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Author(s): Martin Ruef and W. Richard Scott

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A Multidimensional  
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**Martin Ruef**

*Stanford University*

**W. Richard Scott**

*Stanford University*

Using data on 143 hospital organizations, this article examines the antecedents and effects of two forms of organizational legitimacy (managerial and technical) over a 46-year period. Results show that both the managerial and technical forms provide notable improvements in organizational survival chances but that the strength of each effect varies over time depending on the nature of the institutional environment. Variation also appears in the antecedents of legitimacy—for example, the ability of a hospital to secure approval for its managerial practices depends on the correspondence between its mission and the logic of the surrounding institutional environment. The results suggest that a multidimensional model can reveal nuances of organizational legitimacy that are missed by more unitary conceptions. •

Max Weber was among the first great social theorists to stress the importance of legitimacy. In his definitional foundations of the types of social action, he gave particular attention to those forms of action that were guided by a belief in the existence of a legitimate order: a set of "determinable maxims," a model regarded by the actor as "in some way obligatory or exemplary for him" (Weber, 1968: 31). In his own work, Weber applied the concept to the legitimation of power structures, both corporate and governmental. His widely rehearsed typology of administrative systems depends on whether the subordinate actor regards the order as binding because of its traditional nature, the charismatic qualities of its leader, or because it has been legally constituted. Variations in such beliefs have been shown to have implications for the structure, stability, and operations of the system, and this work spawned a large number of empirical studies of different types of power and authority systems (e.g., French and Raven, 1959; Dornbusch and Scott, 1975; Kelman and Hamilton, 1989). While analyzing legal order, Weber (1968: 313) developed a distinction between general social norms and what he termed guaranteed law: the existence of a "coercive apparatus, that is, that there are one or more persons whose special task it is to hold themselves ready to apply specially provided means of coercion (legal coercion) for the purpose of norm enforcement." Thus, Weber regarded regulatory institutions as clearly distinctive from other, normative elements.

In proposing his cultural-institutional perspective, Parsons (1960) broadened the focus of legitimation to include features other than power systems. As specialized subsystems of larger societal structures, he asserted that for organizations to have a legitimate claim on scarce resources, the goals they pursue should be congruent with wider societal values. The focus of the organization's value system "must be the legitimation of this goal in terms of the functional significance of its attainment for the superordinate system" (p. 21). This conception of legitimacy, emphasizing the consistency of organizational goals with societal functions, was later embraced by Pfeffer and colleagues (Dowling and Pfeffer, 1975; Pfeffer and Salancik, 1978).

Most recently, with the advent of neoinstitutionalism, a number of theorists have emphasized the importance of cogni-

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tive belief systems—organizations are assessed in terms of their consistency or congruence with cultural models or rules specifying appropriate structures or procedures. Following the lead of Berger and Luckmann (1967), who emphasized the extent to which institutionalized patterns provide a basis for predictability and order, Meyer and Rowan (1977) were among the first to call attention to the ways in which organizations seek legitimacy and support by incorporating structures and procedures that match widely accepted cultural models embodying common beliefs and knowledge systems. These and related contributions represent considerable diversity but also reflect a common underlying conception, which has been formulated by Suchman (1995: 574) as follows: "Legitimacy is a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs and definitions."

Early theorists were content to assert or assume the importance of culturally based rule systems but did little more than illustrate such effects. More recently, a growing number of researchers have attempted to operationalize the concept of legitimacy. In moving from vague, general assertions about organizations being legitimated by societal values or being consistent with socially constructed models, researchers have had to confront several conceptual and measurement issues, including (1) What element or aspect of institutions is of interest? (2) What social actors are doing the legitimating, and what dimensions do they target? (3) What level (population, organization, subunit) is being assessed? and (4) What is the relative salience of the dimensions assessed?

### **What Elements?**

While theorists have attended to somewhat distinctive institutional elements in formulating their views of legitimacy, it is useful to distinguish analytically among three basic components of institutions—the normative, the regulative, and the cognitive—each giving rise to a distinctive basis for evaluating legitimacy (Scott, 1995) and to distinctive types of control mechanisms—normative, coercive, and mimetic (DiMaggio and Powell, 1983). The normative component, stressed by Weber's discussion of administrative systems, places emphasis on "normative rules that introduce a prescriptive, evaluative, and obligatory dimension into social life" (Scott, 1995: 37). Organizations are subject to the application of generalized societal norms such as fair play but are particularly constrained by the existence of a variety of occupational and professional standards to which their participants subscribe (DiMaggio and Powell, 1983). Regulative institutions, such as Weber's "guaranteed law," stress the presence of "explicit regulative processes: rule-setting, monitoring, and sanctioning activities" (Scott, 1995: 35). Such activities are often lodged in formal oversight structures, such as state agencies. Singh, Tucker, and House (1986) provided an illustration of regulatory legitimacy when they determined whether voluntary social service organizations in Toronto obtained a charitable registration number from the state agency, Revenue Canada.

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Cognitive elements are the rules that specify what types of actors are allowed to exist, what structural features they exhibit, what procedures they can follow, and what meanings are associated with these actions. Hence, cognitive elements are more basic to the operation of social systems and provide frameworks on which normative and regulative systems are constructed. The new institutionalism has emphasized the importance of these cognitive facets of institutions (see Meyer and Rowan, 1977; Zucker, 1977; DiMaggio and Powell, 1991). The prevalence or density of a form or practice is often employed as an indicator of cognitive legitimacy (Fligstein, 1985; Westphal and Zajac, 1994).<sup>1</sup>

Each of the three elements gives rise to legitimacy, defined as "a condition reflecting cultural alignment, normative support, or consonance with relevant rules or laws" (Scott, 1995: 45), depending on whether the emphasis is on cognitive, normative, or regulatory aspects of institutions. The three institutional elements can apply to different types of organizations (e.g., registration or accreditation may be relevant for one type of organization but not another). Moreover, it is possible for an organization to be judged as legitimate in terms of one set of elements but not another—for example, a firm may be accredited by a professional agency but may be found to be in violation of regulatory rules.<sup>2</sup>

Our empirical investigation places primary emphasis on normative rather than cognitive or regulative legitimacy for both substantive and practical reasons. From a substantive viewpoint, the healthcare field in the U.S. has long been subject to strong professional norms, as evidenced by the power of organizations such as the American Medical Association (AMA) and the American Hospital Association (AHA). In areas such as healthcare, where outcomes are often uncertain and difficult to assess, professional and industry trade associations develop "to collectively create and maintain institutional legitimating devices" that enhance public trust (Van de Ven and Garud, 1989: 211). These associations engage in regular and systematic efforts to evaluate the conformity of hospital organizations to industrywide professional standards and to provide assurance to the public that such matters receive careful scrutiny. The results of such evaluations are significant for the organization being evaluated: hospitals receiving favorable evaluations are likely to display them publicly to relevant audiences; conversely, the loss of accreditation is widely publicized in local or even national media. On the practical side, cognitive legitimacy at the population level (which we evaluate empirically) is well established by the time of our study: hospitals are a taken-for-granted arrangement for providing healthcare services, and individual organizations rarely depart from the conventional format. There exist many sources of regulative authority over hospitals, including common law (negligence and liability, duties and responsibilities of corporate officials, the hospital's contractual agreements), labor law, personnel licensure, monitoring of financial operations, hospital licensure, and Medicaid certification (see Somers, 1969). Many of these—especially licensure and certification—tend to be closely aligned with normative control systems.

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Aldrich and Fiol (1994) proposed a closely related schema, distinguishing between cognitive and sociopolitical legitimacy. The latter combines normative and regulative elements. While, as Edelman (1992) argued, regulatory requirements such as laws frequently operate through normative mechanisms, we believe there is value in preserving the analytic distinction between them. Suchman's (1995) typology of legitimacy is also closely related. He also identified the "cognitive" element. His category of "moral" is similar to our normative; and the third category, "pragmatic" includes our regulative element but broadens it to include all conformity based on "self-interested calculations" (p. 578).

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The concept of legitimacy is sometimes extended to include reputational assessments (e.g., Galaskiewicz, 1995; Deephouse, 1996). Reputational assessments deal with a wide range of dimensions that may, but often do not, attend to legality, normativity, or cognitive correctness. For example, many such measures are based on relative size or performance or virtually any attribute along which organizations may vary that can serve as the basis for status comparisons (e.g., Podolny, 1993). In our view, legitimacy assessments are best reserved for the more restricted subset of criteria that pertain to normativity, legality, or cultural comprehensibility.

