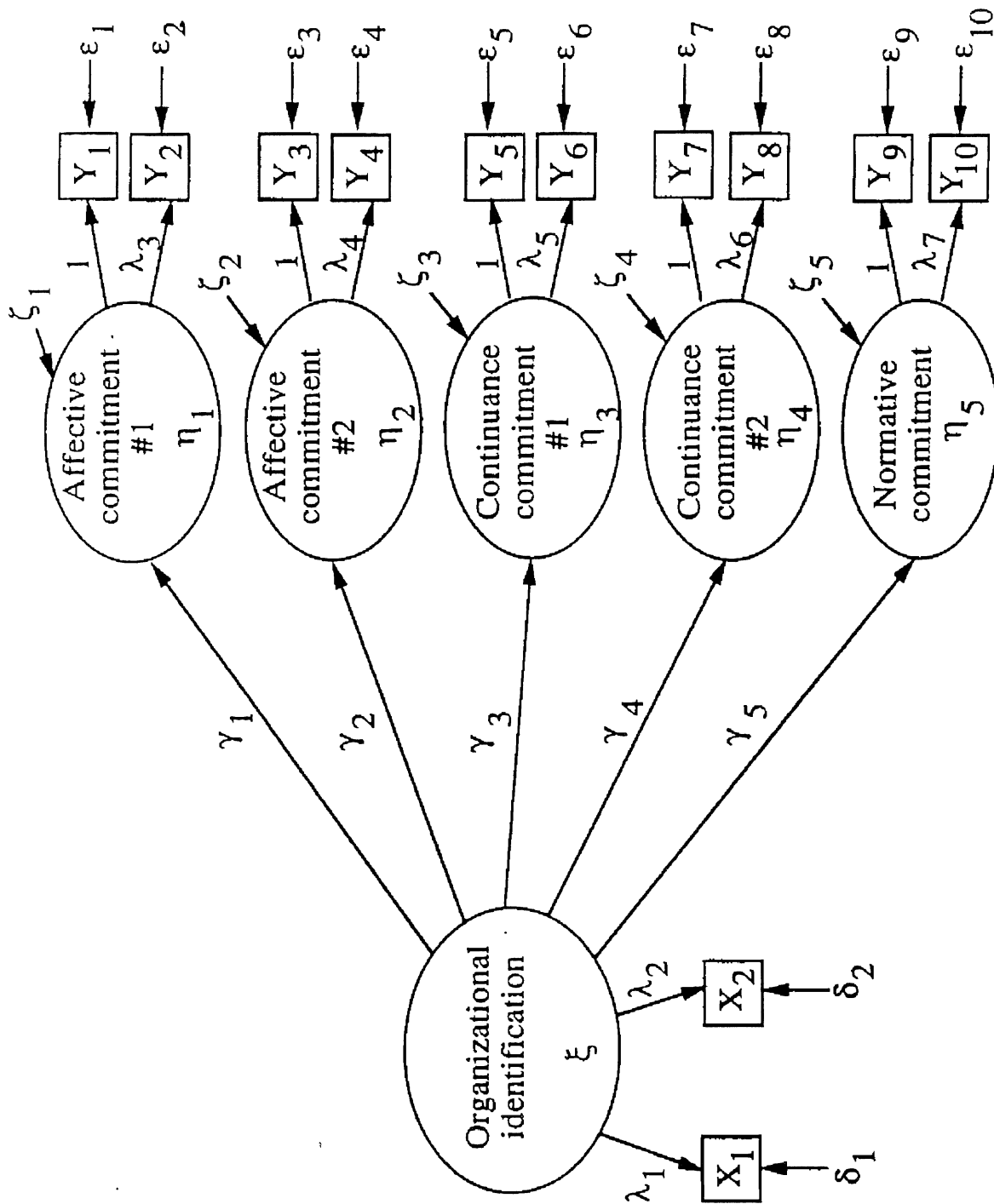


Figure 4. Structural Equation Model for Testing the Impact of Organizational Identification on Organizational Commitment

