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Beauty Is in the Eye of the Beholder: The Impact of Organizational Identification, Identity, and Image on the Cooperative Behaviors of Physicians

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We use an established model of organizational identification to try to understand the voluntary cooperative behavior of professionals in organizations. We examined the relationships among physicians' assessments of the attractiveness of a health care system's perceived identity and construed external image, strength of system identification, and cooperative behaviors. We surveyed 1,504 physicians affiliated with three health care systems and collected follow-up data from 285 physicians a year later. Attractiveness of perceived identity and construed external image were positively related to physicians' identification with the system, which in turn was positively related to cooperative behavior. Extensions to the model of organizational identification are suggested. ●

Considerable attention has been given to the psychological attachment between organizations and their members and the consequences that such attachment has for each. Recently, a special issue of the *Academy of Management Review* was devoted to organizational identity and identification. The editors of that special issue (Albert, Ashforth, and Dutton, 2000: 14) noted that these concepts "provide a way of accounting for the agency of human action within an organizational framework." Although the concepts of identity and identification have generated a great deal of theoretical attention, relatively few empirical studies have been published that examine their effects. This is regrettable, because identity and identification may provide insights into some fundamental challenges of managerial life. For instance, the study of identity and identification may help us understand why some members of organizations regularly engage in cooperative behaviors that benefit the organization, whereas others do not. Theory on organizational identification (Ashforth and Mael, 1989; Dutton, Dukerich, and Harquail, 1994; Pratt, 1998; Elsbach, 1999) may provide a unique lens with which to view organizational members' decision to cooperate, particularly when there is no penalty for failure to engage in such behaviors, since decisions to engage in cooperative behaviors under these conditions are likely to be based on attitudes and cognitions about the organization (cf. Kramer, 1993), which are also the basis for members' identification with the organization. One challenge for managers in this regard has been to elicit cooperative behaviors from professionals in organizations (cf. Scott, 1982; Starbuck, 1992), as they may identify with the profession rather than the organization. We focus on such professionals in this study: physicians associated with three major U.S. health care systems. We examined the relationships between the perceived attractiveness of the images that the physicians had of a particular health care system, their identification with that system, and the extent to which the physicians engaged in cooperative behaviors.

Health care systems are corporations that are vertically integrated health service providers. These systems involve situations in which hospitals and/or health care systems have ownership arrangements with physician organizations and may include a variety of health service providers, such as acute care hospitals, primary care clinics, skilled nursing facilities, home health agencies, and retail pharmacies, along the

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continuum of care. Like all complex organizations, organizational success is partially determined by organizational members' cooperative behaviors. Physicians determine the flow of critical inputs (i.e., patients) into the organization by admitting or referring patients, substantially affect resource utilization, and are expected to perform essential administrative duties for which non-clinically trained managers are not qualified (e.g., medical affairs committee work). Typically, organizational members may cooperate because the organization's reward system induces cooperative behavior or punishes uncooperative behaviors (cf. Ouchi, 1980; Pfeffer, 1994; Tyler and Blader, 2000). But executives in health care systems are often unable to use traditional rewards or punishments to influence the behaviors of physicians because physicians are typically not employed by these organizations, may be affiliated with multiple competing organizations, are prohibited from receiving payment for referring patients to a particular system, and may frequently find the interests of the organization at odds with the norms of their profession or the interests of their patients (Starbuck, 1992; Golden, Dukerich, and Hauge, 2000; Callister and Wall, 2001). In addition, the costs of monitoring behavior are generally prohibitive, and it is difficult to determine whether behaviors are of high quality (e.g., determining a surgeon's performance after the death of a severely ill patient). Such conditions reveal the importance to health care systems of physicians' cooperative behaviors, that is "the willful contribution of personal effort to the completion of interdependent tasks" (Wagner, 1995: 152). Because the appropriateness of traditional reward systems may be limited, physicians' attitudes and cognitions about the health care systems may be especially good predictors of cooperative behaviors. To the extent this is so, and given the characteristics of the physician-organization relationship described above, these systems are also relevant settings in which to empirically examine some of the most fundamental propositions of the organizational identification literature.

ORGANIZATIONAL IDENTIFICATION AND COOPERATION

Social identity theorists have argued that (1) individuals define themselves, in part, based on their membership in various groups (e.g., their work group, their organization, their occupation or profession) (Tajfel and Turner, 1985; Mael and Ashforth, 1988; Ashforth and Mael, 1989; Kramer, 1991), and (2) not all group memberships contribute equally to one's definition of oneself (Stryker and Serpe, 1982; Breakwell, 1986; Kramer, 1991). Accordingly, organizational members vary in terms of the degree to which the organization serves as an identity-defining social group. As defined by Dutton, Dukerich, and Harquail (1994: 242), organizational identification refers to "a cognitive linking between the definition of the organization and the definition of self." Pratt (1998: 194) proposed two conditions that are necessary for organizational identification to occur: "(a) the individual must perceive the organizational identity to be salient, and (b) the individual must self-categorize him or herself in terms of his or her organizational identity." Relatedly, Tyler and Blader (2000: 15) referred to group identification as the "merger of self and group." Thus, a member's level of organizational identifica-

Cooperative Behaviors of Physicians

tion indicates the degree to which his or her membership in an organization is tied to the content of his or her self-concept. We consider organizational identification to be strong when members consider worthy the central, distinctive, and enduring (Albert and Whetten, 1985) values and goals of the organization and incorporate these into their sense of self.

In their model of organizational identification, Dutton, Dukerich, and Harquail (1994) argued that two key organizational images influence the strength of individuals' identification with their organization: their perceptions of the identity of the organization and their beliefs about how outsiders view their organization. The identity of a particular organization consists of those attributes that its members consider as central, enduring, and distinctive (Albert and Whetten, 1985; Stern, 1988; Dutton and Dukerich, 1991). Thus, organizational identity helps individuals answer the question, "What does this organization stand for?" (and, by implication, "What do I stand for?"). When individuals consider those attributes that are central, enduring, and distinctive, they are in effect constructing a "perceived organizational identity" (Dutton, Dukerich, and Harquail, 1994). Perceived organizational identity is an individual-level construct and refers to the identity of the organization as understood by each of its members. While perceived organizational identity may be highly correlated with the organization-level construct, organizational identity, the two constructs are conceptually distinct. A perceived organizational identity is attractive to an individual when it satisfies three principles of self-definition: self-continuity, self-distinctiveness, and self-enhancement (Tajfel and Turner, 1985; Steele, 1988; Shamir, 1991; Dutton, Dukerich, and Harquail, 1994). That is, a perceived organizational identity that helps the individual maintain a consistent sense of self, distinct from others, while enhancing self-esteem, will be viewed as attractive. The attractiveness of this image, then, leads to stronger organizational identification.

Dutton, Dukerich, and Harquail (1994) proposed that the attractiveness of a second key image, namely, construed external image, also affects the strength of organizational identification. Social identity theorists (Tajfel and Turner, 1979; Tyler and Blader, 2000) suggest that individuals attach importance to the status of the groups with which they are associated. Status is conferred on a group by others, though interpretations of status are made by individuals. Construed external image refers to how the organization's members believe others (i.e., outsiders) view the organization. For example, Dutton and Dukerich (1991) reported that employees of the Port Authority of New York and New Jersey were sensitive to how outsiders viewed the Port Authority's treatment of homeless people. Similarly, Kauffman (1997) noted NASA personnel's concern with the image of the organization after the difficulties with the Hubble Space Telescope. Dutton, Dukerich, and Harquail (1994) distinguished construed external image from corporate reputation, which has been defined as the overall estimation in which a company is held by its constituents, representing the "net" affective reaction of customers, investors, employees, and the general public to the company's name (Fombrun, 1996). They noted that

how insiders think outsiders see the organization may not be identical to how outsiders actually see the organization.

Like organizational identity, a construed external image is inherently neither positive nor negative. Rather, a construed external image assumes meaning for an organizational member to the extent that it corresponds with the individual's self-definition. If, for example, organizational members perceive the organization's external image as environmentally conscious, this image would likely be viewed as attractive by an organizational member who is also a Sierra Club member and, presumably, partly defines him- or herself by this membership. In contrast, this same construed external image might be viewed as less attractive to individuals who do not define themselves in this way. As with perceived organizational identity, individuals assess the attractiveness of the construed external image by how well this image reinforces their self-concept, provides distinctiveness, and enhances self-esteem.