### What Sources?

Whether an organization is legitimate, or more or less so, is determined by those observers of the organization who assess its conformity to a specific standard or model. All stakeholders participate in this process, evaluating one or another aspect of the organization with varying degrees of knowledge and with varying degrees of influence on the overall level of legitimacy. As Suchman (1995: 574) noted, legitimacy is a "generalized perception" representing the "reactions of observers to the organization as they see it; thus, legitimacy is possessed objectively, yet created subjectively."

Organizations relate to numerous stakeholders and confront many constituencies, both internal and external. Accordingly, analysts must carefully consider to which sources of legitimacy they should attend (Meyer and Scott, 1983). External sources that have been identified include licensing boards, funding agencies, intellectuals, professional bodies, unions, business circles, and public opinion and the media (Galaskiewicz, 1985, 1995; Hybels, Ryan, and Barley, 1994; Deephouse, 1996).<sup>3</sup> Various categories of internal participants, including workers, managers, staff specialists, and members of the board, also make legitimacy evaluations that can affect their own levels of involvement and motivation (Elsbach, 1994). Under some circumstances (e.g., whistleblowers) these evaluations become available to and affect the opinions of external constituencies (Near and Miceli, 1987).

Attention to these various constituencies is important because such groups tend to have varying interests and to use diverse criteria and standards in assessing the legitimacy of an organization. Earlier studies focusing on effectiveness evaluations have emphasized the diversity of criteria used by differently placed groups (Scott, 1977). The same arguments should apply to the generalized legitimacy assessments. Deephouse (1996), for example, has shown that regulative agencies and the print media used somewhat different criteria in assessing the legitimacy of banks. Our own study of hospitals concentrates attention on the normative assessments of technical and managerial legitimacy made by a collection of industrywide professional bodies external to the hospitals being evaluated.

### What Unit or Level?

Legitimation processes operating on organizations may be considered on several levels: (1) entire organizational populations, (2) individual organizations, or (3) subunits and specialized aspects of organizations. Ecological as well as many institutional approaches focus attention on the legitimation of organizational populations, collections of organizations exhibiting a given structure or form. Population ecologists such as Carroll and Hannan (1989) have used population density, or prevalence, as an indicator of cognitive legitimacy. They argued that organizational density serves as an indicator of the cognitive status of the form, the extent to which it is taken for granted, the degree to which "relevant actors regard it as the 'natural' way to organize for some purpose" (1989: 525). Critics of this interpretation (e.g., Zucker, 1989; Baum and

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One should distinguish analytically, however, between the legitimating effects of obtaining funding from a given source and the exchange benefits associated with receipt of the funds.



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Powell, 1995) have expressed concern about the indirect nature of this indicator—legitimacy is inferred from density rather than directly assessed—but to date there have been few attempts to develop more direct measures at this level. One notable exception is a recent study by Hybels, Ryan, and Barley (1994), which examined the impact of the numbers of articles in the business press dealing with biotechnology on the founding rates of U.S. biotechnology firms. They measured the net rate of favorable to unfavorable articles as an indicator of cumulative legitimacy during the period 1971 to 1989 and showed it to be positively correlated with founding rates. A different approach to assessing population-level legitimacy was developed by Baum and Oliver (1992), who examined the institutional embedding of day care centers—the extent of relations between centers and various sources of legitimacy and resources—and its effects on survival at both the overall population and individual organization levels.

Whether or not an organizational form is regarded as legitimate, organizations within a population may also vary in their conformity to rules or norms or cultural models. Much research has been devoted to examining legitimation at the level of the individual organization, as can be seen in the following three examples, one for each type of legitimacy. Research by Kimberly (1975), examining the cultural models employed by rehabilitation centers in New York City, suggested that organizations must reflect changes in cognitive frameworks if they are going to receive community support. The importance of normative legitimacy was examined by Singh, Tucker, and House (1986) in their study of the influence of state registration and municipal directory listings on the survival of a sample of community service organizations. And Deephouse (1996) has examined regulative legitimacy, in particular, the effects of actions by state regulatory agencies on commercial banks, including endorsement based on the assessment of a bank's capital and the extent of enforcement actions taken against a bank.

Subunits or functions within an organization can also be the focus of legitimation processes. Accreditation agents may certify individual schools or departments as well as entire universities, and the NCAA provides normative guidelines for athletic programs within colleges (Stern, 1979). Edelman (1992) and Dobbin et al. (1993) have examined legitimacy effects associated with the presence and nature of affirmative action offices in organizations. The specialized and differentiated nature of modern organizations encourages the development of multiple, quasi-independent sources attending to one or another of these systems, and, conversely, diverse environmental sources simultaneously encourage differentiation within organizations as well.

From an intraorganizational perspective, it is also possible to separate legitimating processes operating with respect to different organizational functions. One can imagine examinations of the legitimacy of public organizations that separate decision making by councils or legislatures from implementation activities by public agencies or contracting agents. The technical and managerial aspects of hospitals that we distinguish in our study have historically been structurally differen-

tiated (Smith, 1955): physicians, organized as the medical staff, carry out and oversee technical activities; administrators oversee and attend to the managerial activities.

### What Is the Salience of the Legitimacy Assessments?

All legitimacy assessments are not of equal importance. In the case of hospitals, normative assessments by industry-wide professional associations have more salience than do regulative or cognitive assessments, at least during the post-World-War-II period. It is also clear that all constituencies do not have equal weight, and their assessments do not have equal influence. What may be less obvious is that the salience of one or another legitimacy assessment may also vary over time and place (see Dacin, 1997). In general, the more the assessments of particular constituencies tap into the beliefs and values currently dominant in the institutional environment, the more salience we would expect them to have for the organization. But this still begs the question of how salience should be operationalized. Typical performance criteria—whether defined in financial, quality, or other terms—tend to presume the salience of one or another dimension of legitimation and are thus useless in delineating institutional salience itself. Following past work in neoinstitutional and ecological theory (e.g., Hannan and Freeman, 1989; Baum and Oliver, 1992), we consider the relative impact of managerial and technical legitimacy on organizational survival as appropriate indicators of salience, given the generality of survival as a success criterion.

### Legitimacy in Hospital Organizations

The foregoing review suggests the importance of crafting arguments and selecting legitimacy measures that take into account the distinctive features of the organizations under study, as well as their context. Our study focuses on the population of hospitals located in the San Francisco Bay area of northern California during the period between 1945 and 1990 and the extent to which various indicators of hospital legitimacy have affected organizational survival. We also examine the effects associated with changes over time in the institutional environments of the medical sector and organizational factors that relate to technical or managerial legitimacy.

**Diverse sources and targets.** Hospitals operate in highly institutionalized environments that put substantial pressures on both their technical and managerial components. Parsons (1960) distinguished between three levels within organizations: (1) a technical level, which is responsible for transforming production inputs into outputs, (2) a managerial level, which administers and obtains essential resources for the technical production system, and (3) an institutional level, which relates an organization to its environment and attempts to secure its legitimacy (see also Thompson, 1967). Our usage departs somewhat from Parsons' lead in applying these distinctions: we argue that legitimation efforts by officials at the institutional level can be targeted at either the technical level or the managerial level, or both.<sup>4</sup>

The securing of managerial legitimacy is closely tied to Weber's (1968) conception of legitimate authority. Managerial

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We also depart from Meyer and Rowan's (1977) argument that institutional leaders work to buffer or decouple the technical core from the external environment.

Rather, we see legitimation processes as penetrating the technical core and technical processes as being grounded in institutional superstructures (cf. Scott, 1995).

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legitimacy involves normative support for organizational mechanisms such as personnel management, accounting practices, and the rules of conduct and structure of the administrative staff. With respect to hospitals, in particular, such legitimacy is typically conferred through oversight bodies (e.g., the American Hospital Association) that review the structure and functions of governance boards and administrator hierarchies. By contrast, technical legitimacy is focused on aspects of core technology, including normative support for staff qualifications, training programs, work procedures, and quality assurance mechanisms. In the health-care sector, these assessments revolve around patient-focused tasks, such as diagnosis, treatment, education, and continuum of care, as well as ethical standards concerning patient rights (JCAHO, 1996). More so than most organizations, hospitals have traditionally attempted to differentiate structurally, so as to separate and insulate the sphere of technical tasks, under the jurisdiction of the medical staff, from administrative tasks, under the control of managers (Smith, 1955; Goss, 1961).<sup>5</sup>

All hospitals have the opportunity to seek legitimacy from a variety of external normative sources. Some of these are more clearly focused on managerial procedures, some on technical procedures, and some pertain to both. Because managerial legitimacy is typically governed by different societal values (efficiency and cost-containment) than technical legitimacy (quality of patient care and specialty training among health organizations), the types of procedures suggested by different normative sources need not be complementary and may even conflict with one another. In our empirical investigation, therefore, we consider seven different sources of normative legitimation, three focusing primarily on managerial aspects of hospital activities, three on technical, and one encompassing both.

