Professional Dynamics and the Changing Nature of Medical Work*

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The organization and delivery of health care in the United States is undergoing significant social, organizational, economic, political, and cultural changes with important implications for the future of medicine as a profession. This essay will draw upon some of these changes and briefly review major sociological writings on the nature of medicine's professional status to examine the nature of professional dynamics in a changing environment. To this end, we focus on the nature of medical work and how this work impacts on and is impacted by medicine's own internal differentiation and the presence of contested domains at medicine's periphery. We trace this dynamic through a number of issues including the multidimensional nature of medical work, the role of elites in that work, and how changes in the terms and conditions of work can exert changes at medicine's technical core. We close with some thoughts on the relationship of public policy to medicine's professional status, the role health policy might take in shaping a new professional status, the role health policy might take in shaping a new professional ethnic for medicine, and the role sociologists might play in this process.

The rise of medicine to the status of a dominant profession in the United States has been fostered by two compatriot trends. One was the emergence of a more autonomous state, ushered in by the rise of populism in the 1890s, the peaking of laissez-faire capitalism, and the ascendancy of the notion that government had a proactive role to play in advancing the general welfare and health of the populace. The second trend was the continued evolution of a capitalistically based, corporate-industrial presence, fueled by industrial expansion and a continuing industrial revolution, and holding important implications for the rationalization and reorganization of work (Zhou 1993). As unskilled workers turned to unions to protect their interests, more elite occupational groups turned to state legislatures to establish their interests through practice laws and licensure provisions (Zhou 1993).

Medicine was uniquely positioned to take advantage of these trends. Having formed its national association in 1847, nearly a half century earlier, the decision to evolve as a professional entity rather than a trade union placed it in a regulatory environment that favored professional rather than business interests. Although it would be incorrect to frame the state as nothing more than a legislative handmaiden to medicine's monopolistic interests, the historical record makes clear that during the first half of the twentieth century medicine did acquire an extraordinary degree of cultural legitimacy along with extensive legal protections and legislatively based entitlements (Brown 1979; Champion 1984; Starr 1982; Stevens 1971). In

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turn, medicine was able to resist corporate efforts to employ physicians directly (as "company doctors") or to organize them into prepaid group practices that would provide services under contract to corporations and large business enterprises (Light 1991).

Medicine's powers and prestige reached their zenith in the 1950s and 1960s, a period widely characterized as the "Golden Age of Medicine." The watershed would come in 1965 with the passage of Medicare and Medicaid legislation. Evidence of medicine's continued influence could be found with the inclusion of Section 1801 of the Medicare Act. This section specified that the federal government would not exercise "supervision or control over the manner in which medical care services were provided . . . or over the administration or operation of any . . . institution, agency, or person providing health services" (Thompson 1981). On the other hand, by mandating (via economic incentives) the delivery of medical services to two previously disenfranchised groups (the elderly and the poor), the state clearly announced that it considered itself a legitimate source of social welfare legislation in the arena of health care. Over the next two decades, the rise in expenditures remained unchecked by various remedial strategies such as certificates of need and peer review organizations, government, and private payers. This lead to a "buyers revolt" (Light 1988), accompanied by renewed efforts to control the terms, conditions, and the content of medical work.

As the state struggled to devise effective mechanisms for controlling health care costs, a long-dormant corporate presence began to exert its own presence—and interests (Relman 1980, 1987, 1991; Starr 1982). Traditional distinctions between payers and providers (e.g., insurance companies versus hospital and clinics) became blurred as both sides moved to horizontally expand by purchasing businesses in the other's domain. The political defeat of the Clinton Administration's health reform bill in 1994 served only to highlight how much of the reorganization of health care was taking place within the private as opposed to the public sector.

The changes being wrought within this fluid environment of shifting alliances and organizational arrangements are staggering. In less than a generation of providers, the solo practitioner has given way to the group practice, which itself has become buried under a mosaic of practice networks, institutional arrangements, and organizational schemes (e.g., health maintenance organizations [HMOs], independent practice arrangements [IPAs], preferred provider organizations [PPOs], third party administrators [TPAs], and integrated service networks [ISNs]). Managed care arrangements and practice networks are being supplemented by practice protocols, treatment guidelines, and a litany of requirements for prior authorization (Kelly and Toepp 1994). Patterns of practice, once arranged informally around loose networks of individual providers, are becoming more routinized (Luce, Bindman, and Lee 1994). Assessments of quality, once privately conducted almost exclusively by peers and in a ritualistic and cordial fashion (Bosk 1980; Freidson 1975; Millman 1977), have been replaced by, among other things, physician "report cards" and related assessment tools developed and deployed by employers and payers to measure—and control—provider behavior (Brouillette 1991; Winslow 1994). Billing and claims records, long the chief primer of medicine's revenue pump, are being turned against medicine by government and corporate payers in efforts to limit and manage the practices and practice patterns of physicians (Luce et al. 1994). In turn, national organizations collect and disseminate information on hospital mortality and morbidity rates, physician performance indicators, and even patients who have filed malpractice claims (Irving 1993; Maier 1994; Millenson 1993).

In the following pages, we first present an overview of sociological thinking on the nature of professions and professional dynamics. We then briefly outline some of the major forces that are shaping medicine currently both from within and at medicine's periphery. In both instances, our focus is on how these dynamics influence the content and control of medical work. We follow this with a more detailed examination of two phenomena that reflect the intersection and interaction of external and internal forces: (1) the rise of administrative and technical elites within medicine (as an example of a source of internal tension); and (2) the emergence of medical effectiveness research and practice protocols (as an example of externally based forces). Once again, we focus on examining these trends in terms of their impact on the core of medicine's professional identity . . . its control over the content of its work. Given our emphasis on the interdependent nature of state-professional-corporate

relations, including the fact that the state has emerged as a major sponsor of effectiveness research and as a producer of practice guidelines, we turn to some observations on the role played by health policy in the process of professionalism and make some suggestions for how policymakers might be informed by a sociology-of-professions perspective. We close with some recommendations for medical sociology itself, including conceptual issues that need to be explored and research that needs to be undertaken, all with the hope of improving our understanding of professional work and the role that work plays in addressing public health problems.

Across all of these issues, we seek to maintain an analytic framework that locates the evolving nature of medical work within the symbiotic relationship that exists between medicine's own internal dynamics and the shifting tensions among countervailing interests marshaled at the boundaries of medicine's professional domain. The explicit recognition that medicine's trajectory of professionalism is shaped interdependently by dynamics both internal to the profession itself as well as external (e.g., such as major institutions and sectors of society including the state, the public, related occupational groups, and corporate interests) serves as the cornerstone of this essay.

Although it has become increasingly clear that data from cross-national studies are critical to any concerted understanding of professionalism (Hafferty and McKinlay 1993; Hafferty 1995), we confine our focus in this essay primarily to the case of the United States. Finally, we have sought deliberately to be provocative in organizing our arguments, drawing our conclusions, and advancing our recommendations. We prefer forceful counterarguments to quiet acceptance.

SOCIOLOGICAL OBSERVATIONS ON THE NATURE OF PROFESSIONS

Sociological writings on professions have tended to parallel the evolving relationship between state, professional, and corporate interests. Weber's concern that the rise of capitalism, along with the forces of rationalism and bureaucratization, would result in an iron cage of servitude (Weber 1952, 1968) was paralleled by Durkheim's hope that professions would function to organize scientific and expert knowledge into associations of colleagues, forming a "moral authority" that would serve as a buffer between the public and the onslaught of industrialization (Durkheim 1933:26).