Physicians associated with health care systems may vary significantly in the extent to which they identify with a particular health care system. While some may define themselves, in part, through their affiliations with the system, others may find little meaning of self from the system and, instead, define themselves by virtue of their affiliation with other groups (e.g., their particular hospital or clinic, their profession, or specialty). Much anecdotal evidence describing health care reform in the U.S. suggests that physicians are becoming increasingly alienated by the "corporatization of medicine" (Enzmann, 1997), as purchasers and payers place restrictions on the physician's autonomy and perhaps focus on goals (cost containment) that are in opposition to the professional values of physicians. Based on the model of organizational identification, and our belief that the central, enduring and distinctive attributes of health care systems may be variously interpreted and valued by their physician members, there is likely to be substantial variance in the extent to which physicians identify with a health care system. As physicians' perceptions of their health care system's identity deviate from the goals and values they themselves hold dear (i.e., as the attractiveness of perceived organizational identity decreases), the strength of organizational identification should decrease. To the extent that there is a correspondence between their goals and values and their perceptions of the system's identity, however, identification should be strengthened:

Hypothesis 1 (H1): The attractiveness to the physician of the health care system's perceived organizational identity is positively associated with the physician's strength of organizational identification.

In integrated health care systems, physicians are likely to attribute low or high status to these systems based, in part, on the relationship between a system's construed external image and the physician's self-definition. Thus, physicians who view the practice of medicine primarily as a lucrative occupation are likely to find a hospital's construed external image as a big, integrated, profit-driven firm quite acceptable. For these physicians, such hospitals confer status and enhance one's "social self" (Tyler, Kramer, and John, 1999).

Cooperative Behaviors of Physicians

In contrast, the physician who defines him- or herself primarily as a caregiver may find such a construed external image decidedly unattractive. Hence, construed external image confers either high or low status as a function of the physician's identity, i.e., his or her conception of self. Based on these arguments we hypothesize:

Hypothesis 2 (H2): The attractiveness to the physician of the health care system's construed external image is positively associated with the physician's strength of organizational identification.

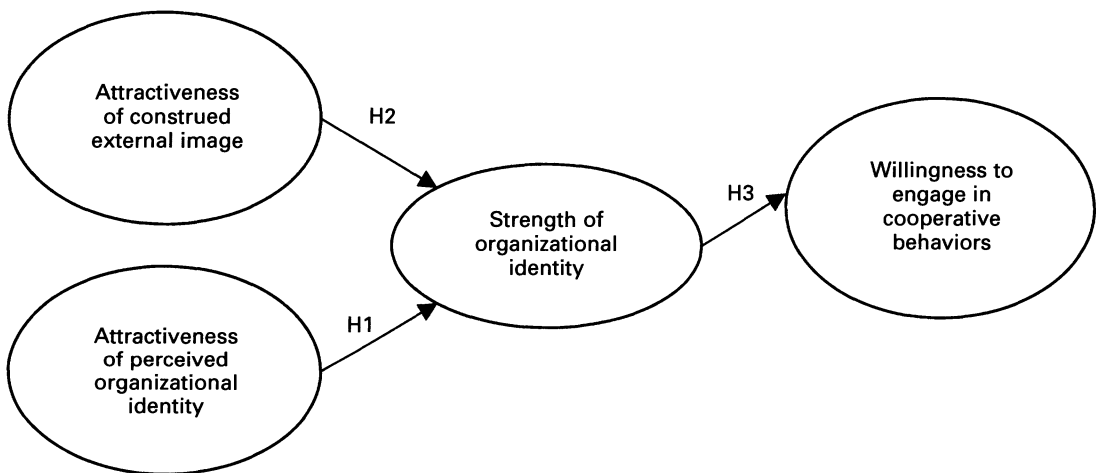
Several theorists have argued that a consequence of identification with a group or organization is the creation of an ingroup-outgroup distinction (Tajfel et al., 1971; Ashforth and Mael, 1989; Kramer, 1991). As Kramer (1991) suggested, social identification results in a bias toward in-group members (i.e., members of a group with which one identifies) and cohesion among group members. According to Dutton, Dukerich, and Harquail (1994: 254–255), this cohesion “makes cooperative behavior toward other organizational members likely.” When individuals identify strongly with an organization, they are likely to consider those behaviors that benefit the organization as also benefiting themselves. Given that individuals seek those organizations whose identities they consider attractive (all things being equal), they may enhance their self-concepts by enhancing the identity of the organization through their behaviors. Cialdini and his associates (Cialdini et al., 1976; Cialdini and Richardson, 1980; Cialdini and De Nicholas, 1989) have demonstrated that individuals attempt to enhance their own image by associating themselves with a successful other (termed basking in reflected glory). Based on individuals' desire to bask in reflected glory, they will more closely identify with organizations to the extent that they believe others see the organization as worthy. It follows, then, that organizational members serve themselves by serving the organization.

As argued above, physicians are expected to vary in the degree to which they identify with the integrated health care systems in which they work. A likely consequence of this may be seen in the extent to which the health care system is defined as an in-group toward which physicians may direct citizenship behaviors, thereby helping the collective (Van Dyne, Graham, and Dienesch, 1994). O'Reilly and Chatman (1986) and O'Reilly, Chatman, and Caldwell (1991) reported that psychological attachment was associated with extrarole behavior. In health care systems, physicians who identify with a particular system may be likely to refer patients to that system (over a competing system) and to engage in extrarole behaviors such as efforts to improve quality and minimize costs. Conversely, though not the focus of our study, other physicians may identify more closely with their group practice than with the health care system and thus may be less influenced by attempts to induce their cooperation. Given that health care organizations are limited in their ability to rely on direct inducements to ensure cooperative behaviors (Goodrick and Salancik, 1996), the degree to which physicians identify with the system may be an important factor in influencing their behavior.

Hypothesis 3 (H3): The strength of the physician's identification with the health care system is positively associated with his or her cooperative behavior.

Figure 1 depicts our hypothesized model. In addition to the predicted effects for cooperative behaviors, Dutton, Dukerich, and Harquail (1994: 253) argued for a feedback loop from strength of organizational identification to the attractiveness of the two organizational images. As individuals increase their identification with the organization, they are likely to evaluate the organization's identity and image more positively. We were able to explore this proposition with the data collected on a subset of the original sample a year later. These authors also suggested that the more visible one's affiliation with the organization, the stronger the relationship between the attractiveness of perceived organizational identity and construed external image and the strength of organizational identification. Although we had no direct measure of visibility of affiliation, some of the physicians at the three health care systems received salary from the system. Physicians who received a salary might perceive themselves, and be perceived by others, as being more closely tied to the system. Thus, we could use this variable as a control for visibility of affiliation. Finally, there has been some debate about the enduring nature of organizational identity. Gioia, Schultz, and Corley (2000) theorized that organizational identity might be better thought of as a relatively fluid and unstable concept. We attempted to examine the stability of perceived organizational identity using physicians' perceptions of the identity of the health care system at two different times, a year apart.

Figure 1. Hypothesized model of organizational identification.



METHODS

Physicians from three major health care systems were asked to participate in the research, which consisted of two phases. In the first phase, we conducted focus groups with physicians in each of three health care systems to determine the "identity" of each system from the physicians' point of view. We also elicited examples of physicians' cooperative behaviors. In the second phase, 1,504 physicians affiliated with the three systems responded to a questionnaire designed to

Cooperative Behaviors of Physicians

measure (a) perceived organizational identity (POI); (b) the attractiveness of POI; (c) the attractiveness of the construed external image (CEI); (d) the strength of organizational identification; and (e) the degree of physicians' cooperation with the health care system. We also collected follow-up data from a subset of the original sample over a year later, again measuring the attractiveness of POI and CEI, strength of organizational identification, and cooperation.

Sample

We contacted the chief executive officers (CEOs) of three major not-for-profit health systems to secure their participation in this research. All three systems had previously been involved in a four-year intensive study of eleven integrated health systems (Shortell, Gillies, and Anderson, 1996) selected from among the 268 health systems listed in the American Hospital Association's Health System Section Directory. They were selected based on owning at least four operating units, serving both geographically concentrated and dispersed markets, being well-established systems with strong leadership, and having geographic representation across the United States; as a group, they were somewhat larger in terms of the number of owned entities and have been established longer than other systems nationwide. The three systems we selected were not different from the remaining eight. All were not-for-profit systems and had multiple affiliations with physician groups. The CEOs' participation involved setting up focus groups at each site, supplying a complete list of physicians who were affiliated with the systems, providing archival data (e.g., number of admissions), and writing a letter to all physicians encouraging their participation.