Hospital organizations improve their survival chances insofar as they are successful in obtaining legitimacy from such normative sources as the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) or the American Hospital Association (AHA). More generally, a number of theorists (Meyer and Scott, 1983; Baum and Oliver, 1991) have argued that organizations operating in highly institutionalized environments are more likely to survive to the extent that they are successful in obtaining legitimacy from those normative sources that are in a position to approve or disapprove their structures, staffing, and programs. While this proposition should hold true of normative legitimacy viewed in general terms, the particular salience of managerial and technical dimensions of legitimacy may vary depending on the nature of an organization's environment. To qualify the significance of these dimensions, we must consider some additional characteristics of institutionalized sectors.

Institutional regimes and the varying salience of legitimation sources. Our study extends over almost fifty years, during which significant changes have occurred in both the nature of hospitals and their relation to their environments (Stevens, 1989; Burns, 1990). Between 1945 and the present, three general periods relevant to hospital organizations can be identified: (1) a period of professional dominance combined

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The clear demarcation of spheres of control is currently undergoing modification under the new regime of managed care.



with localized controls (1945–1965), (2) a period of vastly increased federal involvement in both the funding and regulation of hospital care (1966–1982), and (3) a period of increased reliance on market mechanisms and on managed competition (1983–present). These periods are characterized by the salience of different types of institutional regimes (see Scott, Mendel, and Pollack, 1996).

Early commentators emphasized the unique role played by physicians in establishing appropriate coordination and control mechanisms within the medical sector (e.g. Scott and Backman, 1990). This attitude is clearly exemplified by Freidson (1970: 77), who noted that “the most important single element in the social structure of medical care is the medical profession itself.” The logic of this regime is one of professional dominance, insofar as sector coordination is sustained mainly through the norms and interactions of a dominant profession. In the American healthcare field, professional dominance emerged in the early twentieth century after medical education and licensing standards began to be consolidated under the auspices of the AMA following the Flexner report (Starr, 1982). A related feature of this era was the decentralized nature of medical care organizations. Throughout the period, many hospitals—the major organized providers of medical services—assumed a voluntary, nonprofit form and operated as independent organizations under localized community controls (Burns, 1990). Formal linkages that did exist among providers were typically limited to loosely coupled referral networks or affiliations with academic medical centers.

By the mid-1960s, this regime was increasingly challenged by the encroachment of the federal government into medical affairs—in particular, through the Medicare/Medicaid acts of 1965. Funding decisions became highly centralized, and a number of regulatory structures (e.g., for health planning and professional review) were put in place.<sup>6</sup> In the San Francisco Bay area, the levels of federal and county expenditures for direct health services shifted in less than one year from being strongly in favor of local funding to favoring federal funding by a three-to-one ratio (USBHP, 1990). The resulting institutional regime was not only more centralized than the system of professional dominance, it also featured increased development of horizontal linkages among organizations in the sector. Many of these linkages, such as the Regional Medical Program networks, were encouraged by public agencies (May, 1967), but health providers also began to create more palpable connections in the form of multihospital systems (Ermann and Gabel, 1984). This increase was especially pronounced when one considers the timing of Medicare/Medicaid passage: in the brief period between 1965 and 1967, the proportion of Bay Area hospitals with system affiliations increased by 50 percent.

Following the rapid increase of healthcare costs and the delegitimation of welfare state policies during the 1970s, the stage was set for yet another shift in the institutional regime. This change had already been foreshadowed in a number of ways by the health maintenance organization (HMO) legislation of the early seventies, which sponsored health maintenance organizations as a means of redirecting system

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Federal efforts to require healthcare organizations to plan and improve coordination of their services included the Comprehensive Health Planning Act of 1966 and the Health Planning and Resource Development Act of 1974. Successive programs enacted to improve quality assurance mechanisms included the Experimental Medical Care Review Organizations (EMCROs), Professional Standards Review Organizations (PSROs), and Peer Review Organizations created during the 1960s and 1970s (Institute of Medicine, 1990).

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incentives from spending to saving, although HMO forms themselves did not develop rapidly until the 1980s (Brown, 1983; Gruber, Shadle, and Polich, 1988). A more decisive change in the regime occurred in 1983, when federal policy embraced the Prospective Payment System for Medicare, shifting from retrospective reimbursement of costs to prospective payments linked to diagnosis. For the first time in over a decade, the ratio of federal to local public funding exhibited a secular decline (USBHP, 1990). Laws were also passed in California (and quickly thereafter in other states) to allow Medicaid and commercial insurers to contract selectively with groups of physicians and hospitals, fostering cost competition among providers (Bergthold, 1990). These policy changes resulted in more decentralized decision making, as providers competed at local and regional levels for health-care contracts (ProPAC, 1989). The trend toward decentralization was furthered in the mid-1980s by the dismantling of federally initiated health planning and dissolution of the associated administrative structures (health system areas) by the repeal of the Health Planning and Resources Development Act.

During this same period, healthcare providers increasingly adopted corporate symbols and practices (Starr, 1982; Hafferty and Light, 1995). The era of market forces and managerial ascendance was underway. The markets thus created, however, were not those involving isolated organizations coordinated through spot market contracts but, rather, involved complex linkages, as healthcare delivery systems were embedded in an extensive system of networks. These networks increasingly pervade the sector in the form of multi-hospital systems (Shortell, 1988), purchasing cooperatives (D'Aunno and Zuckerman, 1987), contract management arrangements (Morrisey and Alexander, 1987), and other strategic alliances. While many of these ties resemble the lateral connections among providers that were already emerging in the period of federal involvement, integrative connections among providers, consumers, and funding sources now also play a critical role (Zuckerman, Kaluzny, and Ricketts, 1995). Under such conditions, managerial functions—both to encourage the development of more efficient managed care delivery systems and to create and monitor contracts and alliances—become more critical to the survival of healthcare organizations.

Table 1 summarizes the shifting institutional regimes surrounding healthcare organizations during the past fifty years and links them to arguments relating to legitimation strate-

Table 1

<b>Historical Eras and Predicted Legitimacy Effects in the Health Care Sector</b>				
Historical era	Centralization of governance	Formalized linkages	Saliency of technical legitimacy	Saliency of managerial legitimacy
Professional dominance (1945–1965)	Low	Low	Low	Low
Federal involvement (1966–1982)	High	Intermediate	High	Intermediate
Managed competition (1983–present)	Intermediate	High	Intermediate	High

gies. In the early professional era, when medical institutions were primarily creatures of their local environments, we would not expect the normative endorsements of either technical or managerial national associations to have great salience for organizational survival. Such assessments have greater salience under more formal arrangements (i.e., greater centralization and/or wider horizontal connections). As funding became more highly centralized and as other sectorwide regulatory structures were introduced during the era of federal involvement, national arbiters of legitimacy exercised increased influence, as would be anticipated by neoinstitutional arguments (e.g., DiMaggio, 1983; Scott and Meyer, 1991). Because governmental agents needed to establish criteria to provide guidelines for their decision making, it is not surprising, given the continued dominance of physicians, that they relied greatly on publicly available indicators of hospital conformity with technical standards. While technical normative endorsements were available throughout the period of our study, we expect that they would assume greater salience when funding decisions became more centralized and public officials needed to provide justification for their allocation of funds to some hospitals rather than to others. More generally:

**Proposition 1:** Normative endorsement of technical staff and programs will be especially salient for the survival of organizations when sector funding decisions are more highly centralized.