This notion of professions as experts in the service of public interests became part of the Progressive Movement, the ideas of which were reflected in E.A. Ross' *Social Control: A Survey of the Foundations of Order* (1901). Physicians were perceived as an important occupational class who sought to advance public welfare by strengthening licensing laws, by opposing commercialism in medicine, by driving out proprietary medical schools, and by attacking the hucksterism of the nostrum industry (Light 1989). Early sociological writing on the professions (e.g., Carr-Saunders by himself [1928] and with Wilson [1933] chronicled the emergence of a middle-class fashion and zeal for professional work. As was true for Durkheim and many other distinguished sociologists of the time, Carr-Saunders regarded the rise of professions as an important source of standards, service, and moral authority in the modern world of corporations and markets (Bledstein 1976). Less well-appreciated is the degree to which this drive also constituted a more silent war against emergent forms of corporately organized and competitively structured health care (Light 1989).

This idea of professional life as the embodiment of service reached its most formal apogee when Parsons (1939) characterized professional work as universalistic yet functionally specific, rational, and altruistic. Reflecting the tenor of the postwar period, Parsons (1951, 1954) formalized the earlier writings on the nature of professional work into his typology of pattern variables and into a normative view of doctoring that presented the profession's image of ideal practice as sociological reality. Parsons seemed relatively innocent of the idea that the restraint of self-interest in a professional guild is the key to its economic, cultural, and institutional power and therefore best serves the collective interests of its members. No attention was given to the ways in which the enlightened paternalism of doctoring, which Parsons extolled, resulted in part from cultivating ignorance, helplessness, and a sense of incompetence in patients as techniques of social control (Waitzkin and Waterman 1974; Light 1979).

The economic, cultural, and institutional power of medicine grew apace during the 1950s and 1960s. By the late 1960s, accusations of greed, hubris, fragmentation, and insensitivity to patients had proliferated and led to seminal works by Freidson on professional dominance (1968, 1970a, 1970b). A key element in Freidson's early writings was his recognition that the interpersonal basis of professional authority is weak and unstable. Parsons may have emphasized that authority emanates from technical knowledge, but that locus alone leaves professionals with little more than their powers of persuasion. To solve this problem, professions seek to institutionalize their authority. They use licensure and public identity to attract clients suffering from a persistent problem. They gain control over valued services and facilities, like prescription drugs and hospitals and medical excuses from work. Related observations on the efforts of professional groups to establish a market shelter and to gain status, privilege, and legal protections at the cost of a service orientation came with the writings of Johnson (1972) and Larson (1977).

The print was hardly dry on Freidson's conclusions about medicine's status as a dominant profession, balanced as they were by his critiques of medicine's loss of a service ethic, when other sociologists' pronouncements of medicine's fall from professional grace began to surface. Principal among these critiques were Haug's thesis of "deprofessionalization," (1973, 1975, 1988; see also Haug and Lavin 1978) and a related but theoretically distinct concept of "proletarianization" advanced by McKinlay (1973, 1977, 1988; see also McKinlay and Arches 1985; McKinlay and Stoeckle 1988). Freidson responded throughout the 1980s with a series of rebuttals (see Freidson 1983, 1984, 1985, 1986a, 1986b, 1987, 1989), in which he dismissed evidence of the profession's weakening grip and affirmed the continued dominance of the profession in clinical affairs. Although proponents of all three of these perspectives have retreated somewhat from their earlier arguments (Hafferty and McKinlay 1993), and while the accelerating rise of a corporate presence in medicine and the computer-facilitated monitoring of physician work appear to bolster the arguments of McKinlay and Haug respectively, most observers continue to conclude that medicine is retaining its professional dominance both in this country and abroad (Hafferty 1988, 1995; Hafferty and McKinlay 1993; Hafferty and Salloway 1993; Mechanic 1991).

Most recently, two interrelated trends have contributed appreciably to our understanding of professional dynamics. The first, more empirical in nature, is the growth in the number of cross-national examinations of professional dynamics.[1] The second, more theoretically oriented, is the evolution of a theory of countervailing powers formed by the work of Abbott (1988), Halpern (1988, 1992), Light (1993, 1995), and others. The emergence of recent cross-national studies, with their focus on state, professional, and corporate forces in countries other than the United States and Great Britain, have made it amply clear that in each country medicine takes on a different professional character as it is shaped by the particular configuration of countervailing institutional powers, and all within a framework of professional dynamics that includes professional ascension as well as professional maintenance and professional decline (Hafferty 1995).

Building upon these observations, the notion of countervailing powers locates professions within a field of institutional and cultural forces and parties in which one party may gain dominance (e.g., the state in the former Soviet Union and the medical profession in the United States) by subordinating the needs of significant other parties who, in time, mobilize to counter this dominance.[2] In a situation in which a currently dominant group (e.g., the medical profession in the 1960s) seeks to maintain its privileges and power, change takes place over decades, partly from the excesses and neglects of dominance and partly from the mobilization of other parties. Extrinsic forces, such as technological advances, significant changes in resources or economics, demographic changes, and societal changes outside the field of forces also influence the balance of power and make countervailing powers more than a zero-sum game.

FERMENT AT THE CORE AND TENSIONS AT THE PERIPHERY

Structurally, organized medicine never did fit Goode's (1957) idyllic characterization of the profession as a "community of equals." Claims heralding the death of the generalist began to

surface as early as the turn of the century (Shryock 1967; Konold 1962), with trends supporting a specialty-oriented and procedurally based medicine continuing well into the 1990s. Despite a policy emphasis on primary care in the 1970s and again in the 1990s, this trend toward specialization and thus toward internal differentiation has accelerated in recent years.[3]

Faced with tightening revenue streams, individual specialties have taken up arms to control particular diagnostic or therapeutic modalities. In the summer of 1993, for example, the American Society for Gastrointestinal Endoscopy and the American College of Gastroenterology hired a major Washington, D.C. law firm and undertook a national campaign to convince hospitals that allowing family practitioners to perform endoscopies would be tantamount to condoning malpractice (Castro 1994). Their efforts were reasonably successful even though this call to limit the availability of endoscopies made it more difficult for patients to receive this service. Similar struggles have arisen over who is qualified to do flexible sigmoidoscopies, first pitting gastroenterologists and internists against family practitioners and more recently pitting physicians in general against nurse practitioners (Maule 1993). Other clashes have evolved between gynecologists and family practitioners over colposcopy and within hospital systems about general (Can chiropractors receive privileges?) or specific (Who is qualified to deliver babies, do laparoscopic surgery, or work with patients in intensive care units?) staff privileges (Chene 1986; Dent 1991). Even the entitlements that have traditionally accompanied specialty certification (e.g., the "exclusive right" to perform certain procedures) are coming under fire as provider organizations such as hospitals and HMOs begin to employ their own competency-based assessments to establish who is eligible to perform particular clinical activities (Pelberg 1989). A related conflict has been drawn between generalists and specialists over who should function as a legitimate source of primary care services (Barondess 1993; Rivo, Jackson, and Clare 1993; Schwartz, Ginsburg, and LeRoy 1993). With the growing presence of capitation contracts, the stakes have become enormous. As managed care and related "gatekeeper" systems stress a stepwise delivery model that restricts "front door" access to subspecialists, providers such as rheumatologists, oncologists, and cardiologists are attempting to reposition themselves as primary providers for their chronically ill patients, and thus to tap into the primary care as well as the subspecialty revenue streams. Even more threatening, the very presence of capitation reduces the overall need for subspecialists in managed care systems, thus producing an oversupply of these provider types (Weiner 1994).