The three systems we studied, referred to here as Alpha, Beta, and Delta, were in relatively competitive markets, although all three systems were profitable at the time of the study.¹ In addition, all three had diversified into a variety of related health care businesses as part of their vertical integration strategies (e.g., outpatient clinics, health maintenance organization insurance companies, nursing care facilities). At the time of the study, Alpha had total revenues of \$631 million and \$875 million of total assets. While still competitive, Alpha's market was the least competitive of the three systems. In addition, although managed care had begun to make significant inroads into Alpha's market, managed care did not represent as significant a share of the market as it did in the markets of Beta and Delta. Alpha owned five acute-care hospitals (1,454 total licensed beds) and was dominated by a central teaching hospital. It also owned six senior health centers, two specialty hospitals, a home health agency, and an ambulatory surgery center. Beta had total revenues of \$649 million and total assets of \$682 million. Beta evolved from a single hospital in the mid 1980s to a system of four acute-care hospitals (1,416 total licensed beds), one specialty hospital, four skilled nursing facilities, 18 medical clinics, eight urgent-care centers, two multispecialty group practices, two single-specialty group practices, one health maintenance organization (HMO), and one home health care agency, among other entities. Managed care was more prominent in Beta's market than in Alpha's and Delta's market. Because

¹ Although maintaining not-for-profit status, the revenues of these hospitals exceeded their total costs. As opposed to investor-owned/for-profit hospitals, which distribute a portion of their profits to investors, not-for-profit hospitals reinvest profits in the hospital for such things as charitable care and other community services.

managed-care companies (e.g., HMOs) are paid a pre-set amount to provide necessary health care for individuals, they have an economic incentive to minimize costs. A common approach to minimizing costs involves the post hoc monitoring of physician services and resource use. Some of the consequences of these practices recently have been reported by Hadley and Mitchell (2002: 47), who noted that "the growth of managed care retarded the growth of physicians' incomes, reduced their perceptions of professional autonomy and decreased their satisfaction with the practice of medicine and the choice of medicine as a career." Consequently, the autonomy and economic well-being of Beta physicians may have been the most threatened of the physicians in this study. Delta had \$514 million in total revenues and \$476 million in assets. Delta traditionally had a stable management team that relied on a relatively decentralized organization structure. It owned six general acute-care hospitals (1,836 total licensed beds), 20 primary-care clinics, one skilled nursing facility, one home health agency, and four retail pharmacies, among other entities. It had 60 percent ownership in a managed-care company. Of the three systems' markets, Delta's market represented an intermediate position on the managed-care continuum. Unlike Alpha and Beta, Delta's chief administrator of medical affairs was a physician, and Delta was associated with a church.

Focus Groups

We conducted on-site focus groups at each of the three systems (three groups at Alpha, two groups each at Beta and Delta). Senior managers of the health systems arranged meetings with 7–12 physicians. We asked to meet with a diverse set of physicians (e.g., both primary-care physicians and specialists). We also expressed our desire to talk with physicians who were critical of the system, as well as those who were more positive. The first two authors facilitated the focus groups, and no administrators were present. The physicians were told that we were independent researchers and were not employed by the health care system. We received permission from the physicians to tape-record the sessions and assured them that their responses would be kept confidential.

The objective of the focus groups was to discover the physicians' perceptions of their health care system. We asked a variety of questions designed to elicit perceptions of the system's identity ("What adjectives would you use to describe Alpha?"; "What are some key values at Beta?"; "What is distinctive about Delta?"). In addition, we asked the physicians to give examples of cooperative behaviors of physicians. Physicians were encouraged to piggyback on each other's answers to the questions. Each session lasted between one and a half to two hours, during which one facilitator asked questions and recorded responses, and the other took extensive notes. A doctoral student, who also listened to the audiotapes, transcribed the facilitators' notes and the flip charts used in the focus groups.

Albert and Whetten (1985: 268) argued that a statement of organizational identity points to features that are seen as the

Cooperative Behaviors of Physicians

essence of the organization (core, or central), features that distinguish the organization from others (distinctiveness), and features that exhibit some degree of continuity over time (enduring), but that in a complicated organization, "a simple statement of identity [might be] impossible." Therefore, we generated a list of system identity attributes for each system. We then selected 37 attributes that were mentioned by physicians in all three of the systems. Although a number of the attributes might not be considered typical "identity" elements, these came out of the focus groups when physicians were asked to generate adjectives, values, and distinctive aspects of the system. Since there is no established measure of organizational identity that can be used in survey research, we based our measure on the attributes that were consistently mentioned across all of the focus groups. Because the physicians in the focus groups differed in terms of which attributes they thought defined the system, we expected that respondents to the survey would not be likely to rate all of the 37 attributes as highly characteristic of the system. Appendix A gives the list of attributes used in the research, which includes both positive and negative attributes (e.g., impersonal, trustworthy, bureaucratic, compassionate). We also identified a common set of cooperative behaviors as a result of the focus groups, listed in Appendix B, which we used with the attributes in generating a survey instrument designed to capture how physicians might perceive their system's identity and the theorized consequences of organizational identification (i.e., cooperative behaviors).

Survey

We developed a multisection survey instrument, consisting of several established scales, as well as the measures that resulted from the focus groups, for data collection. In section 1, respondents were asked to indicate on a scale of 0 (not at all) to 7 (to a great extent) the extent to which they thought each of the 37 attributes described the health care system (Alpha, Beta, or Delta). They were also asked to list other attributes that came to mind. Section 2 provided the same list of 37 attributes and asked the respondents to indicate how attractive they found each of the attributes (-3 = not at all attractive; +3 = very attractive). Section 3 comprised established scales measuring organizational identification (Mael and Ashforth, 1992) and attractiveness of public image (Luhtanen and Crocker, 1992). In section 4, we provided a Venn diagram depicting increasing levels of overlap between the individual and the health care system (see Bergami and Bagozzi, 2000; Bartel, 2001, for examples). Section 5 listed the 17 cooperative behaviors generated in the focus groups. Respondents indicated on a 7-point Likert scale the extent to which they engaged in each behavior. Finally, respondents were asked in section 6 to provide demographic information (e.g., age, sex, medical focus: primary-care or specialist).

We conducted a pilot study by mailing surveys to a subsample of 290 physicians across the three systems to determine if (1) respondents seemed to understand the intent of the questions; (2) the system identity attributes generated from the focus groups seemed to be reasonably descriptive to a larger group of physicians; and (3) there was variance in the

cooperation measures. Respondents returned 69 surveys, for a response rate of 24 percent. The pilot study surveys were not used in the subsequent study's analyses. We made several minor changes to the cooperation behaviors as a result of the pilot study.

Respondents

We mailed surveys to 5,917 physicians affiliated with the three systems. In the first wave of surveys, 941 were returned, for a response rate of 17 percent. Over 200 of the physicians returned the survey indicating that they were no longer affiliated with the system or had retired, which means that the list of physician names given to us by the three systems was not accurate or up to date and makes it difficult to determine the true response rate. We sent out a second wave of surveys three months later, hoping to increase the response rate. An additional 563 surveys were returned. Thus, the sample consisted of 1,504 responses, for an overall response rate of 26 percent (Alpha = 36 percent; Beta = 21 percent; Delta = 28 percent). Eighty-five percent of the respondents were male. Their average age was 47.4 (s.d. = 9.9), and they averaged 11.2 (s.d. = 9.4) years of association with the system. The majority of the physicians indicated that they were specialists (64 percent); the remainder indicated that they were primary-care physicians. To assess how representative our respondents were of the population of physicians at the three systems, we used two of the demographic variables that we had for the entire sample, sex and physician type. Across the three systems, the female-to-male ratio was 13.8 percent to 86.2 percent (similar to the respondents to our survey); 31 percent of the physicians were primary care, compared with 36 percent for our respondents.

Time 2 Data

A year later we mailed 833 surveys to physicians affiliated with the Alpha and Delta systems who had responded to the survey at Time 1. Beta recently had been acquired and was unable to participate in the second wave of data collection. We received 285 completed questionnaires, for a response rate of 34 percent. Of the 468 physicians from the Alpha system who responded to the survey at Time 1, 182 responded to the survey at Time 2, while 103 physicians at the Delta system responded to the survey at both Time 1 and Time 2.² Eighty-seven percent of the respondents were male. Respondents' average age was 50.5 (s.d. = 10.5) years, and they averaged 15.1 (s.d. = 10.1) years of association with the system. The ratio of specialists to generalists was comparable to Time 1. The questionnaire was composed of the same measures used at Time 1, as described below.