Whereas healthcare funding has remained relatively centralized into the third, managed care era, both the increasing demand that medical care be managed (not simply coordinated by physicians but organized so that greater economies can be realized) and the increasing interdependence of healthcare organizations place greater salience on managerial capabilities. As attention is accorded to creating efficient, market-oriented systems, managerial skills become more valued (Alexander and D'Aunno, 1990). The recognition and endorsement of managerial competence is undoubtedly important to all organizations (including nonprofit firms), but we would expect its salience to peak under circumstances emphasizing efficiency and increasing alliance-building as, one after another, organizations attempt to locate "partners for the dance" (Zuckerman, Kaluzny, and Ricketts, 1995).

As with funding decisions, we are considering the effects of relatively formal and public evaluations of managerial competence, not the informal evaluations of appropriate conduct made by exchange partners. A characteristic of increasing interdependence is that linkages among organizations are no longer restricted to localized ties but extend across regional, national, and even international areas. Under such conditions, informal evaluations of the managerial talents of potential alliance partners become increasingly infeasible or costly, and formal endorsements of managerial qualifications become more salient. By relying on the opinions of external professional committees, organizations are able to reduce the monitoring costs that are invariably invoked in long-term associations with other managers who may be opportunistic or incompetent (cf. Williamson, 1985).<sup>7</sup>

**Proposition 2:** Normative endorsement of managerial staff and programs will be more salient for the survival of organizations when

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In the healthcare sector, the problem of monitoring exchange partners is compounded by widely cited issues of adverse selection in evaluating the efficacy and quality of care. Monitoring becomes especially important when downstream clinical integration occurs—such as when home health agencies agree, under fixed-payment contracts, to provide extended care to patients released from hospital facilities (see also Robinson and Casalino, 1996).

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there are increased levels of formalized organizational interdependence.

**Other institutional elements.** Although our principal analyses focus on normative legitimacy at the level of organizational subunits, it is also important to determine how salient this effect is when controlling for other types of legitimacy. As noted above, ecologists have conceptualized legitimacy in cognitive terms, assessing it at the population level using organizational density as a proxy (Carroll and Hannan, 1989). Legitimacy is expected to increase linearly with density, decreasing mortality rates in the process. In the standard density-dependence formulation, density also serves as an antecedent to competitive effects within the organizational population, which are measured in terms of a squared density term (Hannan and Freeman, 1989). Because the hospital population is already a mature population at the beginning of our study in 1945 (i.e., cognitive legitimacy is well-established), we do not conduct a formal test of density dependence. We do, however, control for density effects, since it could be argued that the varying salience of normative legitimacy is a spurious outcome for an organizational population that has achieved cognitive legitimation and now finds that the benefits of density are being outweighed by competition. Under such circumstances, it is possible that the increasing salience of technical or managerial legitimacy could be generated by increased competition. We propose that normative legitimation processes are separable from ecological dynamics (cf. Zucker, 1989; Baum and Oliver, 1992; Baum and Powell, 1995):

**Proposition 3:** The salience of normative legitimation is independent of density-dependent effects (subsuming cognitive legitimation and competition).

**Antecedents of normative legitimacy.** If a multidimensional conception identifies variation in the consequences of legitimacy dimensions, the same may be true of the organizational antecedents that are linked to the acquisition of legitimacy in the first place. Age, market niche, mission, and size have been important considerations in past studies of legitimacy (e.g., Baum and Oliver, 1991). We consider how these four attributes affect the legitimation process, taking into account the possibility of varying determinants for the technical and managerial dimensions. Organizational age has received perhaps the most extensive theoretical treatment. Scholars have long argued that reproducibility is a key ingredient in an organization's ability to account rationally for its actions and that age is likely to increase such reproducibility through conditioning mechanisms (Hannan and Freeman, 1984; Singh, Tucker, and House, 1986). Furthermore, organizations may learn which responses are most appropriate over time, independent of the actual efficacy of those responses, thereby insulating legitimacy somewhat from the organizational senescence that can cause deterioration in real competencies. This is especially true for acute-care accreditation processes, since superficial assessments of organizational structure and procedure by hospital oversight committees are far more common than assessments of patient outcomes (ProPAC, 1989). Established hospitals also gain leverage by influencing accrediting bodies directly, in some cases becoming stan-

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standard-bearers for definitions of normative legitimacy. This leads us to the following prediction:

**Proposition 4:** Both technical and managerial legitimacy will increase with organizational age.

A second factor that may affect the ability of an organization to attract normative legitimacy is the scope of its market niche (see Hannan and Freeman, 1989, for a general discussion of niche scope). Unlike influences such as age, the effects of niche specialism are likely to vary for the managerial and technical forms of legitimacy. The narrower focus of expertise in specialist organizations (e.g., children's or tuberculosis hospitals) will often enhance their technical legitimacy above that of comparable generalist organizations. Not only does specialism lead to distinctive competencies in an objective sense, but external evaluators can be swayed by an organization's strong commitment to a limited set of services or products. After all, folk wisdom regarding the division of technical labor in modern society favors social actors that strive to be best at one function over those that attempt a wide variety of functions.<sup>8</sup>

At the same time, the idiosyncrasies of operating in a specialist niche may handicap organizations trying to conform to standard managerial norms. In stark contrast to the increasing differentiation that has dominated technical domains such as medicine or academia, practical managerial models have tended toward universalism. For example, total quality management (TQM) principles are often held to apply equally well to hospitals as to manufacturing organizations. When general hospitals successfully adapt generic TQM models to healthcare applications, they are readily imitated by other generalists. Specialist hospitals, in contrast, lack similar mimetic opportunities because of the relatively small number of correspondingly situated organizations. Given these considerations regarding the effects of specialism, we propose:

**Proposition 5:** An organization's technical legitimacy increases with its level of niche specialism.

**Proposition 6:** An organization's managerial legitimacy increases with its level of niche generalism.

The match between an organization's mission and the logic of the overarching institutional regime within which it operates is also likely to play an important role in determining its legitimacy. If we take an organization's tax status as providing some reasonable indication of its mission, then we can identify three common types of organizations (and corresponding goals): nonprofits, for-profits, and governmental organizations. The managerial legitimacy of these organizations, in particular, should depend on the logics that pervade their institutional environments. When the dominant institutional logic is one of maximizing returns to investors (as in the era of managed competition for hospitals), then the managerial legitimacy of for-profits will be high. When the dominant institutional logic is one of providing collective goods to the general public (the era of federal involvement), then the managerial legitimacy of governmental organizations will be high. And when the dominant institutional logic is one of building ties with the community (the era of profes-

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In the healthcare context, see the literature on medical specialization (e.g., Lingsley and Darragh, 1985). Naturally, the objective and subjective advantages enjoyed by specialists depend on a fairly clear differentiation of technical domains within an organizational field. If this differentiation is reduced, generalists may enjoy positive knowledge transfers between the technical domains within their purview, and external technical observers may not prize niche specialism as highly.

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sional dominance), then the managerial legitimacy of non-profits will be high:

**Proposition 7:** An organization's managerial legitimacy increases in proportion to the conformity of its mission with that of the overarching institutional regime.

No similar effect is expected for the technical layer in organizations as long as it has been decoupled somewhat from the managerial layer. This has traditionally been true of hospitals, which, as autonomous professional organizations, have tended to exhibit fairly clear boundaries between their technical and managerial task areas (Goss, 1961).

Finally, a number of studies (e.g., Dobbin et al., 1988; Deephouse, 1996) have noted the possible legitimacy benefits afforded by organizational size. According to these arguments, size is often associated with greater cognitive legitimacy among general publics or regulatory endorsement by governmental agencies. The empirical evidence for this suggestion has been mixed. Deephouse (1996), for instance, found no significant increase in regulatory legitimacy due to size and discovered that cognitive legitimacy can actually be reduced by size. Moreover, it is unclear whether the beneficial effects of size could be extended to normative legitimacy, where the legitimating parties (associations of professionals) are less likely to be impressed by size as a proxy for appropriate technical or managerial practice. We therefore refrain from offering any propositions on the impact of size and simply explore its effects. Because organizational size also indirectly taps several other measures of material power and wealth (e.g., slack resources, lobbying influence, etc.) that are otherwise unavailable for the full period of our study, we control for this parameter in evaluating the impact of legitimacy on hospital survival as well.