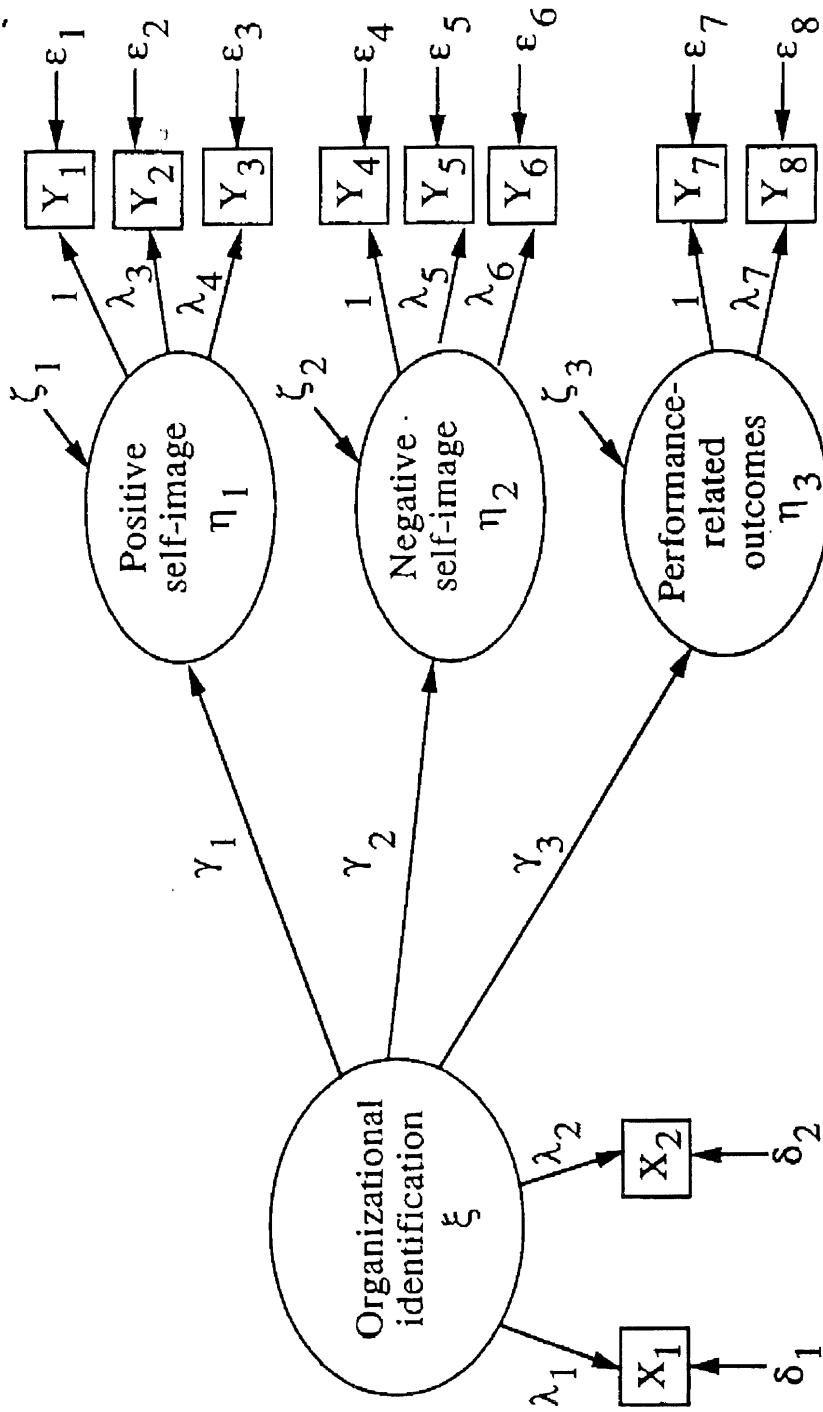
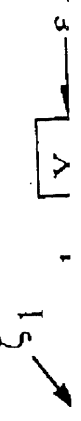


Figure 5. Structural Equation Model for Testing the Impact of Organizational Identification on Organizational-Based Self-Esteem