Measures

Attractiveness of perceived organizational identity (POI). To determine the overall attractiveness of the identity image for each respondent, we measured each respondent's perception of the attributes that most described the system (the identity image) and elicited an assessment of how attractive the respondent rated each attribute. We multiplied the responses for each attribute on the scale measuring per-

2

Some physicians who had not received the survey at Time 1 were part of the Time 2 data collection, although their responses were not used in the analyses reported here. The overall response rates for Time 2, including the newly surveyed physicians, were 40.5 percent and 32.6 percent for Alpha and Delta, respectively.

Cooperative Behaviors of Physicians

ceived organizational identity (section 1) by the response for the corresponding attribute on the attractiveness scale (section 2).³ For example, a respondent may have responded that the "impersonal" attribute was highly characteristic of the Alpha system (rated a 7) and found this attribute to be highly unattractive (rated a -3). The attractiveness score for this attribute would thus be -21. Conversely, the respondent might also have responded that the system was well managed and indicated that this was an attractive attribute, resulting in a score of +21 for that attribute. We computed the mean for the 37 attributes to obtain an overall measure of how attractive a respondent perceived the system's identity to be. The measure ranged from -21 to +21, with a mean of 6.35 (s.d. = 3.97); the scores across respondents represented a normal distribution.

One concern with the attractiveness measure is that it could be interpreted as a measure of satisfaction with the system rather than an assessment of the attractiveness of the system's identity. To distinguish between assessments of the system's identity and the attractiveness of the attributes, however, we asked respondents to indicate the degree to which they found a particular attribute attractive, regardless of whether it was characteristic of the health care system. The attractiveness of the system was then based on the composite of the two scales. It might have been better to measure identity and attractiveness at different times, but this was not possible in the present study. We did examine the correlations between respondents' ratings of the descriptiveness of each attribute for the system and their assessments of each attribute's attractiveness. These correlations ranged from -.09 to +.36, with an average correlation of .16. Thus, it appears that the respondents did not base their attractiveness ratings on the degree to which a particular attribute was descriptive of the system. We also tested for restrictions in the range and variance of each of the items on the attractiveness scale but found that respondents utilized the full scale (-3 to +3) for all of the items, and none of the items seemed to have restricted variance.

There are also concerns about using a multiplicative composite in behavioral research. Two issues in particular seemed applicable here. First, Evans (1991), as well as others (e.g., Schmidt, 1973), argued that the multiplicative composite should be treated as one would an interaction, so as to determine the unique variance of the cross product. Thus, Evans suggested using a three-stage hierarchical regression analysis. The first two stages involve regressing the dependent variable (strength of organizational identification) on the components that make up the multiplicative composite (in this case, the mean ratings of the identity attributes and the attractiveness rating of the attributes). In the third stage, the interaction term is entered, and an increase in R^2 from the previous, additive model indicates whether the multiplicative version is better. The results of the analyses indicated support for the multiplicative model, which suggested that using the composite was appropriate. Second, Evans demonstrated that correlations between the composite measure and other variables can vary dramatically when beliefs are measured on

3

If a respondent did not think an attribute was related to the identity of the system, he or she was asked to rate it 0, and this attribute then had no impact on the overall attractiveness rating. We also provided space for respondents to add attributes not included among the 37 items, but this option was used in fewer than 5 percent of the responses; thus, we did not add to the original 37 attributes.

a 7-point scale depending on whether the scale is coded -3 to +3 or 1 to 7. The regressions noted above were conducted using both forms of the scale, with no appreciable difference. Therefore, we used the composite variable to measure attractiveness of identity.⁴

Attractiveness of construed external image (CEI). We selected four items from Luhtanen and Crocker's (1992) Collective Self-esteem Scale, measuring the public image of the social group to which an individual belongs: "Overall, the Alpha system is considered good by others"; "In general, others respect the Alpha system"; "In general, others think that the Alpha system is unworthy" (reverse coded); "Most people consider the Alpha system, on the average, to be more ineffective than other health care systems in the local area" (reverse coded). The reliability for this scale was .82.

Organizational identification. We used two measures of strength of organizational identification. The organizational identification (OID) scale from Mael and Ashforth (1992) consisted of six items (e.g., "When I talk about the Alpha system I usually say we rather than they."). Respondents indicated on a 7-point Likert scale the extent to which they agreed or disagreed with each statement. Coefficient alphas for this scale are typically greater than .80 (Mael and Ashforth, 1995); reliability for our sample was .90. Our second measure of organizational identification was based on a cognitive representation process (Bergami and Bagozzi, 2000). A Venn diagram indicating a lesser to greater degree of overlap between the self and the organization (i.e., the system) was provided, and respondents chose the picture that best described their relationship with the system. The correlation between Mael and Ashforth's OID scale and the Venn diagram of overlapping circles was positive and significant ($r = .68$), providing some validation for the measure. We used the six-item scale for the LISREL analyses.

Cooperation. The 17 items measuring the extent to which physicians engaged in cooperative behaviors were analyzed in an exploratory factor analysis. Four factors emerged with eigenvalues greater than 1. The first factor consisted of those behaviors that would have a positive impact for the system (e.g., refer patients to other physicians within the system; assess what is best for the system). For patients covered under an HMO insurance program, the health system contracts with the HMO to provide patient care. Thus, the system benefits financially when it is able to keep patients within the system, rather than having to refer them to more expensive physicians outside of the system. Variance in our data confirms focus group reports that HMO physicians in fact have much discretion over these and other decisions. In the survey, we asked respondents to indicate the total number of patients they admitted to any system in a month. The mean number of patients admitted was 13.82 (as compared with 9.2 patients admitted to the designated system). This provides support that these physicians had some discretion over where they admitted patients. For patients covered by fee-for-service insurance plans, it is also to the system's advantage when physicians refer patients to other physicians within the system. The items loading on the first factor

⁴ We chose to use a composite measure for the full 37-item scale, rather than use a factor analysis to find subscales, because we considered factor analysis to be inappropriate. A factor analysis would have involved finding dimensions across respondents. Our goal was not to find a consensually agreed upon identity of the system across respondents; rather, we wanted to measure each respondent's perception of the system's identity and the attractiveness of that identity.

Cooperative Behaviors of Physicians

seemed to capture this discretionary behavior of the physicians. We labeled this factor cooperation. The scale consisted of six items with a reliability of .86. Items measuring the extent to which the physicians engaged in voluntary committee work, task forces, etc., loaded on the second factor. This scale, labeled organizational citizenship behavior (OCB), consisted of four items and had a reliability of .85. The remaining two factors had items that cross-loaded on the factors and/or consisted of items that failed to form an acceptable scale (reliability was below .60) and were not used in subsequent analyses. Table 1 presents the factor analysis for the two factors that were used in the analyses. Although the items that we used were generated from the focus groups, the two factors resembled two of the outcome variables suggested by Dutton, Dukerich, and Harquail (1994), who proposed that strength of organizational identification would affect the degree of a member's cooperation with other members of the organization and engagement in organizational citizenship behaviors. Thus, we felt that these two variables would allow us to provide a systematic test of the consequences of organizational identification as proposed in the earlier model.

Control variable. We included a control variable measuring whether or not the physicians received salary from the system (74.5 percent of the physicians at Time 1 indicated that they did not receive a salary; 60.1 percent indicated they were nonsalaried at Time 2). We used this variable as a proxy for visibility of affiliation. As suggested earlier, the more visible one's affiliation with an organization, the stronger the effects of the attractiveness of organizational images on strength of identification are expected to be. While receiving a salary may not be as visible as being an executive or a spokesperson for the organization, it may heighten self-

Table 1

Results of Principle Components Factor Analysis of Cooperation Items*

Item	Factor 1 Cooperation	Factor 2 OCB
1. When I have a choice, I make referrals to physicians in the Alpha system rather than outside the system.	.82[†]	.24
2. Speak well of the Alpha system to other physicians.	.77	.16
3. Speak well of the Alpha system to patients.	.73	.13
4. Given insurance constraints, admit patients when possible to the Alpha system as opposed to another system.	.65	.22
5. Refer patients to physicians in the Alpha system as opposed to physicians in other systems.	.84	.21
6. Advise patients to join an Alpha system affiliated managed-care plan.	.61	.36
7. Participate as a voluntary member of systemwide committees/task forces (exclusive of your medical staff committee) to improve the management of the Alpha system.	.17	.88
8. Participate as a voluntary member of systemwide committees/task forces to improve medical services of the Alpha system.	.14	.89
9. When I have the opportunity I participate as a voluntary member of systemwide committees/task forces to enhance the financial viability of the Alpha system.	.27	.78
10. Participate in community services on behalf of the Alpha system.	.34	.63
Eigenvalue	4.89	1.52
Percent of variance explained	48.91%	15.22%

* This factor analysis only included the items loading on the two factors of cooperation and OCB with items loading on factors 3 and 4 deleted.