## METHOD

### Data

Our sample includes all hospital organizations in the nine-county San Francisco Standard Metropolitan Statistical Area (SMSA) that met the following criteria: (a) the hospital is not (exclusively) a psychiatric facility, (b) the hospital is not (exclusively) a drug/alcohol rehabilitation center, (c) the hospital does not solely serve chronic or convalescent patients, and (d) the hospital is not a federal (e.g., military or Veterans' Administration) facility. We developed the exclusionary criteria for those hospital types occupying highly specific institutional environments and therefore lacking comparability with the rest of the population. For example, the survival of federal hospital facilities has often been linked to base closures, post-war demobilization, and political processes—causes that are evidently unique to this subpopulation. By the same token, combining psychiatric, rehabilitation, and convalescent organizations with acute-care hospitals mixes proverbial apples and oranges.

We collected data from several sources, including AHA's *American Hospital Directory* (1945–48), the directory issue of the AHA journal *Hospitals* (1949–71), the *AHA Guide to the Health Care Field* (1972–1990), and the annual hospital disclosure reports from the Office of Statewide Health Planning and Development (OSHPD, 1976–1990).<sup>9</sup> The resulting data

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The AHA directories do not limit their entries to AHA member hospitals, and we could detect no bias against the inclusion of non-AHA hospitals when comparing these records with those of OSHPD.

set features 143 hospital organizations, comprising individual cases of 4,004 spells (organization-years).

### Dependent Variables

The most important variables in our analysis are the measures of managerial and technical legitimacy. The Appendix describes the sources of legitimation we considered and provides examples of how sources affect managerial and technical aspects of legitimacy. To operationalize the latter two constructs, we examined the accreditation of all hospitals from seven associations, with each accreditation operationalized as a binary variable. Aside from those time periods when particular types of accreditation were not implemented, these data cover the full 46-year range. Table 2 lists the accreditations and memberships analyzed. The mean proportion of hospitals receiving approval from the various legitimacy sources are indicated in the table, along with our intuitions regarding the dimensions of legitimacy that are proxied by each source. To determine if these intuitions were appropriate, we conducted an exploratory factor analysis (Kim and Mueller, 1978) for the seven accreditations. To accommodate missing values in our exploratory factor analysis, we replaced those values with the means for the respective accreditation indicators. Thus, the missing JCAHO accreditation values during the 1945–1953 period were replaced with an overall mean for the JCAHO indicator before extracting the legitimacy factors. The same procedure was employed for missing CHA accreditations after 1963. After extracting those factors with eigenvalues greater than 1 (via a principal components method) and applying varimax rotation techniques, we obtained the loadings shown in table 3. Due to the ordinal character of the accreditation indicators, polychoric loadings were also obtained (Lee, Poon, and Bentler, 1994). We found virtually no difference between the resulting factor scores and those computed using standard exploratory factor analysis.

Table 2

#### Hospital Accreditations and Memberships Analyzed

Accreditation or membership	Form of legitimacy	Relevant time period	Mean proportion of hospitals in sample
American Hospital Association (AHA)	Managerial	1945–1990	.741
Blue Cross Association (BCA)	Managerial	1945–1990	.729
California Hospital Association (CHA)	Managerial	1945–1963*	.833
American College of Surgeons (ACS)	Technical	1945–1990	.267
Joint Commission (JCAHO)	Both	1954–1990*	.867
Medical school (LCME)	Technical	1945–1990	.158
Residents (ACGME)	Technical	1945–1990	.316

\* CHA and JCAHO accreditations did not exist over the entire time period.

As anticipated, the accreditations and memberships cluster rather neatly into two groups, one corresponding to the normative legitimacy associated with technical functions, the other corresponding to the normative legitimacy associated with managerial functions. JCAHO accreditation contributes moderately to both dimensions. The only possible exception

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Table 3

	Factor 1 (Technical legitimation)	Factor 2 (Managerial legitimation)
Residents	.8822	-.0332
Medical school	.8094	-.1630
College of Surgeons	.6170	.2306
Joint Commission	.3507	.2636
Blue Cross	-.0642	.7465
AHA	.1449	.6965
CHA	.0396	.6502
Eigenvalue	2.0208	1.5582
Cumulative var. explained	28.9%	51.1%

to our earlier assessment concerns the moderate loading that the College of Surgeons (ACS) exhibits on the managerial factor. This is informative from a historical standpoint, considering that, during the 1950s, the JCAHO assumed responsibility for some of the functions that had earlier been under the purview of the ACS (see Appendix). Sources of legitimacy can clearly target a mixture of managerial and technical functions, as is reflected in the continuum of factor loadings.

The negative values in the table are also noteworthy. They imply that the requirements associated with some forms of membership may conflict with the spirit of certain legitimacy claims. Thus, the quality-of-care and professional training standards of a medical school accreditation may be inimical to the efficiency standards inherent in managerial legitimacy (and vice versa). The strategic tradeoff faced by organizations in trying to secure legitimacy from different sources is not simply one of balancing resources devoted to legitimacy claims but involves substantive considerations as well. Since the two legitimacy factors account for over 50 percent of the variance in the accreditations, it seems appropriate to employ the corresponding factor scores (computed via the Bartlett method) in further analyses.

We also performed a periodized factor analysis to consider temporal changes in the focus and content of accreditation standards over the three institutional eras noted earlier. We found that the most notable change in prescriptions occurred for the JCAHO, which has moved toward a stronger managerial emphasis during the era of market reform (1983–present). Other accreditations were fairly stable until the last few years. Because of pronounced volatility in the content of standards during recent years, we opted to terminate our analysis after 1990.

Aside from managerial and technical legitimacy, which are used as both dependent and independent variables, the propositions reviewed in the theory section call for the operationalization of organizational survival as a dependent variable. Exit events included dissolutions ( $N = 40$ ), acquisitions by other hospitals ( $N = 10$ ), transformations into other organizational forms (e.g., nursing homes or rehab centers) ( $N = 11$ ), and equal-status mergers ( $N = 4$ ). Research by

Longo and Chase (1984) has shown that dissolutions and mergers among hospital organizations tend to be motivated by similar factors; because of this consideration and our relatively small event sample, we opted not to model heterogeneity in exit events. Between 1945 and 1990, 65 hospital exits occurred in the San Francisco SMSA.

### **Independent and Control Variables**

The remaining variables of theoretical interest were hospital age, size, market niche, and ownership status. Age was operationalized as the time since the founding of a hospital. For those organizations undergoing equal-status mergers, the old organizational event histories were coded as exits and the time clock of the new (merged) hospital was set to zero to reflect a potential liability of newness (Amburgey, Kelly, and Barnett, 1993). Hospital size was operationalized in terms of bed capacity, following standard practice in health economics (Feldstein, 1988). We coded market niche so as to distinguish between general hospitals and specialists. The latter category included children's, orthopedic, TB, and maternity hospitals, among others. Hospitals were grouped into three ownership types: for-profits include both corporate and non-corporate (e.g., proprietorship) forms, nonprofits include both religious and non-religious facilities, and government hospitals encompass city, county, district, and state-owned facilities. Since interorganizational ties may also affect both survival and legitimacy, we included a binary variable for multihospital system (MHS) membership.

To control for some environmental effects of health care supply and demand, we obtained additional data from the county-level Area Resource File provided by the U.S. Bureau of Health Professions (1990). As a proxy for health care demand, we used the level of urbanization in the county served by a hospital. Previous research (e.g., Longo and Chase, 1984) has suggested that hospital closures tend to be strongly influenced by location in urban as opposed to rural or suburban areas. Supply-side factors were operationalized in terms of the physician-to-population ratio (number of practicing physicians per thousand residents) in the same county.

A subset of our models incorporated covariates for organizational density and density squared to reflect the standard ecological treatment of legitimation and competition (Hannan and Freeman, 1989). For the sake of consistency with standard density-dependence specifications, we used a single density measure, operationalized at the level of the SMSA, for all hospitals. This operationalization avoids the complexities of multilevel ecological specifications (Hannan et al., 1995) but also does not capture some of the nuances of local market competition or nonlocal legitimation dynamics.

Summary statistics and correlations for all variables appear in table 4. Since the legitimacy factors have no inherent measurement scale, they have been normalized as z-scores (with a mean of 0 and a standard deviation of 1).