In recent years, one of the more bitter conflicts among specialties has been around the introduction of resource-based relative value scales (RBRVS), a payment scheme based on cost (as opposed to charges) for reimbursing physician services under Medicare. RBRVS was designed (at least initially) to redress the traditional imbalance in reimbursement patterns that have favored technical and procedurally based medical work (and thus subspecialty-oriented activities of listening, questioning, and explaining (Hsiao et al. 1988, 1992). As the federal government, in its role as buyer seeking fair prices based on cost, moved to implement RBRVS, lines of allegiance were quickly and predictably drawn. RBRVS was praised by primary care specialty groups and vilified by subspecialty—particularly surgical—interests (Werner 1992; Gott 1993). Opposing camps wasted little time in attacking each other as well. "Master organizations" such as the American Medical Association (AMA) and the American College of Physicians found themselves betwixt and between as they scrambled to answer to multiple constituencies.

But RBRVS did more than exacerbate the frictions that lurked beneath the surface of medicine's public facade of internal equanimity. The development of RBRVS also reflected the resolve and power of Medicare and Congress to ascertain the cost and value of different medical and surgical procedures. Using practice-based data, RBRVS sought to measure: (1) the time, skill, and intensity of each procedure; (2) all direct and indirect costs of practice; and even (3) a return on the income forgone when physicians pursue additional years of specialty training rather than enter practice. Work itself was quantified along four major dimensions: (1) time; (2) mental effort and judgment (including knowledge and diagnostic acumen); (3) technical skill and physical effort; and (4) psychological stress. These formulas were intended not merely to reflect the relative value of physician work but ultimately to alter the way physicians delivered services. Perhaps most importantly, the RBRVS methodology legitimated the idea of measuring something (medical work) that had for so long been considered enigmatic

and idiosyncratic—and therefore unqualifiable. In many respects, the arrival of RBRVS has helped to set the stage for subsequent efforts to measure quality of care and to assess medical outcomes. RBRVS also represented a loss of control for medicine over the setting of reimbursement rates, something long dominated by physicians.

Important rifts within medicine have appeared along a number of other "fault" lines as well. Over the past several years, the AMA and the American College of Surgeons have been split bitterly over a number of issues including the issue of work hour limits for residents (Deaconson et al. 1988; Van 1989; Kelly et al. 1991). Health reform and proposals for fee caps and for a single payer plan placed the AMA (con) and the American College of Medicine (pro) on opposite sides of the table (Neus 1992). Internally, the AMA has been deeply divided over the issue of whether physician ownership of laboratories or other diagnostic facilities represents a conflict of interests and thus unethical behavior on the part of providers so situated (Priest 1992).[4] As the media began to report examples of referral abuses and as studies tied physician ownership to higher referral patterns (Mitchell and Scott 1992; Scott and Mitchell 1994), the already fragile trust between medicine and the public became further strained (Hafferty 1991). Correspondingly, the perceived failure of medicine to satisfactorily police itself has led to a variety of legislative actions (and thus externally derived controls) such as those spearheaded by California Representative Pete Stark to cover physicians' facility ownership and referral practices.[5]

Matters of physician supply, including the system-straining effect of physician oversupply, constitute another dimension of medicine's internal dynamics. Although not yet a visible issue in the United States, physician unemployment has been reported in other countries, and linkages between oversupply and the forces of proletarianization have long been a part of the sociological literature on issues of medicine's professional dominance (Hafferty and Wolinsky 1991; Hafferty and McKinlay 1993). In the United States, recent projections based on HMO staffing patterns make it clear that medicine continues to produce too many physicians, particularly subspecialists (Weiner 1994). Evidence of oversupply—or at least fear of a shrinking market place—is reflected in the above-referenced turf battles among various physician groups.

The presence of these turf battles, along with the emergence of the state as an arbiter of medicine's internal conflicts, stand as a witness to medicine's inability or unwillingness to satisfactorily control its own affairs, to the growing role of the state in exerting its regulatory presence, and to the inability of medicine to resist such incursions. These turf battles also bring us to the second of our territories, the topic of boundary maintenance and matters of external relations.

Tensions at the Periphery

Five broad groups make up the external locus of countervailing pressures that exist along medicine's boundaries: (1) *government*, including local, state, and federal; (2) *corporate purchasers* of health care for their employees (e.g., GE, IBM) and their agents, such as insurance and managed care companies; (3) *corporate sellers*, such as providers of services (e.g., Humana) and manufacturers of medical products, equipment, and pharmaceuticals (e.g., Merck, Kodak); (4) *consumers*, as represented by government and consumer groups (e.g., AARP, Citizen Action, and various disability advocacy groups), but also reflected by activities such as consumer spending and the changing tides of cultural legitimacy; and (5) *other providers,* such as nurses, physical therapists, and alternative providers such as chiropractors and herbalists.

Here too, the overall pattern has been one of increasing differentiation and greater complexity. Government action on issues of health care financing and organization unfolds at federal, state, and even local levels, sometimes in a complementary and sometimes in a conflicting fashion. Corporations routinely compete—and seek to acquire a dominant position (and thus a minimization of competition) in the medical market place. Turning to other providers, we find the evolution of a highly complex web of occupational groups, each seeking to establish a distinctive sphere of work (and thus influence) along with a concurrent desire to

bask in the sun of professional prerogatives. Turf wars exist not only between medicine and other provider groups such as nursing, chiropractic, and pharmacy, but among and within these groups as well.[6] Other examples of external tensions highlight the interrelatedness of some of these domains. The rise in the number of alternative practitioners ("other providers") has been accompanied by a startingly broad acceptance by the public ("cultural legitimacy") of alternative therapies and "unconventional medicine" (Eisenberg et al. 1993; also, see Letters to the Editor [1993] for responses to the Eisenberg et al. article). HMOs, particularly those employing providers directly ("corporate sellers") have moved aggressively to transfer clinical services down the traditional medical hierarchy ("other providers"). Today, the majority of babies delivered within the Kaiser system are delivered by midwives. Taken as a whole, these patterns indicate a diminished presence and role for physicians in the actual delivery of services and lessening influence over the degree to which other groups participate in delivering those services.

The dynamics surrounding the Clinton Administration's health reform efforts, including the formation of Hillary Rodham Clinton's health care task force, illustrate this complexity as well as medicine's overall marginalization. Long accustomed to a privileged seat at the policy table, the AMA and other major physician organizations found themselves, unexpectedly, purposefully, and pointedly excluded from direct task force participation (McCombs 1993; Pear 1993; Priest 1993). Vice-President Gore warned the AMA that it would no longer dominate health reform (SoRelle 1993), while President Clinton labeled the AMA just another "special interest group" (Hall 1993). As the national debate swirled on, registered lobbying groups with an interest in health reform, now numbering over 1500, circled Washington intent on restructuring the traditional roster of key players (Feder 1993). Physicians, once disdainful of practice arrangements such as HMOs and IPAs, are now fighting a series of legal battles to *require* these organizations or networks to hire them under "any willing provider" provisions (that is, if a provider is willing to abide by the rules of the network or organization, then that provider must be hired or included in that plan).[7] Meanwhile, medicine's legislative presence appears less decisive and less well-orchestrated. Between 1989 and 1992, for example, the AMA contributed significantly more to House members who wound up *opposing* AMA positions on three key health issues (including the "gag rule" on abortion counseling) than to those who supported AMA interests (Sharfstein and Sharfstein 1994).