[†] Reported loadings are those based on the rotated solution.

awareness of the connection between the physician and the system.

RESULTS

System Comparisons

We compared physicians' responses in the three systems in terms of (1) how attractive they found their respective system's perceived identity; (2) the attractiveness of the construed external image; (3) strength of organizational identification; and (4) level of cooperation. Because the overall MANOVA was highly significant, we conducted univariate ANOVAs for each of the variables. The results are presented in table 2. An interesting contrast emerged between the systems. The degree to which physicians found the system's perceived organizational identity and construed external image to be attractive, the extent of identification, and the extent to which they indicated a willingness to engage in cooperative and organizational citizenship behaviors all seemed to be strongly and negatively related to the extent to which the system was engaged in managed-care activities. The Beta system was greatly involved in managed care, whereas physicians at Alpha were just beginning to get involved in it, and the Delta system was moderately involved in it. Given the reluctance of many physicians to give up their autonomy, as happens in managed care, the negative reactions of Beta physicians may have been the result of the extent to which the system was involved in managed care.

Testing the Model of Organizational Identification

Structural equation modeling was used to test the hypotheses. Interactive LISREL 8.20 (Jöreskog and Sorbom, 1999) allowed us to take into account measurement errors for the image, identification, and cooperation scales in the model.⁵ According to the model, the attractiveness of perceived organizational identity and the attractiveness of construed external image predict the strength of physicians' organizational identification, which in turn predicts the extent to which they indicated willingness to engage in cooperative behaviors. As a control, we also included whether the physician received salary from the system. We included a number of possible control variables in the initial testing of the models. Given the systematic differences observed between physicians across the three systems, we included a system dummy variable. We also had a dummy variable for physician type (primary care or specialist), since specialists often complained the most about the loss of autonomy due to the increase in managed-care contracts. Finally, we checked other demographic variables as controls, such as age, sex, and tenure. None of these variables, except for salary, had significant paths to the variables of interest. Thus, only the control variable for salary is reported in the models. Table 3 presents the correlation matrix for all of the variables used in the structural equations.

We used a variety of fit indices to test the initial model: the normed fit index (NFI, Bentler and Bonett, 1980), the incremental fit index (IFI, a modification to the NFI by Bollen, 1989), the non-normed fit index (NNFI, Bentler and Bonett, 1980; Tucker and Lewis, 1973), and the comparative fit index

5

An overall confirmatory factor analysis resulted in goodness-of-fit statistics in the mid 90s. In the full model, we used all of the items measuring each construct (attractiveness of image, strength of organizational identification) rather than the average of the items so that measurement errors could be taken into account.

Cooperative Behaviors of Physicians

Table 2

Means Differences across Systems*

System	Attractiveness		Strength of organizational identification	Consequences	
	POI	CEI		Cooperation	OCB
Alpha	8.29 ^a (3.92)	5.82 ^a (.91)	4.73 ^a (1.37)	5.49 ^a (1.34)	3.19 ^a (1.87)
Beta	5.05 ^b (3.67)	4.81 ^b (1.18)	3.63 ^b (1.50)	4.42 ^b (1.70)	2.68 ^b (1.84)
Delta	5.96 ^c (3.61)	4.90 ^b (1.07)	3.92 ^c (1.29)	4.48 ^b (1.60)	2.73 ^c (1.76)
F statistic	F _{2,1443} = 96.6 ^{***}	F _{2,1493} = 136.3 ^{***}	F _{2,1491} = 82.8 ^{***}	F _{2,1484} = 71.9 ^{***}	F _{2,1470} = 11.2 ^{***}

*** $p < .001$.

* The superscript designations (for each column) indicate which means are significantly different from each other using a Scheffe test ($p < .05$). Standard deviations are in parentheses. POI = perceived organizational identity; CEI = construed external image.

Table 3

Descriptive Statistics and Correlations, Time 1 (N = 1,504)*

Variable	Mean	S.D.	2	3	4	5	6
1. Salary [†]	1.81	.53	-.13 ^{**}	-.15 ^{**}	-.25 ^{**}	-.28 ^{**}	-.27 ^{**}
2. Attractiveness of POI	6.35	3.98	—	.60 ^{**}	.57 ^{**}	.50 ^{**}	.24 ^{**}
3. Attractiveness of CEI	5.15	1.16		(.82)	.55 ^{**}	.55 ^{**}	.20 ^{**}
4. Strength of organizational identification	4.07	1.47			(.90)	.66 ^{**}	.43 ^{**}
5. Cooperation	4.77	1.64				(.86)	.52 ^{**}
6. OCB	2.86	1.84					(.85)

** $p < .01$.

CEI = construed external image; POI = perceived organizational identity.

* Numbers in parentheses are reliability estimates.

† Dummy variable: 1 = salaried; 2 = non-salaried.

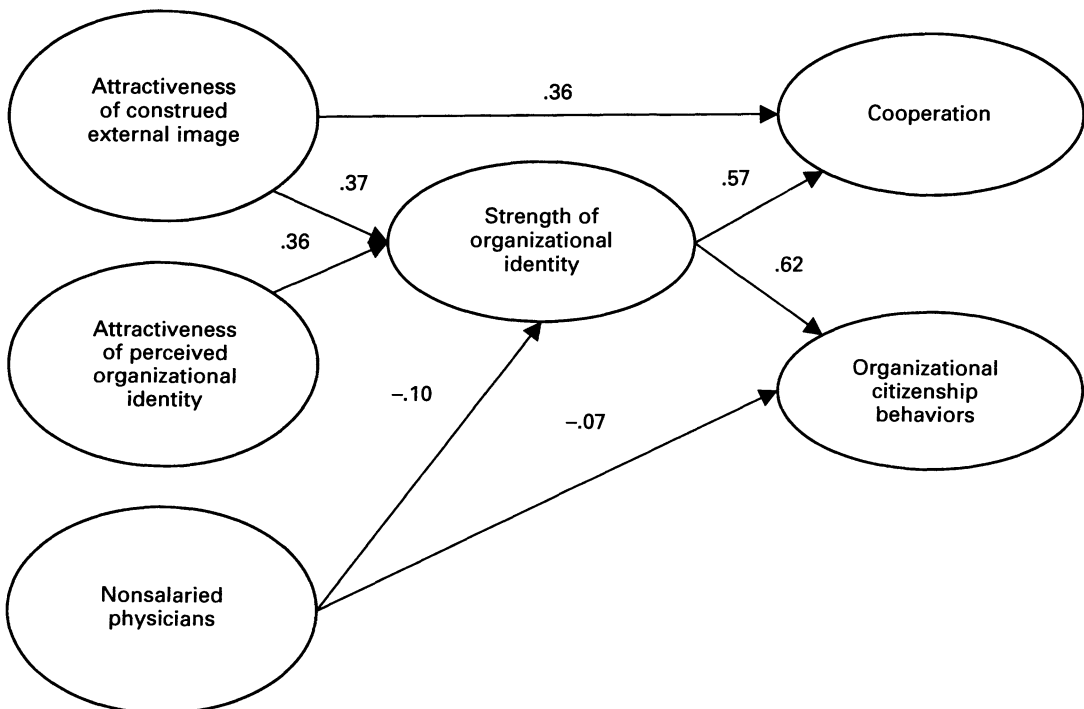
(CFI, Bentler, 1990; McDonald and Marsh, 1990), since the adjusted goodness of fit measure does not account for sample size (Wheaton, 1987). The use of multiple fit indices is recommended because there is much debate on the suitability of any one fit index. A commonly accepted rule of thumb for these test statistics is that values of .90 or greater indicate well-fitting models (Tucker and Lewis, 1973; Bollen, 1989). All of the test statistics indicated that the model demonstrated a good fit (all indices were above .90).