### **Estimation Methods**

Left-truncation of the data set (i.e., a lack of complete event histories before 1945) led us to observe some precautions in

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Table 4

Descriptive Statistics and Bivariate Correlations (Total N = 4004)													
Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11
Organizational													
1. Age (years)	41.67	31.13											
2. Size (beds)	186.26	162.20	.44										
3. Niche (specialist = 1)	.11	.31	-.06	-.16									
4. For-profit ownership	.18	.38	-.24	-.34	-.04								
5. Government ownership	.23	.42	.01	.32	.03	-.26							
6. System membership	.29	.46	-.03	-.02	-.12	-.04	-.23						
7. Technical legitimacy	0	1	.51	.58	-.04	-.32	.07	.05					
8. Managerial legitimacy	0	1	.04	-.08	-.27	-.03	-.21	-.08	-.00				
Environmental													
9. Organizational density	97.22	8.95	-.03	.00	-.11	.02	-.03	.04	-.08	.03			
10. Physician-population ratio	2.41	1.34	.45	.26	.03	-.15	-.20	.07	.41	.08	.12		
11. Urbanization	.92	.15	.08	.15	.13	-.15	-.13	-.03	.20	.04	.12	.31	
Organizational mortality	.02	.13	-.02	-.05	.05	.06	-.03	-.05	-.06	-.07	.03	.01	.02

specifying the time-parametric form of the hospital survivor models (Tuma and Hannan, 1984). Nonparametric exploratory analyses were conducted to obtain Nelson-Aalen estimates of the hazard rate over time. Variations in these hazard rates closely matched the time periods noted earlier (1945–1965, 1966–1982, 1983–1990). Since piecewise exponential survivor models can readily capture these variations and produce unbiased results even when left-truncation is present (Guo, 1993), we opted for the following functional form for transition rates ( $r$ ):

$$r(t) = \exp\{\gamma_n + \mathbf{A}\alpha_n + \mathbf{B}\beta\} \quad \text{if } t \in n \quad (1)$$

where  $\gamma_n$  is a constant coefficient associated with the  $n$ th time period,  $\mathbf{A}$  is a vector of covariates (also associated with the  $n$ th period),  $\alpha_n$  is the corresponding vector of coefficients,  $\mathbf{B}$  is a vector of time-stationary covariates, and  $\beta$  is the coefficient vector corresponding to  $\mathbf{B}$ .

Econometric techniques were applied to evaluate the effects of organizational characteristics on managerial and technical legitimacy over time. A pooled Durbin-Watson test revealed that legitimacy scores in the hospital time series suffered from significant autocorrelation (on average,  $d = .21$  for technical legitimacy;  $d = .40$  for managerial legitimacy). To accommodate the autocorrelation, legitimation was modeled as a first-order autoregression, or AR(1), process (see Sayrs, 1989). Given that  $t$  indexes each year, the disturbances for this model can be represented as:

$$\varepsilon_t = \rho\varepsilon_{t-1} + u_t \quad (2)$$

with  $u_t \sim N(0, \sigma_u^2)$ . Estimates for the autocorrelation term  $\rho$  ( $\rho$ ) were derived through a feasible generalized least squares (FGLS) procedure; a Prais-Winsten estimator was applied (Greene, 1997). Concerns about heteroskedasticity also led us to test for unequal variances in the disturbance term. Using graphical inspection of residuals, we found no significant evidence of heteroskedasticity for either technical or managerial legitimation.

## RESULTS

### Survivor Analysis

We have proposed that the salience of different forms of normative legitimacy will vary depending on the institutional



characteristics of an organizational sector. In particular, the extent of sectoral centralization and formal linkages are likely to dictate how managerial and technical legitimacy may enhance organizational survival. Using Rohwer's (1994) Transition Data Analysis (TDA) program, we tested a series of survivor models investigating this proposition. Table 5 shows the results.

Table 5

<b>Effects of Normative Legitimacy on Exits from Hospital Population, 1945–1990*</b>				
Variable	Model 1	Model 2	Model 3	Model 4
Intercept(s)	-3.298*** (1.138)	-5.329*** (1.253)	-	-
1945–1965	-	-	-5.310*** (1.351)	20.961 (18.314)
1966–1982	-	-	-4.403*** (1.366)	22.145 (18.547)
1983–1990	-	-	-3.563*** (1.370)	22.957 (18.508)
Age	.002 (.005)	.007* (.005)	.008* (.005)	.008* (.005)
Size (log beds)	-.523*** (.148)	-.207 (.164)	-.179 (.157)	-.165 (.158)
For-profit ownership	.509* (.316)	.394* (.306)	.254 (.318)	.264 (.320)
Government ownership	-.022 (.410)	-.399 (.426)	-.896** (.441)	-.849** (.443)
System member	-.871** (.389)	-.950*** (.391)	-1.596*** (.411)	-1.538*** (.416)
Physician ratio	.136 (.101)	.230** (.103)	.051 (.111)	.074 (.112)
Urbanization	1.307 (1.044)	1.250 (1.063)	.863 (1.138)	.966 (1.131)
Technical legitimacy	-	-.694*** (.218)	-	-
1945–1965	-	-	-.560* (.390)	-.685* (.426)
1966–1982	-	-	-.821*** (.313)	-.801*** (.308)
1983–1990	-	-	-.695** (.323)	-.725** (.324)
Managerial legitimacy	-	-.475*** (.105)	-	-
1945–1965	-	-	-.566*** (.168)	-.561*** (.170)
1966–1982	-	-	-.772*** (.208)	-.739*** (.209)
1983–1990	-	-	-1.008*** (.361)	-.999*** (.362)
Organizational density	-	-	-	-.538* (.374)
Density <sup>2</sup> /1000	-	-	-	2.688* (1.846)
Log likelihood	-309.58	-294.75	-282.02	-281.00
Degrees of freedom	8	10	16	18

\*  $p < .10$ ; \*\*  $p < .05$ ; \*\*\*  $p < .01$  (one-tailed tests).

\* Standard errors are in parentheses. All models include 4,004 organization-year spells.

Model 1 represents a base line specification of hospital mortality without any legitimacy effects. As determined in numerous studies of organizational mortality and the liability of smallness (e.g., Barron, West, and Hannan, 1994; Hannan and Freeman, 1989), larger organizations experience significantly lower failure rates than small ones. The other notable effects in the baseline specification are for-profit status and

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system membership. For-profit status introduces a marginal ( $p < .10$ ) increase in exit rates, possibly associated with a relative lack of community embeddedness among these organizations when compared with nonprofits (see Baum and Oliver, 1992). By contrast, hospitals that are members of multiorganizational systems had markedly lower rates of exit than independent hospitals. System linkages can provide both economic and non-economic (e.g., reputational) benefits to hospitals that serve to insulate them from environmental uncertainty and turbulence (Dranove and Shanley, 1995).

A second survivor model adds technical and managerial legitimacy, improving model fit substantially (likelihood-ratio  $\chi^2 = 29.66$ ,  $\Delta$  d.f. = 2,  $p < .001$ ). Both forms of legitimacy play an important role in decreasing organizational mortality. In the case of technical legitimacy, top-rated hospitals such as Stanford Medical Center and the University of California at San Francisco (UCSF)—which typically receive factor scores between 2.0 and 2.4—are estimated to improve their survival chances on the order of five times that of hospitals with merely “average” technical legitimacy. The effect is slightly less pronounced for managerial legitimacy, where top-rated hospitals improve their survival chances on the order of twice that of their more average counterparts. The effect of organizational size drops out in the second model once the impact of technical and managerial legitimacy is controlled for. Insofar as size is an antecedent of legitimacy at the organizational level (a proposition that we examine in the next set of analyses), the liability of smallness may indicate the presence of unmeasured legitimacy effects.

In our third model specification, we allow the effects of the legitimacy coefficients to vary across the three time periods associated with distinct institutional regimes. The results show some interesting differences in the effects. Technical legitimacy is only marginally associated with improved hospital survival during the period of professional dominance (1945–1965). During the same era, the magnitude of the coefficient for managerial legitimacy is also modest (as predicted in table 1), though statistically significant. The era of federal involvement (1966–1982) represents a dramatically different institutional regime, with a substantial degree of centralization and an increasing number of ties among sector participants. This leads to a high salience of technical legitimacy, as expected in proposition 1. The magnitude of the coefficient for managerial legitimacy is also slightly greater in this period than it was in the era of professional dominance. During the period of managed competition, the healthcare sector again experiences decentralization, albeit with widespread provider linkages and exchange relations. Under these institutional conditions, the magnitude of the managerial legitimacy coefficient is the largest, suggesting the greatest contribution to organizational survival (proposition 2), while technical legitimacy has an intermediate effect. The likelihood-ratio  $\chi^2$  of model 3 versus model 2 is significant at the  $p < .001$  level (likelihood-ratio  $\chi^2 = 25.46$ ,  $\Delta$  d.f. = 6), verifying the improved fit of the model when previous equality constraints on period parameters are removed. Although these results are encouraging, they must be viewed as preliminary rather than definitive. The size of the standard errors

on the time-varying estimates prevent us from drawing confidence intervals that would clearly distinguish the impact of each institutional regime (in fact, a very large event sample may be required to obtain such intervals).