While no one is suggesting that organized medicine has become an insignificant player, its ability to exert its influence in an increasingly crowded policy environment appears greatly diminished. Only an influential few (e.g., see Mechanic 1991; Freidson 1994) still insist that physicians, as medicine's traditionally high-priced free agents, continue to dominate the playing field. As medicine continues to experience internal tensions, and particularly as these differentiations are reflected in strains between a governing elite and a clinically based rank-and-file, we anticipate that the basic overall thrust of professionalism is toward a loss and not a continuation or strengthening of medicine's control over its own work. It is becoming increasingly clear that the ranks of medicine will be populated with both winners and losers, something that does not bode well for medicine's internal solidarity, its ability to effectively secure its boundaries, and thus its ability to maintain control over the content of its work.

THE RISE OF THE NEW ELITES

Organized medicine has not been untouched by the swirl of activity along its boundaries. One important effect of the buyers revolt has been the rise of two groups within the ranks of medicine; a knowledge elite exerting technical and cognitive power, and a more recent administrative elite wielding economic and organizational power (Freidson 1984, 1987). Although a knowledge elite has been present within the ranks of medicine since at least the time of the Flexner Report and the related development and evolution of the academic medical center, it is only in the past decade that attention has been focused not so much on developing individual diagnostic and treatment procedures as on establishing their efficacy based on outcomes, on the utilization of clinical trials, and on assessing entire systems of care including their financing and organization. The presence of physician administrators, while also long-standing, has shifted from the traditional informality of rotating chair or clinical chief

positions to a trend for clinicians to establish themselves more permanently within the boardroom or executive suite.

Two different scenarios have surfaced in writings on these elites. On the one hand, there is concern that the presence of these two elites signals a growing rift between them and the rank-and-file physicians and thus a growing tension between the knowledge generators and the knowledge consumers, the rule setters and rule followers, the managers and those being managed, and those who function as owners versus those who perform as employees. In short, it has been anticipated that the rise of these elites, particularly an administrative elite, would constitute a "critical change" in the organization of medicine and one that might hold "dire consequences" for medicine's status as a profession (Freidson 1987). "When you have one elite setting the standards and another elite directing and controlling and other professions doing the work, you have altered the organization of the body and relations between its members which may have serious implications for its corporate character" (Freidson 1984:14).

The possibility that these elites might function as a source of structural instability and thus undermine medicine's professional status brings us to a counter-scenario. Medicine's powers and prerogatives are being maintained because physicians—not laypersons—are serving in critical decision-making positions and thus securing medicine's control over the technical core of its work and the organizations in which it is clinically applied. It is physicians, the argument runs, who are creating the databases, writing the guidelines and protocols, conducting the relevant research on matters critical to the nature of medical work, organizing and distributing the resources so that these tasks can be done, and serving as ministers without portfolios (Freidson 1987). In short, it appears that these new elites have been cast as both *necessary* to medicine's maintenance of its professional status and as *potentially destructive* to that status. How are we to think sociologically about these possibilities?

This issue may be viewed from several vantage points. First, it is important to recognize that although the rise of the academic medical center and the large-scale federal funding of biomedical research within such centers during the 1970s and 1980s facilitated the growth of new career paths for physicians in research and administration, the declaration that medicine continues to exert definitive control over its work by virtue of the fact that MDs are functioning in these roles, remains just that—an assertion. Although the ranks of physician-researchers and physician-administrators have grown, so too have the number of non-MD researchers and administrators, bringing with them alternative disciplinary backgrounds, differing paradigms, and contrasting cultures and orientations toward work. To the best of our knowledge, there has been little effort to examine the proportion, respective roles, and the influence of physicians versus non-physicians in either the production of new medical knowledge or the administration of medical resources. Thus, there has been little empirical information about the relative influence of a physician versus a non-physician elite at the core of medical work.

More central than issues of composition or even ascribed influence are those of hierarchy, power, and role. The notion that the attainment of an MD degree (or lack thereof) is the critical factor around which the control of medical work revolves is tenuous at best. There are two grounds on which to question such assumptions about professional fidelity. The first is empirical and asks whether physicians who enter the administrative ranks continue to identify with their earlier allegiances as clinicians or whether they adopt more of a managerial orientation. The second, more conceptual, concerns the relative influence of prior socialization versus current work setting on professional behavior.

Data on the first question are linked to work done by Montgomery (1990, 1992). She found that, even at the earliest stages in the development of physician executives as an occupational type (during the mid to late 1980s), those moving from clinical into management ranks engaged in a process of "individual reprofessionalization" as they began to shift their identity and commitments from the medical profession to the organization for which they worked. Moreover, it appeared that management identity intensified as time and involvement in administrative duties increased.

Turning to our second point, Freidson is quite clear in both *Profession of Medicine* (1970a) and *Professional Dominance* (1970b) that he views current work environment as being more influential than education and prior socialization both in determining and explaining

"professional performance." But if this indeed is the case, then should we not expect physician-administrators or managers, as individuals who spend the bulk of their working day administering resources, conducting basic science or clinical-outcomes research, organizing conferences or establishing national research priorities, to identify more with the problems and exigencies "at the top" than with the day-to-day contingencies and murkiness of life in the clinical trenches? Montgomery suggests that this is exactly what is happening, and Freidson provides, in part, the interpretive framework for why this might be so. To date, only Wolinsky (1988:43) has suggested a criterion for "physician membership," which although stringent (requiring that a loss of one's physician identity would occur only when physicians had "fully and permanently divested themselves of actual medical practice") does emphasize the influence of work setting over that of medical training or the attainment of a particular degree.

In sum, although the whole issue of physician control over the content of his or her work needs substantial empirical examination, the evidence gathered to date about the case of physician-administrators suggests that this elite does not represent the points of view of the rank and file. Furthermore, it appears that the critical issue is not one of degree attainment (MD or otherwise) but rather the notion of orientation toward work, toward organization and power, and toward those who pay one's salary.

An alternative approach to the depiction of these two elites as necessary but potentially destructive is to frame their appearance in a more dynamic fashion. Thus, while their *arrival* may initially have provided organized medicine with at least the appearance of an "in-house" resource base along with a locus of functional control, any *subsequent movement* toward an elite status may render the profession increasingly vulnerable to outside control. That control tightens particularly as the profession becomes more internally differentiated and as outside forces, such as corporate interests, attempt to coopt the expertise of these elites as a part of more general efforts to restrict the clinical discretion traditionally exercised by rank-and-file clinicians. In other words, steps taken by organized medicine to populate the ranks of the knowledge and administrative elite with physician "insiders," and thus to maximize its control over the process of rationalization and the technical core of medical work, also set in motion forces that might undermine that very control.

As we have noted earlier, there are few reasons to believe that these elites will represent the interests of organized medicine—if this has ever been the case. Clearly it is in the interests of capital and the state to persuade these elites to adopt points of view other than those that resonate within hospital corridors and clinic hallways. Furthermore, it is more than reasonable to expect that as these elites establish their positions of power and influence, they will become estranged from those they were intended to save . . . in this case the rank-and-file clinician. Similar to Freidson's observations on the self-corrupting nature of autonomy (Freidson 1970a:368–82, 1970b:42; Hafferty 1988),[8] we can imagine that these groups might become as estranged from the rank-and-file as medicine has become from the general public. This possibility is exacerbated because, unlike the more general relationship between medicine and society, there is no implied social contract between these elites and the rank-and-file. There is no promise that they will hold themselves accountable for acting in the best interest of their "members." Furthermore, at least in the case of the knowledge elite, there are no mechanisms for "external" review or a mandated process of accountability—at least with respect to issues of fidelity and service orientation. In short, there is no guarantee that these elite groups will align themselves with the interest of medicine as opposed to non-MD health researchers (in the case of the knowledge elite) or corporate interests (in the case of both the knowledge and the administrative elite).