There were significant positive paths between the attractiveness of perceived organizational identity and construed external image, and strength of organizational identification, providing support for hypotheses 1 and 2. Hypothesis 3, which predicted that strength of organizational identification would be positively associated with cooperation, was supported as well, with a significant positive path between strength of organizational identification and the cooperation and organizational citizenship measures. There was also a significant positive path between whether physicians were salaried and strength of organizational identification: salaried physicians were more likely to indicate stronger organizational identification. Thus, the results provide general support for the model of organizational identification.

The model implies that the strength of organizational identification fully mediates the relationship between the attractiveness of both perceived organizational identity and construed external image and willingness to engage in cooperative behaviors. We examined these relationships by opening up the paths between how attractive physicians rated the perceived organizational identity and construed external image and the two cooperation measures. We also included a possible path between the salary control variable and the cooperation measures. Figure 2 presents the final model with significant paths noted. Summary statistics are presented in table 4. A chi-square difference test between the two models was significant, indicating that the fit of the final model was better than the hypothesized model [$\chi^2(7) = 228.52$].

While we must be cautious interpreting the results of the model with the additional paths, since we did not hypothesize them (MacCallum, Roznowski, and Necowitz, 1992), the results may add some additional depth to the model of organizational identification. Concerning the relationship between the attractiveness measures (perceived organizational identity and construed external image) and cooperation, the results varied depending on the different types of cooperation. Strength of organizational identification fully mediated the relationship between these two attractiveness measures and willingness to engage in organizational citizenship behaviors. That is, although both of the attractiveness measures were significantly correlated with this type of cooperative behavior, the paths between them were nonsignificant when strength of organizational identification was included in the model. The control variable for salary was related to this measure.

Figure 2. Simplified structural model, Time 1.



Cooperative Behaviors of Physicians

Table 4

Summary Statistics for LISREL Model, Time 1*

Model	d.f.	χ^2	RMSR	AGFI	NFI	IFI	NNFI	CFI
Null	231	19005.48***	.33					
Hypothesized	201	1567.68***	.069	.89	.91	.92	.91	.92
Final	194	1339.16***	.064	.90	.93	.94	.93	.94

*** $p < .001$.

* RMSR = root mean squared residual; AGFI = adjusted goodness of fit index; NFI = normed fit index; IFI = incremental fit index; NNFI = non-normed fit index; and CFI = comparative fit index.

Salaried physicians indicated a greater willingness to engage in organizational citizenship behaviors. The path between the attractiveness of the construed external image and the cooperation measure, however, was significant and positive, while the path from attractiveness of perceived organizational identity was not significant in the model. While strength of organizational identification was directly related to the willingness of physicians to engage in cooperative behavior, how attractive the physicians thought others perceived the system to be continued to have an effect. Considered together, our results suggest that it may be useful to distinguish between different kinds of voluntary behaviors.

Comparing across Respondent Groups

A unique opportunity was serendipitously created as a result of our using two mailings of the survey to increase our response rate. The three health care systems provided us with a list of mailing labels for all physicians affiliated with their systems for both mailings of the survey. For the second mailing, we sent all physicians a copy of the questionnaire and requested in the cover letter that they ignore the duplicate questionnaire if they had already filled out the survey, but 73 physicians filled out the survey again.⁶ Given that the length of time between the first and second mailing was fairly short (three months), we used this opportunity to treat these data in a test-retest reliability analysis. For every variable, we examined the correlation between the physician's first and second response. The correlations ranged from the high .60s to the low .90s. All correlated responses were highly significant, indicating that the measures were stable and providing further evidence of their reliability.

We also discovered that the list of physicians on the second mailing was not identical to the list of physicians on the first mailing: some names had been added to the second mailing list that were not on the first list, and some names had been deleted. Thus, we were able to compare the responses of physicians who remained part of the system with responses of those who were no longer affiliated. We coded the physicians into four groups: (1) respondents who were on both mailing lists and responded to the first survey; (2) respondents who were on both mailing lists and responded to the second mailing; (3) respondents who were on the first mailing list and responded but were not on the second mailing list; and (4) respondents who were on the second mailing list and responded but were not on the first mailing list (i.e., newcomers). We reasoned that group 3 might provide an

6

We matched duplicate surveys on the demographic variables to ensure that the two questionnaires were filled out by the same person.

indirect measure of turnover. We then compared the responses of physicians in these four groups on the major variables of interest. As table 5 shows, an interesting pattern of results emerged. Physicians who responded to the first survey but who were not on the second mailing list (group 3) reported significantly lower values on all of the measures than the physicians who responded to the first survey and whose names continued to be on the mailing list (group 1). These physicians considered the system less attractive, were less strongly identified with the system, and indicated less willingness than other physicians to engage in cooperative behaviors. Of course, we can only speculate as to why these physicians left the system, as indicated by the omission of their names on the second mailing list, but the results may indicate that their less positive reactions were associated with eventual turnover.

Time 2 Survey

A year later, 285 of the original respondents from the Alpha and Delta health care systems responded to a mailed survey. The survey, which was part of a larger study of physicians and health care systems, contained all of the measures used at Time 1. Thus, we were able to examine the longitudinal effects of the hypothesized relationships, as well as address some issues that have been raised concerning the enduring aspect of organizational identity (Gioia, Schultz, and Corley, 2000). We conducted a series of analyses to explore the stability of the results as well as the predictive ability of the model. We first examined the hypothesized relationships for Time 2 data to see if we could replicate the initial results. We then used Time 1 data on the two attractiveness measures and strength of organizational identification to see if we could predict the cooperation variables measured at Time 2. We also used the Time 2 data to test the feedback loops between strength of organizational identification (as measured at Time 1) and the attractiveness of POI and CEI (as measured at Time 2). Finally, we focused on the identity

Table 5

Comparison of Respondent Groups*									
Variable	Group 1		Group 2		Group 3		Group 4		F Statistic
	Mean	N	Mean	N	Mean	N	Mean	N	
Attractiveness of POI	6.94 ^{a†} (4.73)	640	6.26 ^b (4.15)	315	5.72 ^b (4.08)	305	5.80 ^b (3.48)	85	$F_{3,1344} = 8.00^{***}$
Attractiveness of CEI	5.36 ^a (1.08)	661	5.14 ^a (1.14)	326	4.87 ^b (1.25)	316	4.97 ^b (1.10)	87	$F_{3,1389} = 14.56^{***}$
Strength of organizational identification	4.24 ^a (1.46)	660	4.19 ^a (1.48)	325	3.52 ^b (1.41)	316	4.25 ^a (1.32)	87	$F_{3,1387} = 19.98^{***}$
Cooperation	4.91 ^a (1.60)	656	5.09 ^a (1.56)	325	4.02 ^b (1.62)	314	5.16 ^a (1.46)	87	$F_{3,1381} = 31.40^{***}$
OCB	2.93 ^a (1.87)	654	3.11 ^a (1.81)	317	2.21 ^b (1.66)	312	3.03 ^a (1.90)	85	$F_{3,1367} = 15.66^{***}$

*** $p < .001$.

* Group 1 respondents were on both mailing lists and responded to the first mailing; those in Group 2 were on both mailing lists and responded to the second mailing; those in Group 3 responded to the first mailing but were not on the second list; and those in Group 4 responded to the second mailing but were not on the first list. CEI = construed organizational image; POI = perceived organizational identity. Standard deviations are in parentheses.

† The superscript designations (for each column) indicate which means are significantly different for Group 3 when compared with the other groups, using a Scheffe test ($p < .05$).

Cooperative Behaviors of Physicians

attribute data to see if physicians' perceptions of the identity of the health care system remained stable over time.

Descriptive statistics, the correlation matrix, and the results of the LISREL analysis can be found in tables 6 and 7. All of the scales demonstrated high reliabilities (Cronbach's alphas were above .77). As our sample size was much smaller at Time 2 than Time 1, we used the average of each scale in a manifest variable LISREL analysis. We predicted that strength of organizational identification would fully mediate the relationships between the attractiveness of POI and CEI and organizational citizenship behaviors but partially mediate the relationships between the attractiveness of POI and CEI and cooperative behaviors. We also included the salary measure as a control variable.

Figure 3 presents the final model, with significant paths noted. The attractiveness of POI and CEI had a significant effect on strength of organizational identification, but salary was not related to identification. Strength of identification and the attractiveness of CEI were significantly related to the cooperation measure, while for the organizational citizenship behaviors, only strength of organizational identification and salary had significant effects. This pattern of results remained the same when using Time 1 measures of attractiveness and strength of identification to predict the two cooperation measures, although the effects were not as strong.