The results of the fourth model show that the estimated first- and second-order density effects are consistent with the predictions of organizational ecology, i.e., form-level cognitive legitimacy decreases the rate of hospital exits, while competitive dynamics (the squared density term) increase exit rates. The overall improvement in model fit (likelihood-ratio  $\chi^2 = 2.04$ ,  $\Delta$  d.f. = 2), though, is not significant. Also, the inclusion of these controls does not undermine the salience of the normative legitimacy factors, which maintain a periodized pattern that is very similar to that displayed in model 3. Consequently, there appears to be support for proposition 3, that different types of legitimacy operating at different levels confer distinct and separable benefits to organizational actors.

### **Antecedents of Normative Legitimacy**

We next examined organization-level characteristics affecting legitimacy with Greene's (1992) LIMDEP program. Base line specifications (models 1 and 3) were ahistorical, excluding period-specific effects; more sophisticated models (2 and 4) incorporated interaction terms between periods and forms of hospital ownership. Table 6 reports the results.

Organizational age is one significant predictor of technical legitimacy (model 1). As suggested by proposition 4, recognition of the appropriateness of a hospital's technical practices is related positively to its age. Given our factor scale, we expect a facility that has existed for a century to exhibit a technical legitimacy score that is 0.3 standard deviations above that of a newly founded facility. In turn, this can be seen to reduce the mortality of the older facility by 16 percent when compared with the new one (cf. table 5). The significance of this variable is reduced in model 2, however, when period effects are introduced. This seems to be largely due to the fact that the periods pick up much of the systematic variation in age, with the mean hospital age during the first era being 37.8 years and the mean age during the last era being 52.8 years. Greater hospital size is also associated with significant increases in technical legitimacy. This is a reasonable result in the hospital industry, where size may often be seen as a proxy of an organization's ability to acquire the latest diagnostic and medical resources for the conduct of appropriate acute-care procedures. We are uncertain, however, if this particular finding can be generalized to other sectors.

While the effect of niche specialism on technical legitimacy is positive, supporting proposition 5, a large standard error prevents any conclusions from being drawn in this regard. A somewhat unexpected result is the significant influence of ownership characteristics, with for-profit ownership causing a notable decrease in technical legitimacy and government ownership causing an increase. The first effect disappears in the periodized model (2), but it nevertheless suggests that the decoupling of technical activities from ownership in autonomous professional organizations may not be as strong as it once was. As a result, the legitimacy of technical activi-

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Table 6

### Hospital Characteristics Affecting Legitimacy, 1945–1990\*

Variable	Technical legitimacy		Managerial legitimacy	
	Model 1	Model 2	Model 3	Model 4
Intercept	–1.255*** (.126)	–1.175*** (.130)	.222* (.166)	.284** (.168)
Period 2 (1966–1982)†	–	.010 (.040)	–	.141*** (.059)
Period 3 (1983–1990)	–	.152*** (.049)	–	.397*** (.071)
Age × 100	.313*** (.082)	.127* (.098)	.525*** (.107)	.118 (.117)
Size (log beds)	.225*** (.024)	.219*** (.024)	–.058** (.034)	–.058** (.034)
Niche (specialist = 1)	.037 (.055)	.036 (.055)	–.770*** (.079)	–.744*** (.079)
For-profit ownership‡	–.103*** (.040)	–.062 (.052)	–.135** (.060)	–.240*** (.078)
1966–1982	–	–.057 (.066)	–	.131* (.100)
1983–1990	–	–.098 (.091)	–	.454*** (.139)
Government ownership‡	.125*** (.052)	.119** (.061)	–.296*** (.071)	–.380*** (.087)
1966–1982	–	.040 (.073)	–	.200** (.108)
1983–1990	–	.028 (.085)	–	.142 (.129)
System member	.045 (.038)	.030 (.039)	.069 (.055)	–.027 (.056)
Rho	.895*** (.007)	.901*** (.007)	.791*** (.010)	.794*** (.010)
Log likelihood	–4522.00	–4508.86	–5340.97	–5286.04
Degrees of freedom	8	14	8	14

\*  $p < .10$ ; \*\*  $p < .05$ ; \*\*\*  $p < .01$  (one-tailed tests).

\* Standard errors are in parentheses. All models include 4,004 organization-year spells.

† The omitted period is that of professional dominance (1945–1965).

‡ The omitted ownership category is nonprofit.

ties may be subject to a greater influence from decisions made by a hospital's owners or board of trustees than our earlier expectations had suggested.

The antecedents of managerial legitimacy are notably different from those of technical legitimacy (see models 3 and 4). Only organizational age seems to remain consistent across both forms of legitimacy, once again exercising a positive influence, albeit, a statistically insignificant one in model 4. Niche specialists in the hospital industry have substantially lower managerial legitimacy than general hospitals. Following the logic of proposition 6, this may result from the difficulty of adapting specialized bureaucracies to the standard administrative norms of the hospital industry. Also in contrast to technical legitimacy, we find that larger hospitals tend to have lower managerial legitimacy scores than smaller ones. While large hospitals have the resources to attract technical approbation, they may also carry the burden of cumbersome administrative structures that can be difficult to adapt to new managerial norms and standards.

Organizational ownership also has some interesting effects on managerial legitimacy, which are best recognized in the specification with period interaction terms (model 4). For-

profit ownership significantly decreases managerial legitimacy during the period of professional autonomy when compared with nonprofit ownership. As noted previously, the logic of this first institutional regime is one that explicitly rejects profit-maximizing and economizing practices, encouraging a voluntaristic orientation toward health services provision. The finding thus provides support for proposition 7, that organizations whose missions are consonant with the theme of the overarching regime (nonprofits in this case) increase their managerial legitimacy over those organizations whose missions are at odds with the regime (for-profits in the first institutional era). An instructive contrast is provided by examining the equivalent coefficient during the period of market competition. Here, for-profit ownership improves managerial legitimacy by 0.214 standard deviations (0.454 – 0.240) over nonprofit ownership. This appears to be a direct result of the improved match between the mission of for-profit hospitals and the logic of market competition, again consistent with proposition 7.

Government ownership also shows time-varying legitimacy effects. The managerial legitimacy of government facilities is significantly lower than nonprofits during the era of professional autonomy. The expected legitimacy gains made during the period of federal involvement support proposition 7 but are not quite comparable in magnitude or statistical significance ( $p < .05$ ) to the corresponding for-profit estimates in the third era. Because we have excluded federal hospitals from our sample, however, we do not have an ownership category that is a precise counterpart to the federal regime.

## DISCUSSION

A multidimensional model of legitimacy offers both theoretical and empirical benefits to organizational and, more broadly, social scientific inquiry. Much of the diversity in legitimation processes can be captured by closer attentiveness to the varying sources of legitimacy, the levels at which they operate, the institutional elements that they target, and the environments that contextualize their effects. Armed with these distinctions, researchers can advance beyond simple, unitary conceptions of legitimacy to address the trade-offs faced by social actors in seeking public approval for their actions from diverse constituencies.

We have demonstrated how an empirical framework might be constructed around some of these distinctions. By considering the separate accreditation processes associated with the managerial and technical layers of hospital organizations, this study has identified variation in both the benefits and antecedents associated with organizational legitimacy. Our analysis suggests that the salience of managerial and technical forms of normative legitimacy can fluctuate across different institutional regimes. Hospitals whose managerial structures achieve a high degree of legitimacy may enhance their survival chances most significantly in regimes that are characterized by the presence of extensive formalized relations. In contrast, hospitals that enjoy a high degree of technical legitimacy may enhance their survival chances most significantly in regimes characterized by centralized regulatory and funding controls. While our findings are consistent

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with these predictions, more extensive study designs, incorporating larger samples and cross-national or cross-sectoral analysis, are required to fully evaluate the relation between regime characteristics and the salience of diverse bases of normative legitimacy.