A related issue is whether these two groups themselves might come to represent antagonistic as opposed to complementary interests. We do not attempt to answer this question here, but note that it is an extremely complicated issue and one linked to a number of related factors including respective work settings (the knowledge elite being more likely to function in academic settings; the administrative elite in a corporate environment), the extent to which each is able to organize itself as a special interest group (the administrative elite appearing much further along in this regard than the knowledge elite),[9] their relative status within the culture of medicine as well as the broader societal culture (it is unclear at this time which group is accorded greater legitimacy either within medicine or within society at large), and the degree

to which the work of each might come to be considered "problematic" or "tainted" by those in power (e.g., if medical technology becomes cast in too negative a light, then the administrative elite may be accorded greater license to rein in these advances).

In summary, we view the rise of these elites within medicine's own ranks as one part of a more general process of rationalization that has accompanied medicine's rise to professional status. At the present time we see few reasons to believe that these new elites will "identify with the ideals of their profession and concern themselves with sustaining the integrity of the work for which they have taken responsibility" (Freidson 1987:144). Rather, these new elites will not only fail to identify with the rank-and-file or with broader professional values but they themselves will evolve in disparate directions, with the administrative elite becoming the more dominant of the two as it develops closer working and ideological ties with corporate interests and bureaucratic structures.

INCURSIONS INTO MEDICINE'S TECHNICAL CORE

The impact of the knowledge and administrative elites on medical work brings us back to the nature of that work and some observations on factors that are influencing change in the content of medical work. Change in the content of work can occur in two fundamental ways. First, changes in dimensions other than content of work (e.g., technical core), such as in the terms of work (e.g., pay, hours) and the conditions of work (e.g., organizational structure, employment status) may exert a determining influence on that very core. Thus, while it remains important to differentiate between terms, conditions, and content for analytical reasons (see Freidson 1970a), this importance should not blind us to exploring how change in one realm might influence change in the others. The second route for change involves efforts to alter the content of work more directly, such as recent efforts to develop practice protocols and to conduct research on medical effectiveness. Here, the specific intent is to limit what some view as an excessive level of clinical discretion held by practicing physicians.

In the first instance, greater attention needs to be given to examining how changes in the terms or the conditions of work may play an instrumental role in altering the content of that work. Studies of medicine in Czechoslovakia (Heitlinger 1991, 1993), China (Henderson 1993), and the former Soviet Union (Field 1988, 1993) suggest that while state control over critical resources does not unduly impact on the decision-making control exercised by physicians *relative to that exercised by other health care workers*, shifts in resource availability may affect the decision-making process itself, including the clinical outcomes of those decisions.

There appears to be a somewhat analogous situation emerging in this country as third party payers, corporate purchasers of health care, and the state itself become more aggressive in attempting to influence resource availability and conditions under which clinical services are delivered. Examples include the use of formularies that dictate a specific and limited number of medicines available for prescribing, tighter scheduling of patient visits, in-home referral requirements, requirements for prior authorizations, and the hotly debated linkage of physician reimbursement to lower resource utilization by patients. Thus, while it would remain at least true literally that physicians retain the legal right to order any test they might deem appropriate or to treat the patient in the manner they deem "best," it is also true that the threat of review along with the intimidation fostered by the threat of nonreimbursement, effectively limits the number of clinical practice options. In these ways, HMOs, managed eare plans, and related practice arrangements leave the physician in charge of clinical decision-making, but do so within a range of incentives (positive and negative) that are intended to alter at least the terms and conditions under which medicine is practiced.

In short, administrators may never set foot in the examining room, politicians may assume office without clinical training, and insurance agents may never add the laying on of hands to their complement of business practices; but the availability of clinical resources, including the establishment of a prevailing organizational (work) culture (e.g., how many patients are to be seen per hour, how much revenue needs to be generated, and the redefining of patients as customers in short, the "nature" of clinical work, including norms governing that work) places

managers, payers, and purchasers near the heart of the clinical encounter. Over time, choices based on technical-scientific considerations or on professionally controlled norms may be replaced by institutional mandates concerning cost containment or efficiency, by political considerations, or by an organizational hierarchy based on rules and a uniform work product. As the decision-making process expands to represent interests other than technical/medical, those clinical activities not supported or "sanctioned" by critical resources may recede into an unused and distant netherland, eventually slipping out of one's differential diagnosis or clinical armament altogether. Restrictions on certain types of services that at one time may have elicited energetic challenges from clinicians may become the norm as physicians find themselves less inclined to rock the organizational boat and thus advocate on behalf of their patient. Ethical principles, such as the AMA's call for physicians to seek changes in laws that are contrary to the best interests of the patient (Clause 3 in the AMA's Principles of Medical Ethics [American Medical Association 1994]) slip into an even greater obscurity. As the nature of clinical work is transformed, a new clinical culture is created.

The second and more direct avenue for change includes more direct attempts by payers and the government to alter the content of work without necessarily involving the terms or the conditions of that work. An example of this type of intervention can be seen in the recent surge of interest in medical effectiveness research (MER) along with the proliferation of practice protocols and clinical guidelines. The growing importance—and influence—of research on quality of care and health outcomes is reflected in the passage of P.L. 101-239 in which Congress replaced the National Center for Health Services Research and Technology Assessment with a new agency level office, the Agency for Health Care Policy and Research (AHCPR). AHCPR was charged with improving the effectiveness and efficiency of the health care system by undertaking projects that would differentiate between effective, equivocal, and ineffective clinical interventions (Raskin and Maklan 1991). The goal was to reduce the amount of "unnecessary" variability and uncertainty in clinical practice. Related goals included bringing empiricism to the clinical decision-making process and the conjoint empowerment of both providers and patients through increased knowledge.

The new law and subsequent AHCPR activities place the state and matters of effectiveness research at the hub of health care reform with a significant—and growing—health policy presence. In addition to supporting research, AHCPR was charged with developing and disseminating practice guidelines based on its own work along with that of the multi-agency federal MEDTEP (Medical Treatment Effectiveness Program). These guidelines will be used to provide health care organizations and clinicians with a scientific rather than a tradition-laden basis for guiding treatment and diagnostic decisions.

But protocols backed by the collection of primary data and the causally oriented methodology of clinical trials represent only a few of the guidelines that currently are circulating within the medical market place. A larger presence is occupied by panels or groups of individuals who have come together to establish some form of practice norms. These "expert panels" include federally funded undertakings involving international authorities, exhaustive literature reviews, and the employment of meta-analysis; more nationally based efforts underwritten by third party payers, corporate purchasers, or corporate providers of medical care; regionally configured efforts by state medical societies, payers, or deliverers; as well as efforts by physicians at individual clinics who wish to establish some agreed-upon approach for handling common clinical problems within their own practice. In most of these instances, the emphasis is not so much on collecting new data as it is on compiling and assessing state-of-the-art knowledge or on agreed-upon methods of approaching particular clinical problems (Brook and Lohr 1985).

Without taking sides as to the relative validity of these two approaches, the expert panel, although more efficient, gives greater weight to tradition, convention, and custom than does the more primary data-driven effectiveness research model. The expert panel thus offers organized medicine a greater opportunity to exert its traditional powers and influence. In sum, protocols based on expert panels are more likely to maintain medicine's traditional professional prerogatives than protocols generated by primary research.