Table 6

Descriptive Statistics and Correlations, Time 2 (N = 287)*							
Variable	Mean		2	3	4	5	6
	Time 1	Time 2					
1. Salary†	1.65 (.58)	1.69 (.50)	-.15*	-.08	-.08	-.19**	-.27**
2. Attractiveness of POI	8.03 (3.77)	9.26 (4.08)	–	.62**	.59**	.50**	.33**
3. Attractiveness of CEI	5.64 (1.01)	5.68 (1.08)		[.77]	.48**	.56**	.27**
4. Strength of organizational identification	4.76 (1.28)	5.55 (1.24)			[.89]	.66**	.40**
5. Cooperation	5.49 (1.32)	5.62 (1.35)				[.88]	.53**
6. OCB	3.58 (1.76)	4.04 (1.70)					[.87]

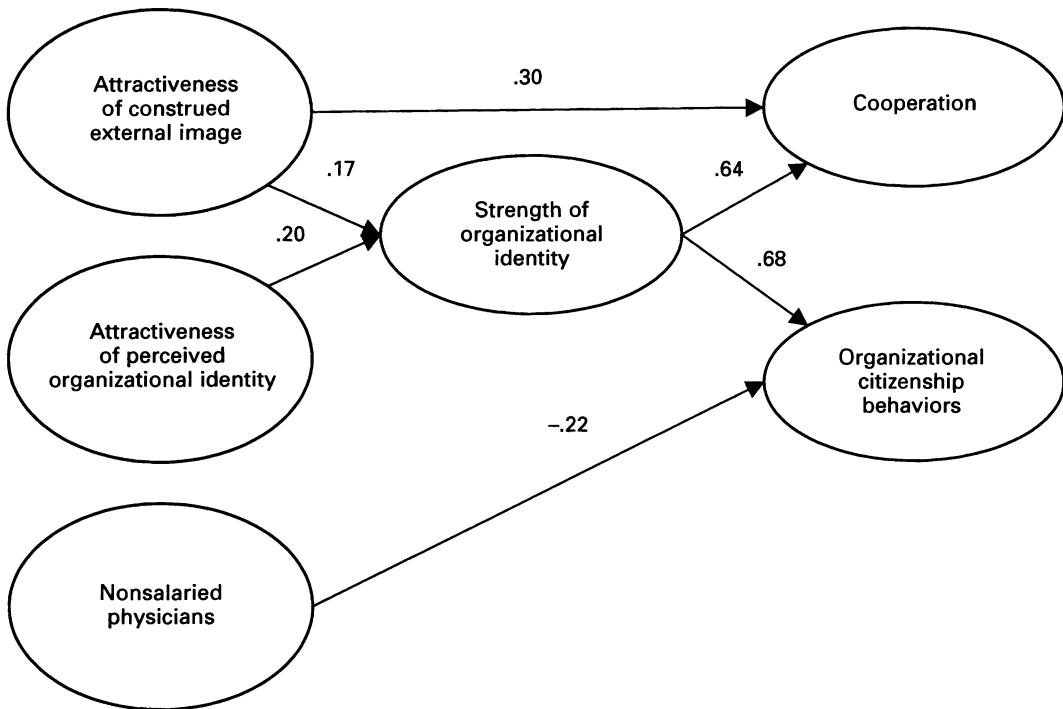
• $p < .05$; ** $p < .01$.
 * Standard deviations are in parentheses. Reliability estimates are in brackets. CEI = construed external image; POI = perceived organizational identity.
 † Dummy variable: 1 = salaried; 2 = nonsalaried.

Table 7

Summary Statistics for LISREL Model, Time 2*								
Model	d.f.	χ^2	RMSR	AGFI	NFI	IFI	NNFI	CFI
Null	15	516.36***	.14					
Hypothesized	6	29.63***	.13	.85	.94	.95	.88	.95

*** $p < .001$.
 * RMSR = root mean squared residual; AGFI = adjusted goodness of fit index; NFI = normed fit index; IFI = incremental fit index; NNFI = non-normed fit index; and CFI = comparative fit index.

Figure 3. Simplified structural model, Time 2.



Since the model proposed by Dutton, Dukerich, and Harquail (1994) included feedback loops between strength of organizational identification and the attractiveness of the images, we used the data from Time 1 and Time 2 to test this proposition. How attractive a physician rated the identity of the health care system at Time 2 (controlling for Time 1 attractiveness) was significantly predicted by prior strength of organizational identification (adjusted $R^2 = .35$). Similarly, strength of organizational identification significantly predicted the attractiveness of the construed external image (controlling for Time 1 attractiveness) (adjusted $R^2 = .38$). This supports the argument that as individuals use their organization as a self-referent, they are more likely to assess the organization in positive ways.

Finally, we attempted to address the debate about whether organizational identity is enduring or might be better thought of as a relatively fluid and unstable concept (Gioia, Schultz, and Corley, 2000). We correlated the physicians' assessment of the health care system's identity (i.e., the extent to which they believed each of the attributes characterized the system) at Time 1 and Time 2. The average correlation was .50. Correlations ranged from .19 to .70. We then conducted a paired-samples t-test to detect differences between the two assessments. Of all the t-tests (one per attribute), only three were significant, thus suggesting that the assessments were fairly stable over the year time period. Whether identity is an enduring concept cannot be conclusively determined from the present study. Perhaps those physicians who responded to both surveys were more likely to view consistency in the identity of the system, or the time span between the two surveys may not have been long enough to detect the

Cooperative Behaviors of Physicians

changeable nature of organizational identity. Additionally, Gioia, Schultz, and Corley (2000) argued that the durability of identity exists in the stability of the labels used by organizational members to describe the organization but that the meaning of the labels change over time. The results suggest that these labels do persist; whether the interpretation of the labels remained the same is still open to question.

DISCUSSION

The objective of this research was to provide an initial, partial test of the model of organizational identification by using data from physicians affiliated with three major vertically integrated health systems. We sought to establish support for the hypothesis that there is a positive relationship between how attractive physicians find the identity and image of a health system and the strength of their identification with the system. We also examined the consequences of weak versus strong organizational identification for physicians' cooperation. The results indicated support for the model and suggest theoretical extensions. Physicians' assessments of the attractiveness of the perceived organizational identity and the construed external image were strongly related to the strength of their identification with the system. Strength of organizational identification, in turn, was positively related to the extent to which physicians engaged in cooperative and organizational citizenship behaviors. Interestingly, the results indicated that how attractive the physicians believed others thought the system to be also affected the degree to which they engaged in cooperative behavior. That is, strength of organizational identification only partially mediated the relationship between this attractiveness assessment (of construed external image) and cooperative behavior. Conversely, strength of organizational identification appeared to fully mediate the relationship between the attractiveness assessments and the physicians' willingness to engage in organizational citizenship behaviors. Given these results, we believe that the model of organizational identification should be modified to take into account that different types of outcome variables are differentially affected by the images that individuals have of the organization.

The first set of behaviors, for which there was a direct path between construed external image and cooperation may represent activities that more fully involve third parties, such as patients. The second set of behaviors (i.e., the OCBs), such as participating on committees and task forces, do not appear to involve third parties. Thus, these behaviors may be viewed as more personal cooperation behaviors. This distinction may be important, as it suggests that the influence of organizational identification may depend in part on how much discretion members perceive they have over the behavior involved. When members perceive they have major or exclusive discretion, their identification with the organization is particularly consequential. When the behavior can be influenced by others, and includes implications for others (e.g., patients), then members may give more weight to how they think others view the organization. These results may generalize to other organizations in which third parties are important, such as key clients or customer groups of sales organi-

zations or the licensing and regulatory bodies with which public service organizations interact.

It is possible that our operationalizations of the attractiveness of the two images may have resulted in the differing effects. Following Albert and Whetten (1985), we conceptualized perceived organizational identity as a multidimensional construct, whereas we thought of construed external image as more of a status marker. Members of an organization with more intimate familiarity than outsiders of what the organization stands for may be able to differentiate between multiple features and weigh them differently in terms of how attractive and unattractive they are. Members may not believe that outsiders are capable of making such fine distinctions. While both the multidimensional (POI) and more general (CEI) images affect how closely individuals identify with the organization, and how cooperative they are, the more generalized image might have a greater impact when they interact with outsiders.