The results also suggest that antecedents of legitimacy vary, depending on the nature of the institutional environment as well as the organizational function that is being legitimated. The mission of an organization, as reflected in its ownership characteristics, is particularly important for attracting managerial legitimacy. Its effects depend primarily, as Parsons once suggested, on the match between the mission and the logic of the overarching institutional regime within which an organization operates. In the healthcare sector, in particular, we found that the shift in dominant logic from one of providing collective goods (e.g., the Great Society programs of the 1960s) to one of profit maximization has had a major influence on the managerial legitimacy of hospitals with different ownership characteristics. The resulting legitimacy crisis of the nonprofit hospital in the era of managed competition raises important policy questions about confidence in eleemosynary healthcare organizations.

The analysis has shown that the degree of niche specialism markedly affects the legitimation of managerial structures. We found that general hospitals matched their managerial structures to normative expectations more readily than did specialized hospital forms. With the continuing drive toward universal administrative protocols, as typified by TQM and ISO-9000 standards, there will be increased pressures for specialists to join integrated provider organizations to maintain their managerial legitimacy. Whether such legitimacy measures real administrative advantages remains a separate issue (cf. Westphal, Gulati, and Shortell, 1997). By coupling analyses of legitimacy with studies of efficiency or strategic adaptation (e.g., Ruef's 1997 study of hospital service portfolio changes), it may be possible to separate true differences in managerial efficacy among generalists and specialists from the socially constructed aspects of accreditation.

Methodological limitations in the present analysis can also be addressed in future research. We have already noted that larger event samples are desirable in considering period-specific legitimacy effects. More direct measures of variables such as centralization are also useful and may eliminate the need for broad-based period characterizations. Our discussion of the impact of age on legitimacy has ignored the possible relevance of relative inertia as it affects organizational legitimation—e.g., the fact that an older hospital that is highly legitimate in one period may be less so in another because of difficulties in adapting to new standards of technical or managerial excellence. The overlapping of legitimation sources is another issue that can benefit from further consideration. What pressures exist for sources to differentiate or combine the targets of their evaluation efforts? What accounts for the historical pattern of sponsorships between legitimacy sources? These questions must await a separate treatment.

A final comment is in order concerning the generalizability of our findings. Hospitals are somewhat atypical among organi-

zations in confronting so many kinds of formalized accreditation sources. While all organizations require some level of legitimacy as a condition of their viability, and all must confront and relate to varied sources of legitimacy, few face as exacting an evaluation as hospitals currently do. Nevertheless, the last decade has witnessed the rapid spread of formal technical and managerial standards (e.g., ISO certification), even in those sectors that have not traditionally been subject to strong institutional demands. Although the loss of accreditation or certification in other sectors may not introduce the crisis that it can for hospitals, it is worth noting that formal normative approval clearly conveys important strategic advantages to many other organizational types. As Oliver (1991) and Suchman (1995) have proposed and Elsbach and Sutton (1992) have demonstrated, organizations are not simply passive recipients in legitimation processes but work actively to influence and manipulate the normative assessments they receive from their multiple audiences.

Strategic considerations also call attention to an alternative interpretation of our findings that merits further consideration. We have emphasized a structuralist view of legitimation, in which aspects of organizational structure are tied directly to the capacity of a hospital to attract technical and managerial approbation. Because processes of accreditation can be both extremely time consuming and costly, organizational strategizing inevitably plays an important role as a mediating variable in this equation. The inverse relation between niche specialism and managerial legitimacy, for instance, could be attributed to the greater capability of generalists to conform to standard managerial norms or to the greater benefits that generalists expect to derive from such approbation within a utilitarian framework. Future analyses should attempt to parse the roles played by structure and strategy in such legitimation dynamics.

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## APPENDIX: Legitimation Sources

In this appendix, we provide three examples of hospital legitimation sources in some detail, emphasizing the American Hospital Association, the Accreditation Council for Graduate Medical Education, and the Joint Commission on the Accreditation of Healthcare Organizations. We also provide a brief overview of the remaining associations represented in our sample.

A legitimation source focusing primarily on managerial aspects is the American Hospital Association (AHA). The AHA (initially called the Association of Hospital Superintendents) was formed in 1899, although its institutional influence as a trade organization did not come into full bloom until the post-World-War-II period (Starr, 1982). A content analysis of 93 AHA standards, released to member hospitals between 1974 and 1987, provides some insight into the norms invoked by the association. These standards are classified into five groups by the AHA, arranged in a hierarchy from the most general to the most specific prescriptions, including policy strategies, policies, policies and statements, guidelines, and technical advisories. Policy strategies represent official positions taken by the AHA in a broadly defined arena of public policy (e.g., reducing increases in national healthcare expenditures); they indicate lobbying activities that will be undertaken by the AHA on behalf of its member hospitals, as opposed to activities undertaken by the hospitals themselves, and therefore only affect internal organizational activities of hospitals indirectly. Nevertheless, policy strategies serve as important signals of hospital interests within the institutional environment. Policies and statements incorporate advice on general practices that should be pursued by acute-care facilities, typically within their institutional components. For instance, a 1969 AHA policy on the financial requirements of health care institutions and services (revised in 1977 and 1979) indicates that "philanthropy should be encouraged as an important source of funding." Guidelines and technical advisories offer more specific recommendations, typically aimed at the managerial component of the hospital. A typical example is a 1979 advisory on departmental management contracts, which outlines steps for deciding whether to contract in the first place, as well as steps for evaluating contract performance. Of 60 AHA guidelines and advisories issued between 1974 and 1987, the great majority (over 50) are oriented toward managerial issues (including finance, governance and organiza-



tion, human resources, etc.), with the small remainder addressing medical matters.

A more technically oriented accrediting body is the Accreditation Council for Graduate Medical Education. The ACGME is sponsored by five other organizations (including the AMA, the Board of Medical Specialties, and the AHA) for the purpose of accrediting hospital residency programs. A review of its principal standards document (cf. AMA, 1995) reveals significant differences from the types of norms fostered by the AHA's prescriptions to facility administrators. While the ACGME guidelines still include a number of managerial standards concerning educational administration and resident eligibility and selection, a great many of the standards are devoted to more technical issues. These medical standards are provided by residency review committees corresponding to over two dozen medical specialties, ranging from ophthalmology to medical genetics. In contrast to the AHA, the ACGME does not produce an equivalent policy strategy document; lobbying efforts within the institutional environment confronting medical practitioners are undertaken by the AMA instead.

Finally, an example of a source providing normative legitimation to both the managerial and technical aspects of hospitals is the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO), a conjoint accrediting agency operated under the auspices of the American College of Surgeons (ACS), the American College of Physicians, the American Medical Association, and the American Hospital Association. The JCAHO was formally created in 1952 (then called the Joint Commission on the Accreditation of Hospital Organizations), taking over some of the review functions initiated early in the century by the ACS (Somers, 1969). The purview of this source is quite broad, including administrative organization (e.g., governing board responsibilities, physical plant and services, record keeping and support functions) as well as nursing and medical staff requirements. Recently, for example, the JCAHO has required hospitals to adopt TQM structures and procedures to provide "documented evidence of certain quality improvement practices" (Westphal, Gulati, and Shortell, 1997: 371).

The other legitimation sources that we considered generate similar technical or managerial norms, though their purview is often more limited than that of the AHA, ACGME, or JCAHO. In the case of Blue Cross Association (BCA) membership, for instance, standards of cost accountability are imposed on hospitals via contractual relationships with Blue Cross medical plans (Anderson, 1975). The more technical American College of Surgeons (ACS) provides approval of clinical cancer programs (cf. the ACS *Manual for Cancer Programs*). The functions of the California Hospital Association (CHA) and Liaison Committee for Medical Education (LCME) are similar to those of the AHA and ACGME, respectively, differing mainly in terms of geographic scope and level of medical education.

The seven sources of legitimation are not independent from one another but, rather, are interrelated through a complex web of historical events and sponsorships. For example, the Blue Cross concept of hospital prepayment plans was endorsed by the American Hospital Association in 1933 and, in 1941, regional Blue Cross plans gained institutional membership in the AHA (Anderson, 1975). At the same time, the overlap between the norms represented by each of the sources is partial at best, with divisive tensions characterizing many of the interrelations—e.g., the AHA leadership of the 1940s and '50s was quite distrustful of Blue Cross methods despite official "endorsement" (Anderson, 1975: 45–46). Rather than consider the associations in isolation or lump them into homogeneous groups, we employ a factor analysis to tease out the latent dimensions that characterize their legitimating functions.