At first glance, it appears obvious that the advent of medical effectiveness research represents a serious challenge to medicine's professional status. The intent of AHCPR (and

P.L. 101-239) to limit clinical discretion almost mandates such a conclusion. Such a threat appears all the more serious if the establishment of effectiveness research-based protocols are controlled by non-medical interests—regardless of whether the research work itself is carried out by MDs. In these ways, protocols generated by effectiveness research, grounded as they are in the paradigm of science, represent a serious "external" threat to medicine's traditional practice of legitimating its work based on the notions of "usual and customary." Although the boundary between science and "nonscience" is itself ideologically based (Gieryn 1983), the arrival of medical effectiveness research raises the very real possibility that medicine's longstanding claim to a professional status based on its scientific expertise is about to be hoisted with its own petard.

On the other hand, advocates of effectiveness research argue that their mission is a scientifically neutral one and that the issue is not one of limiting physician discretion per se, but rather of removing ineffective and even dangerous options from the examining room (Raskin and Maklan 1991). Such protests aside, it appears clear that the payer-driven movement to assess effectiveness clearly threatens the autonomy of individual physicians. At the same time—and to the extent that effectiveness research involves the elimination of questionable and unscientific clinical practices—this overall trend may strengthen medicine's overall professional status by placing professional work on a more scientific footing. Thus, we are left with a paradox: the presence of less autonomy at the individual practitioner level along with a possibly stronger profession at the corporate level—with the major impetus provided, ironically, by outside payers who unintentionally have begun to rescue medicine from the inner-directed and self-deceiving nature that accompanies the attainment of autonomy. Such speculation aside, it will be important to keep a watchful eye on corporate initiatives to place cost considerations at the core of their efforts to evaluate health care practices including outcomes. To the widely noted fears that decisions about the content of medical work may come to be dictated more by matters of cost than by considerations of technical appropriateness and quality (Relman 1987), we point out that establishing indicators of cost-appropriateness is an undertaking that does *not* reside within the boundaries of medicine's technical expertise and therefore is one that must remain vulnerable to the legitimate participation of interests other than medical-professional.

PROFESSIONALISM AND HEALTH POLICY

Matters of health policy and medicine's professional status must straddle two conflicting views of professions: (1) professions as a type of occupation whose activities reflect those of a simple monopoly and whose main goal (as revealed in social action rather than in rhetoric) is to leverage their privileged status for their own gain—and thus an occupational group whose predilections require the need for external control; or (2) professions as institutions which function in the public interest and for that reason should be preserved (Dingwall 1983). Twenty-five years ago the prevailing observation was that medicine's successful quest for autonomy had rendered it incapable of regulating its work in the public's interest as well as undertaking any substantive remedial measures on its own (Freidson 1970a, 1970b). More recently, this conclusion has been supplanted by calls to seat the professional model (stressing flexibility and discretionary judgment) rather than the bureaucratic model (stressing standardization and reliability) at the heart of health care policy (Freidson 1994).

Calls to place professionalism rather than bureaucracy at the core of health policy are not new, but they do invite us to return to several issues previously covered in this paper, including the corrupting nature of discretionary work (e.g., autonomy's "critical flaw"), medicine's historical inability to exercise control over its members, the need for external reins to be placed over medicine's autonomy, and the increasing differentiation and stratification within the ranks of medicine. While the ultimate goal of both public policy and medical practice is to serve that elusive "public good," the pursuit of that goal appears increasingly to place medicine and policy in antagonistic roles, particularly around issues of clinical discretion.

Calls for policies that will nourish professionalism and strengthen the profession's collective commitment by encouraging things such as peer review and the exercise of internal controls

(Freidson 1994) are steps in the right direction, but one needs to remember that peer review is something generated and supported within a system characterized by collegial-peer relationships. It is not supported by a system composed of technical and administrative elites who function to define and control the clinical work carried out by the rank-and-file. As argued earlier, there is no evidence to date suggesting that these new elites will share either a core set of values in common with the rank-and-file or values reflecting a fiduciary or service orientation. At the same time, the absence of administrative and knowledge elites within the profession renders medicine vulnerable to the incursions of "outside" experts, individuals whose agendas may be not only antagonistic to medicine but antithetical to the necessary presence of discretion in medical work.

This paradox asks us to frame issues of health policy in a more inclusive fashion, particularly how policy can strengthen medicine's legitimate control over its technical core and strengthen its service orientation without encouraging the structural divisiveness that often accompanies the presence of a knowledge and/or administrative elite. The goal here is to resist pressures to distance the technical core of medical work from those asked to act on its behalf—the rank-and-file clinicians. As a related issue, health policy needs to keep a wary eye on the tendency of elites to extend medicine's dominance into realms of knowledge application rather than the more delimited domain of knowledge determination.

The connection between a service orientation and discretion over clinical activities is subtle but real. A service orientation defined by the presence of a uniform product translates the notion of service from something that entails responsiveness and flexibility into something that is more of a technical commodity. *As a first task then, policy experts must wrestle with the question of whether they consider discretion to reside at the core of medical work.* In part, this asks policymakers to reflect on the nature of medical work and on the role that uncertainty plays in that work. The goal may be to reduce uncertainty—as it is with medical effectiveness research (Raskin and Maklan 1991, forthcoming)—but the line between uncertainty and discretion is a fine one. Many of the protocols circulating today represent consensus, not science, and while consensus may provide us with uniformity, it also may hinder our ability to respond effectively to that which resides at either end of medicine's grand bell-shaped curve (Mechanic 1994).

But perhaps the maintenance of clinical discretion should not be defined as a key goal of policy? Perhaps decision-making should rest more with the goals of uniformity, a hierarchy of rules, and with issues of cost. If so, then we must begin to think of medicine not so much as a profession but as a technical undertaking. The gain will be uniformity, but at the cost of autonomy. In this respect, we must resign ourselves to being served by clinicians who are linked more by broadly-established and technically-oriented norms of practice (e.g., protocols) than by some more amorphous (and difficult to maintain) commitment to service and to addressing clinical problems at the individual patient level. Here we do not wish to lament some romanticized version of a "paradise lost" but rather to frame the question of how the nature of medical work is being altered fundamentally as issues of clinical discretion and autonomy become ideologically relegated to an increasingly small corner of the health care picture.

Whether current health policy will engender positive or negative consequences in these regards has yet to be seen, or even reasonably predicted. One possibility is a health care system in which most of the problems of most of the people are handled routinely and expeditiously (whether the outcome be cure, alleviation, palliative maintenance, or death) but where unusual and/or nonroutine matters are handled in a less satisfactory manner. The issue is not so much one of disease complexity, limits to coverage, or restrictions governing treatment availability, but rather one of how strategies that limit clinical discretion (such as practice protocols or requirements for prior authorization) will alter the way physicians process clinical data, think about matters of health and disease, and act on the basis of that knowledge.

Health policy must become more anticipatory on a range of fronts and must keep an eye toward muting the inevitable presence of such unanticipated consequences. We suggest two principal "screens." The first screen would subject all health policy initiatives to the question of how that policy might have an impact on medicine's sense of community, of a distinctive mission, and on a sense of shared values. This first screen does not seek to promote medicine's

hegemony so much as it does the reemergence of a service ethic and orientation within the medical ranks. Policies that fuel the divisive cracks of elitism within medicine and/or call for physicians to be "managed" run the risk of creating a hostile environment for the delivery of clinical services. The second screen asks how a particular policy might affect the discretion exercised by rank-and-file clinicians in the organization and delivery of their services. An example relating both screens is the degree to which rank-and-file clinicians are thought to play a central role in conducting effectiveness research and in the development of practice protocols. These are the individuals best able to assess the level and type of clinical uncertainty at the practice level. These also are the troops within which any esprit de corps must reside.