Limitations

Our findings and future work must be considered in the context of this study's limitations. A concern with the results of the above analyses is that they are based on self-reported data collected with a single instrument. Thus, one might argue that it is not surprising that the model demonstrated a good fit, since the independent, mediating, and dependent variables were all collected in a survey instrument. Several precautions were taken to address the potential problem of common-methods variance. First, we used Harman's one-factor test (Podsakoff and Organ, 1986) to determine if one dominant factor emerged in an overall factor analysis. We found that one factor could not adequately account for the variance. While this test does not rule out the problem of common-methods variance, it suggests that variance existed that was not associated with using the same method for measuring the variables. In addition, the longitudinal data mitigate, in part, the concerns of common-methods variance in cross-sectional research designs.

The way in which we identified the potential identity attributes may have also posed a limitation. Albert and Whetten (1985) suggested three ways by which organizational identity might be measured: (1) an inductive approach, emerging from the anthropological tradition, (2) a deductive approach based on a priori identity-relevant dimensions, and (3) a hybrid of the two. We chose a hybrid approach by conducting focus groups and asking open-ended questions. These open-ended questions, however, were based on the theoretical dimensions of identity as central, distinctive and enduring, and it is possible that such questions limited the kinds of attributes participants offered. Alternative methods of generating identity attributes (e.g., those that seek to measure perceptions of identity as a holistic concept) may have resulted in a different set of attributes.

Another potential limitation is that we considered the health care system as an "organization." Because each system consisted of various "organizations," such as clinics, hospitals, and nursing homes, it may have seemed to be more amor-

Cooperative Behaviors of Physicians

phous than an organization such as Exxon or IBM, and respondents may have had some difficulty assessing its identity. Although the questionnaire explicitly directed the physicians to think about the whole system, some physicians may have focused more on the smaller organization (e.g., hospital) with which he or she was affiliated, rather than the larger system. We believe it is unlikely, however, that the respondents did not have the same organizational unit in mind (whether a single hospital or the whole hospital system) when reporting information about both the predictor and outcome variables. In addition, because most of the physicians were not employed by the systems in the usual sense, they may have viewed themselves more as outsiders to the organization than insiders. Because of the possibly unusual conditions in hospital systems, future research needs to validate these findings in organizations with more discrete boundaries and more traditional employment practices. Also, our response rate was lower than we would have liked, which places some limits on our ability to generalize from the findings. Those physicians who were completely apathetic about their membership in the system may have been underrepresented. Finally, as this was a convenience sample, generalizing the results beyond the sample must be done with caution.

Extensions and Future Research

Based on this initial test of the model of organizational identification and previous discussions of the larger model, we can offer some speculation about what managers and future researchers may observe. First, we consider promising our findings that one's identification with an organization may result in the same outcomes that organizations typically rely on economic incentives to realize. In fact, research on the perverse outcomes of extrinsic rewards suggests that an organizational identification perspective may be particularly valuable in certain contexts. As Deci (1975) and Deci, Koestner, and Ryan (1999) suggested, tangible rewards may undermine the intrinsic motivation to engage in organizationally desired behaviors (e.g., OCBs). This "crowding out" phenomenon may be especially visible in the management of professionals, who are socialized to put the interests of the patient or client above those of the organization. Future research should, therefore, more explicitly examine the relationship between extrinsic motivators such as compensation and intrinsic motivators such as cognitive attachment, as these motivators may be in conflict (cf. Deci, Koestner, and Ryan, 1999). Alternatively, extrinsic rewards may have a complementary effect to the extent that they are interpreted as signals of an individual's membership (i.e., status) in a group (Tyler and Blader, 2000). For example, a physician's nominal salary as a department chief may have little direct effect on inducing desired behaviors but may be a significant indicator of his or her status as a member of the organization and therefore, cognitive attachment to the hospital.

Second, this reasoning also suggests that managers should attempt to establish how critical organizational members (current and future) perceive the identity of the organization. Our findings suggest that organizations may benefit to the extent

that they can help members perceive the real and attractive, but perhaps subtle qualities of the organization's character (e.g., publicizing the significant amount of pro bono work that is performed). To the extent that managers can more accurately and comprehensively communicate what is central, distinctive, and enduring about the organization, they may be better able to build an organization's collective identity as understood by its members. This, with appropriate selection criteria, may ultimately result in increased organizational identification throughout the organization.

Third, our findings suggest the importance of considering organizational identification as a dynamic phenomenon. For example, the impact of such events as the merger of an organization with another or other significant organizational change (e.g., a nonprofit hospital creating a for-profit subsidiary) may affect perceived changes in organizational identity, and thus identification for individuals, over time. Based on Heider's (1958) balance theory, Elsbach (1999) suggested that individuals continuously attempt to balance their self-concepts through connections and separations with organizations. Where there is relatively good job mobility, as was the case for the physicians in the present study, we would expect low identification and (to a greater extent) dis-identification to result in self-selection away from the organization. In our study, identification was negatively related to the likelihood of not being listed on the second-wave roster of physicians. We would also expect that when alternative work opportunities are scarce, individuals would seek balance by changing their perceptions of the organization's identity. Thus, it is notable that the present study revealed sizable variance in organizational identification. It suggests a possible fluidity in identification in which organizational members either move closer to the organization, by changing their perceptions or attitudes about what they value, or further away, through formal withdrawal or less formal disassociation.

Relatedly, researchers may want to explore what about the organization needs to change before an identity change is recognized. It could be that an internal reassessment of what the organizational identity should be is sufficient for members to perceive that the identity has been altered. Alternatively, public actions that affect organizational members' construed external image might be necessary for identity change. Our research suggests the importance of both images, perceived organizational identity and construed external image, as they affect the cognitive attachment between organizational members and the organization, and important organizational outcomes, such as cooperation. In professional organizations these outcomes can't easily be based on economic inducements, thus, we need to consider other means by which busy professionals who often have multiple and competing loyalties (to patients, to their practice, to hospitals) express willingness to engage in behaviors that benefit the organization. We believe that a focus on the alignment between the definitions of both the organization and the individual member is a step in this direction.

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Cooperative Behaviors of Physicians

APPENDIX A: Attributes Measuring Perceived Organizational Identity

1. Cooperative with physicians
2. Concern for the bottom line/profit
3. Impersonal
4. Integrated system
5. Conservative
6. Empowers physicians
7. Good reputation in the medical field
8. Responsive to physicians
9. Stable
10. Financially responsible
11. Trustworthy
12. Aggressive
13. Big
14. Committed to employees
15. Successful as compared to other systems
16. State-of-the-art medical technology
17. Competitive with other systems
18. Up-to-date medical facilities
19. Concern for quality care for patients
20. Well managed
21. Compassionate
22. Bureaucratic
23. Proactive
24. Accessible administration
25. Good reputation in the community
26. Community-oriented
27. Specialist-based
28. Focused on education
29. Centralized decision making
30. Constantly changing
31. Integrity
32. Facilitates physician autonomy
33. Cost-effective
34. Collegial
35. Competent medical staff
36. Accessible medical facilities
37. Encourages research

APPENDIX B: Cooperation Items

1. When feasible, make referrals to physicians in the Alpha system rather than outside the system.
2. Speak well of the Alpha system to other physicians.
3. Take call for other Alpha system physicians.
4. Make suggestions to help improve the financial condition of the Alpha system, although you do not personally benefit.
5. Speak well of the Alpha system to patients.
6. Given insurance constraints, admit patients when possible to the Alpha system as opposed to another system.
7. Refer patients to physicians in the Alpha system as opposed to physicians in other systems.
8. Advise patients to join an Alpha system affiliated managed-care plan.
9. Manage patients on an outpatient basis within the Alpha system whenever possible.
10. Participate as a voluntary member of systemwide committees/task forces (exclusive of your medical staff committee) to improve the management of the Alpha system.
11. Respond to Alpha system hospital/emergency room calls when you are not on call.
12. Participate as a voluntary member of systemwide committees/task forces to improve medical services of the Alpha system.
13. Use lower-cost pharmaceuticals to enhance the financial well-being of the system, as long as it doesn't affect patient care.
14. Participate as a voluntary member of systemwide committees/task forces to enhance the financial viability of the Alpha system.
15. Assess what is best for the Alpha system when making decisions that impact the system.
16. Try to minimize Alpha system costs whenever possible, without sacrificing patient care.
17. Participate in community services on behalf of the Alpha system.