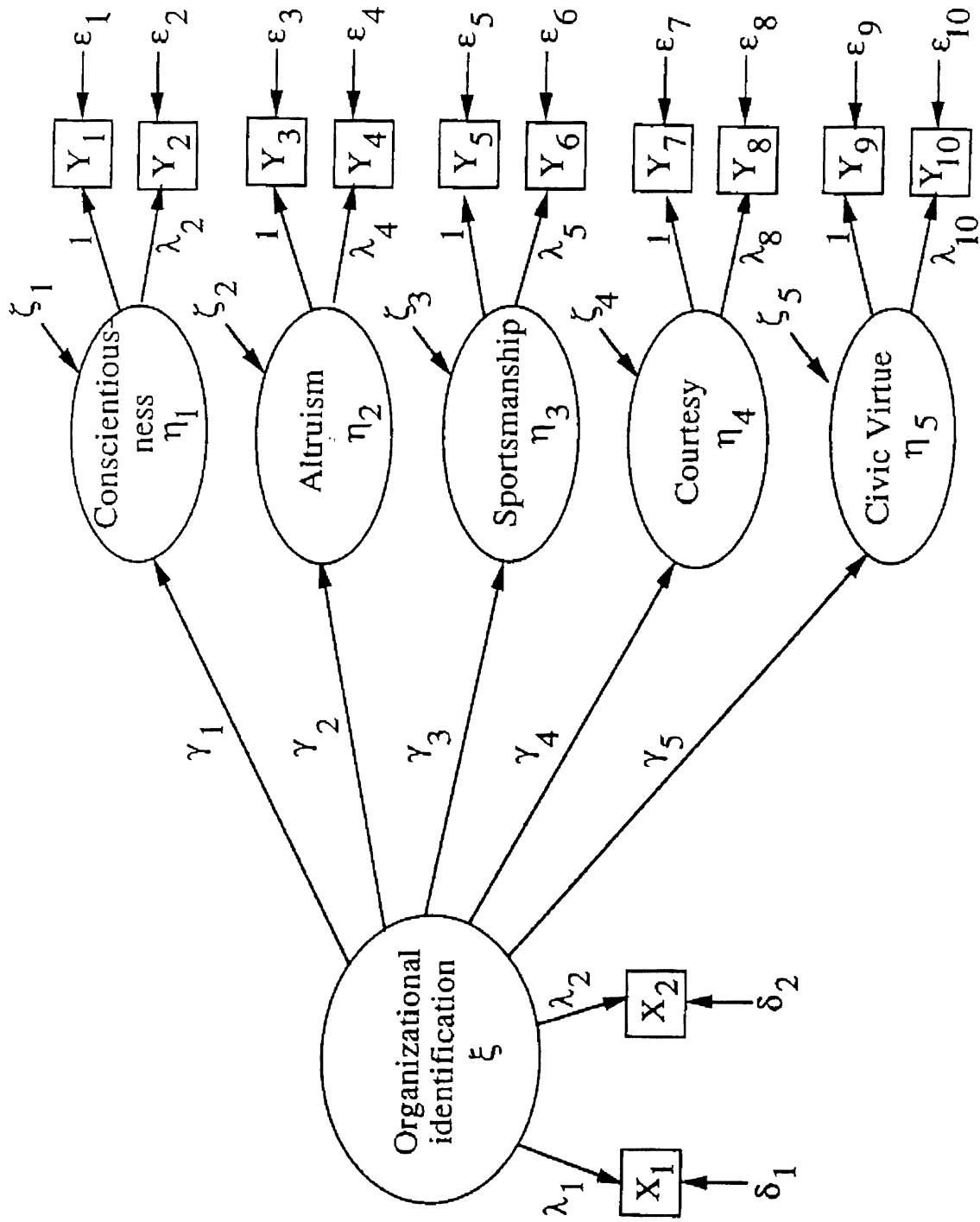


Figure 6. Structural Equation Model for Testing the Impact of Organizational Identification on Citizenship Behaviors