A related health policy trend that might benefit from the application of both screens is the effort to link malpractice immunity to the use of practice protocols. To date, such initiatives have appeared in several states including Maine, Minnesota, Oregon, New York, and Florida, with Maine's *Medical Liability Demonstration Project* being the most fully developed (Atchinson 1994; AHCPR 1994). While particulars vary by state, one underlying theme is the willingness of organized medicine to trade some aspect of its traditionally coveted autonomy for malpractice protection. A second feature of these initiatives is the general absence of direct references to an ethic of service and altruism. The overall topic of malpractice reform is a complicated one, touching upon territory claimed by two professions (law and medicine) and including issues of money and ego. Nonetheless, medicine's apparent eagerness to keep a critical distance from what it views as the onerous and stifling threat of external review, particularly as it involves decision-making by the public (the jury system along with the "court" of public opinion) provides us with some indication of the diminished sacredness of autonomy relative to the threat of malpractice in today's practice environment.

None of this is to suggest that health policy should hesitate to undertake initiatives to restructure inequities or imbalances in the organization and delivery of health services, including issues of geographic and specialty maldistribution. If too many specialists are skewing the delivery picture, then steps should be taken to rectify the situation. Similarly, none of this should be interpreted as a suggestion that health policy must undertake specific efforts to ensure medicine's hegemony over other health occupations or domains that do not fall within the narrow limits of medicine's technical expertise. As we have already suggested, conflict at the "outposts" may prove to be more facilitative than disabling in developing core knowledge about matters of health and disease as well as in implementing that knowledge. Nonetheless, neither the public nor medicine itself is well served by health policies that move to expand medicine's control over matters—particularly matters of knowledge application—rightly retained by the public. In this respect, health policy needs to evaluate its own tendency to blithely accept medicine's claims of expertise as well as it's own proactive tendency to contribute to the general medicalization of society (Conrad 1992).

The pendulum of medicine's status as a profession may have swung more to the side of avarice than altruism, but medicine can never return to its promise of placing the public's interests ahead of its own so long as policymakers create an incentive structure that treats—and thus defines—professionals as economically motivated entities. This is not to argue that economic incentives are not an effective or rational vehicle for change. But, policy that treats physician behavior as economically determined will play a role in creating such a beast.

The alternative is to create policy that maximizes a profession's leanings toward the values of service and altruism. Pollyannish sentiments aside, we can begin by structuring health policy, particularly policy dealing with matters of quality, to emphasize the presence of a necessary partnership between rank-and-file physicians (as opposed to administrative and technical elites) and the public at large. This is not a new suggestion, but it is one that needs constant repetition and reinforcement.

Relatedly, if an emphasis on accountability can be raised as a counterbalance to that of autonomy, if clinical practice can be placed within the larger context of prevention, early intervention, self-management, and interprofessional programs for managing chronic problems, perhaps medicine and society will be the better for it. But the policy question is, whose ends will this serve? At the moment, the balance among countervailing powers is shifting rapidly toward insurers and managed care corporations. They are supposed to be the agents of payers/buyers, but they seem most bent on establishing market share and on

maximizing profits. Furthermore, competitive markets mean that cost-shifting and favorable selection are the easiest ways to make money and win contracts. One needs long-term subscriber contracts for managed competition and for the medical profession to be harnessed to the interests of patients. The policy danger is that the medical profession will go from being the seduced handmaiden of corporate purveyors of medical technologies and pharmacologies as elaborate clinical interventions, to being the kidnapped handmaiden of corporations making money by *limiting* clinical interventions. The object of policy efforts is to establish incentives and constraints that balance the countervailing powers in health care so that they serve to benefit society and its members.

CONCLUSIONS: A CONCEPTUAL AND RESEARCH AGENDA FOR MEDICAL SOCIOLOGY

From the very outset, a sociological fascination with professions was grounded in the anticipation that this organizational type would function (hopefully) to buffer the public from the abuses of state powers and the unrelenting march of bureaucratic rationalism. These early hopes faded as it became obvious that the attainment of professional status was accompanied by monopolistic tendencies, organizational insularity, and a loss of service orientation.

As we move into the twenty-first century, sociologists need to reevaluate the concept of profession, including the dynamics of professionalism and the nature of professional work. Over the past century, the notions that professions embodied a core of technical expertise and represented a service orientation have stood at the center of sociological discussions about these matters. Over the past 25 years it has become increasingly obvious that medicine's claims in both of these regards have contained as much rhetoric as fact. So, where do we go from here?

We need to rethink whether autonomy should remain the pivotal issue in understanding professional dynamics. Driven by medicine's abuse of its prerogatives, its failure to control its own work, and by the revolt of the buyers, we now find the notion of accountability appearing forcefully alongside the more traditional view that esoteric knowledge and technical expertise legitimate exemption from outside review. The emergence of a movement to better establish effectiveness and quality in clinical services offers medicine the hope that its work can be placed more squarely on the altar of scientific rationality, but at the risk of incursions by outside experts into its domain. In addition, the arrival of practice guidelines and protocols may well facilitate medicine's loss of control over clinical activities to other kinds of providers. As sociologists, we need to explore aggressively how the concepts of clinical discretion and autonomy can coexist with that of accountability, as well as how undesirable and unanticipated consequences may come to dominate the quest for greater rationality in health care services.

A related issue involves the concept of medical uncertainty and the presence of ambiguity in medical work. Both themes have a long tradition within medical sociological circles. The former is linked closely to the work of Renee Fox (1980) and the latter with the writings of Robert Merton and Elinor Barber (1976). Sociologists need to examine how the notions of science and uncertainty are being created by, as well as driving, effectiveness research and how these assumptions are related to issues of health, disease, and medical work. While the goal of effectiveness research is to make medicine less governed by custom and tradition, it is also true that the growth of this discipline, along with the deployment of clinical guidelines, will develop its own normative structure accompanied by its own taken-for-granted assumptions about the nature of things. While individual assessments may sparkle with data that are reliable and valid, the overall process is not immune to developing its own myths about its objectivity and the superior nature of its approach to overcoming the ambiguities embedded in clinical decision-making. Sociologists can monitor this process. At the very least, sociologists can point out that the goal of reducing the amount of "unnecessary" variability in clinical practice need not lead to the reduction of uncertainty in medical work. There is also the issue of whether the elimination of uncertainty is an attainable or appropriate vision for guiding research on health care and disease. Sociologists are aptly positioned to question whether advances in scientific knowledge will reduce the amount of uncertainty present in a system or

whether such advances will create a new arena of uncertainty. The challenge for both sociologists and policymakers is not to make medicine more scientific—that will happen, for better *and* for worse—but to understand whether this latest push to rationalize medicine will cause us to expect too much from effectiveness research and at the same time cause us to neglect a more fundamental challenge in health care: how the restoration of an ethic of service and altruism can accompany medicine's reenergized scientific engine. The real danger will be in equating a "greatly improved product" (clinical services) with the existence of a service orientation as if the presence of the former establishes or guarantees the latter. The development of knowledge and the application of that knowledge are two different things. The former is a technical matter that belongs within the domain of science and medicine. The latter resides in a more social domain and should be controlled by the public.

A sociological research agenda on the dynamics of professionalism and the changing nature of medical work should reflect and inform the above issues. Work by Montgomery (1990, 1992) on physician executives and their orientations toward work should be replicated and extended. The number of physician executives has grown dramatically since Montgomery conducted her research a decade ago. But our understanding about who becomes a physician executive, following what career paths, with what role expectations and strains, and with what implications for the structuring and control of medical work has not kept pace. Perhaps the resocialization Montgomery found was more the product of a nascent occupational group than of a fundamental transformation in the value climate of physicians-turned-administrators? Currently, we lack the data to address these issues. Similar questions need to be asked about the careers and work of the new knowledge elite emerging from within the ranks of medicine, particularly those who study clinical effectiveness and quality and, thus, those who set the standards that will govern the way medicine is practiced in the future. The values that guide their work are not clear, and ascertaining whether these elite labor to enhance a corporate rather than a professional-service orientation would be an important dimension of any inquiry.

Moving our focus from matters of internal dynamics to medicine's periphery, sociologists need to develop a clearer understanding of the regulatory environment in which medicine operates, both from the bottom up and from the top down. Beginning on the shop floor, we need to look more closely at how the various rules and regulations that emanate from government and corporate purchasers actually impact on the delivery of clinical services in the examining room and at the bedside. Exactly what is changing in the way services are being delivered at the provider-patient level? Similarly, we need to examine what countervailing steps are being taken by practitioners to dampen, modify, or otherwise shape the impact of these regulations. We need a framework for understanding which influences are being formed as "beneficial" versus "detrimental," by whom, and to what ends. We also need a better understanding of how rules governing medical work, including protocols and guidelines, reach the physician and, for example, whether attaching reimbursement to their use plays a role in how physicians respond to them. In addressing all of these issues, a commitment to conducting field work in clinical settings will play a critical role. Moving to a macrolevel, we need a better assessment of the overall regulatory environment that surrounds medicine. Following the lead of Friedman (1965), we need to establish the degree of licensing legislation that is favorable to medicine as a profession (e.g., "friendly") versus legislation that seeks to regulate the behaviors of both the profession as a corporate entity and as individual practitioners (e.g., "hostile"). We also need to be sensitive to major shifts in that balance in order to ascertain the direction of change, if any.

Relatedly, we need to examine the changing nature of medical work as it is reconfigured across the various health occupations. The rise of the clinical nurse specialist and the expanding of clinical responsibilities for nurse practitioners and physician assistants have implications for the professional status of medicine. Like medicine, other health occupations are becoming highly stratified. The ability of other providers to establish a common value system and sense of community has implications for their ability to mount an effective challenge to medicine's hegemony. We need to examine their own internal dynamics as well as how these occupational groups are positioning themselves relative to other players in the health care sector.

Finally, although this paper has focused on the medical profession in the United States, a better understanding of professionalism, the interplay of state, professional, and corporate interests, and the broader dynamics of countervailing powers can only occur in the presence of an appreciable and sustained cross-national focus. Work done to date represents an important beginning, but one that has been more focused on industrialized countries and major world powers. Less well-understood, and in many cases completely unexamined, is the organization of medical work and the dynamics of professionalism in Third World and developing countries in Africa, Central and South America, Asia, and the Pacific Rim. What is the nature of state, professional, and corporate relations in these countries? More importantly, how do notions of expertise and altruism intersect in different political, social, and economic environments?

Within this litany of conceptual issues and research agendas, the key challenge is how to organize expert knowledge in the service of public problems, and how the dynamics of professionalism and the changing content of medical work can best be directed to this end.

NOTES

1. Notable examples include Abbott (1988), Heidenheimer (1989), Wilsford (1991), and edited volumes by Jones (1991), Hafferty and McKinlay (1993), and Johnson, Larkin, and Saks (1995). Works in progress include Krause's (1995) study of professions in five countries and Freidson's (1995) forthcoming look at five professions across five countries.
2. As an imperfect analogy, one might imagine a tetrahedron (or larger polyhedron) with cables stretching from each corner to a central ring. Each cable is attached to a winch at the corner, and the parties or institutions so situated work with more or less energy to crank the ring towards them. Any given location of the ring defines the current relations among the countervailing powers but the ring remains in tension, even at dead center. The closer the ring is to one corner or another, the more difficult it becomes for individual parties to pull the ring back—but also the more likely it is that their combined efforts, however individually motivated, will have a system-wide effect of moving the ring away from the currently dominant position.
3. Between 1916 and 1971 medicine expanded from a single specialty (ophthalmology) to a body composed of the interests of 22 specialty organizations. Over the next 20 years, however, this number would more than triple. By 1992, the Accreditation Council for Graduate Medical Education (ACGME), one of the two major accrediting bodies, had recognized a total of 25 specialties and 56 subspecialties with the majority of these subspecialties (35/36) receiving their accreditation since 1987. Similarly, the American Board of Medical Specialties (ABMS) now recognizes 70 subspecialty areas with 40 of these being approved since 1980, and 13 of them since 1990. In addition, both organizations have an ongoing log of pending applications (Martini 1992). So great was this proliferation that, in 1992, the ACGME established a one-year moratorium on new specialties and subspecialties. Although subspecialty incomes are beginning to weaken (Mitka 1994; Page 1994) and while medical school graduates are beginning to show increased interest in generalist residency programs (Kassebaum and Szenas 1994), subspecialty medicine remains well-entrenched within organized medicine.
4. For example, in June of 1992, the AMA House of Delegates voted to ignore the recommendations of the AMA's Board of Trustees and the AMA's Council on Ethical and Judicial Affairs and reverse its own six-month ban on physicians referring patients to facilities in which they have a financial interest. Instead, the House of Delegates voted 216 to 210 to recommend (but not require) that physicians inform patients of ownership interests and post their fees (Burton 1992; Pearson et al. 1992).
5. These pieces of legislation are widely known as Stark I and Stark II. There is also a proposed Stark III bill currently that would extend earlier and more limited self-referral provisions to all payers and all services (see Johnson 1994).
6. Examples of between-group struggles include physical therapy and chiropractic over who can undertake "rehabilitation" and who can do "manipulation" (physical therapy claiming the former and chiropractic the latter but each eyeing the other's turf); struggles between nursing and pharmacy over the right to prescribe medicine and make diagnostic determinations; and similar turf wars between optometrists and ophthalmologists, psychiatrists and clinical psychologists, and podiatrists and orthopedists, among others.
7. Plan and network managers contend that such a provision would severely restrict their right to hire only the best (e.g., cost-effective) providers, thus limiting their ability to compete effectively in the health care market place.
8. Freidson posited that the mandate or right to be the exclusive judge of one's own work leads over time to a dysfunctional and corrupting isolation in which the group in question "inevitably" develops "a

distorted view of itself, its knowledge, and its mission" (1970b). This insulation from external review leads to: (1) the construction of "sanctimonious myths" about its superior qualities; (2) a self-deceiving view of the objectivity and reliability of its knowledge base. What ensues is a "self-deceiving" callousness and insincerity in which attitudes toward clientele become "at best patronizing and at worst contemptuous" (Freidson 1970a:370); and (3) an increasing inability and unwillingness on the part of the professional group to regulate itself in the public interest, including the incapability of the group to undertake any substantive remedial measures on its own. All of this led Freidson to conclude that necessary controls must come from outside the profession—a step that would include restricting the dominant profession's control over areas "for which its competence does not equip it, *areas including the regulation of the profession itself*" (Freidson 1970a:372, emphasis ours).

9. Physician executives are organized under the banner of the American College of Physician Executives. No comparable organization exists for physician researchers, who are organized more by substantive area rather than type of work.

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