

the privileges of professional status can imitate, without possessing the cognitive and normative justifications of “real” professions.³

In fact, the professional phenomenon does not have clear boundaries. Either its dimensions are devoid of a clear empirical referent, or its attributes are so concrete that occupational groups trying to upgrade their status can copy them with relative ease. For instance, it is often emphasized that professional training must be prolonged, specialized, and have a theoretical base. Yet, as Eliot Freidson ironically points out, it is never stated *how long; how theoretical, or how specialized* training must be in order to qualify, since all formal training “takes some time,” is “something specialized,” and involves some attempt at generalization.⁴ The service orientation is even more problematic: it is, undoubtedly, part of the ideology and one of the prescriptive norms which organized professions explicitly avow. Yet the implicit assumption that the behavior of individual professionals is more ethical, as a norm, than that of individuals in lesser occupations has seldom, if ever, been tested by empirical evidence. Finally, it is true that most established professions rank high on the prestige scale of occupations, although they rank lower than positions of institutional or de facto power, such as Supreme Court Justice or cabinet member in the federal government.⁵ Such rankings reflect synthetic evaluations, which fact makes it impossible to ascertain the weight assigned to the “professional” characteristics of competence and disinterestedness in such judgments; prestige may well be accorded on grounds that have nothing to do with the professions’ distinctiveness, such as the high income and upper-middle-class status of many professionals.

Profession appears to be one of the many “natural concepts,” fraught with ideology, that social science abstracts from everyday life. The most common ideal-type of profession combines heterogeneous elements and links them by implicit though untested propositions—such as the proposition that prestige and autonomy flow “naturally” from the cognitive and normative bases of professional work. Many elements of the definition reproduce the institutional means and the sequence by which the older professions gained their special status. Others do not seem to take notice of empirical evidence or even of common knowledge about the professions; for instance, the notion of professions as “communities” does not fit very well with the wide discrepancies of status and rewards which we know exist within any profession. It is also somewhat disturbing to note that competence and the service ideal play as central a role in the sociological ideal-type as they do in the self-justification of professional privilege.

The elements that compose the ideal-type of profession appear to be drawn from the practice and from the ideology of the established professions; medicine, therefore, as the most powerful and successful of these, should approximate most closely the sociological criteria of what professions are and do. This is undoubtedly one of the reasons for the centrality of medicine in the sociology of professions. And yet empirical studies of medical practice challenge the validity of the sociological model at almost every step: they question, for instance, the effectiveness (and even the existence) of colleague control;⁶ they show that “ascribed” characteristics of the clientele are at least as important as “universalistic” or scientific methods of diagnosis and

Introduction

My interest in the professions was initially awakened by practical experiences. During a strike of college teachers in the sixties, the accusation was heard that these professors were behaving “like longshoremen.” Later, I was told by the organizers of a union of employed architects in the San Francisco Bay Area that most of their potential members resisted unionization, as something “unprofessional.” Somehow, architectural employees, most of whom can be laid off without prior notice from one day to the next and are paid hourly wages often lower than those of semi-skilled laborers in construction unions, believed that unionization would further reduce their dignity and their prospects as working people. I began asking myself, “what’s in a name?” What made professors and architects—not to mention physicians, lawyers, and engineers—feel that the tactics and strategy of the industrial working class would deprive them of a cherished identity? What is there, in the attributes of a profession, that compensates for subordination, individual powerlessness, and often low pay?

In most cases, social scientists provide an unequivocal answer: professions are occupations with special power and prestige. Society grants these rewards because professions have special competence in esoteric bodies of knowledge linked to central needs and values of the social system, and because professions are devoted to the service of the public, above and beyond material incentives.

The list of specific attributes which compose the ideal-type of profession may vary, but there is substantial agreement about its general dimensions.¹ The cognitive dimension is centered on the body of knowledge and techniques which the professionals apply in their work, and on the training necessary to master such knowledge and skills; the normative dimension covers the service orientation of professionals, and their distinctive ethics, which justify the privilege of self-regulation granted them by society; the evaluative dimension implicitly compares professions to other occupations, underscoring the professions’ singular characteristics of autonomy and prestige. The distinctiveness of the professions appears to be founded on the combination of these general dimensions. These uncommon occupations tend to become “real” communities, whose members share a relatively permanent affiliation, an identity, personal commitment, specific interests, and general loyalties.²

These communities are concretely identified by typical organizations and institutional patterns: professional associations, professional schools, and self-administered codes of ethics. It is not clear how much “community” would exist without these institutional supports; yet these supports are features that occupations which aspire to

therapy;⁷ they show that in medicine as well as in the law, a practitioner's status is as closely related to the status of his clientele as to his own skill.⁸ Historical studies of nineteenth-century medicine, moreover, destroy the notion that "regular" physicians had, in general, any more competence than their "irregular" competitors.⁹ In brief, these ideal-typical constructions do not tell us what a profession is, but only what it pretends to be. The "Chicago School" of sociology—represented, most notably, by Everett C. Hughes and his followers—is critical of this approach, and asks instead what professions actually do in everyday life to negotiate and maintain their special position. The salient characteristics of the professional phenomenon emerge, here, from the observation of actual practices.

In his pathbreaking analysis of medicine, Freidson does much to clarify the nature of professional privilege and the processes by which it is asserted. His examination of the "archetypal" profession leads him to argue that "a profession is distinct from other occupations in that it has been given the right to control its own work." Among other occupations, "only the profession has the recognized right to declare . . . 'outside' evaluation illegitimate and intolerable."¹⁰ This distinctive autonomy is, however, only technical and not absolute. Professions ultimately depend upon the power of the state, and they originally emerge by the grace of powerful protectors. The privileged position of a profession "is thus secured by the political and economic influence of the elite which sponsors it."¹¹

Freidson's analysis has important implications. First, the cognitive and normative elements generally used to define profession are undoubtedly significant; but they should not be viewed as stable and fixed characteristics, the accumulation of which gradually allows an occupation to approximate the "complete" constellation of professional features. These cognitive and normative elements are important, instead, because they can be used (with greater or lesser success) as arguments in a process which involves both struggle and persuasion. In this process, particular groups of people attempt to negotiate the boundaries of an area in the social division of labor and establish their own control over it. Persuasion tends to be typically directed to the outside—that is, to the relevant elites, the potential public or publics, and the political authorities. Conflict and struggle around who shall be included or excluded mark the process of *internal* unification of a profession.

Second, an account of the process by which professions emerge illuminates the fact that professions *gain* autonomy: in this protected position, they can develop with increasing independence from the ideology of the dominant social elites. The production of knowledge appears to play a more and more strategic and seemingly autonomous role in the dynamics of these special occupations. If professions obtain extended powers of self-evaluation and self-control they can become almost immune to external regulation. The fact remains, however, that their privileges can always be lost. If a profession's work or actual performance "comes to have little relationship to the knowledge and values of its society, it may have difficulty surviving."¹² Revolutionary social change should therefore have profound implications for professional practice because it affects, in both relative and absolute terms, the social status that established professions had achieved in previous regimes.¹³

In the central part of his study, Freidson examines the potential for producing *ideology* that is inherent in the status of profession. This potential exists not only because cognitive and normative elements are used ideologically, as instruments in an occupation's path toward professional status, but also because, once reached, this structural position allows a group of experts to define and construct particular areas of social reality, under the guise of universal validity conferred on them by their expertise. The profession is, in fact, allowed to define the very standards by which its superior competence is judged. Professional autonomy allows the experts to select almost at will the inputs they will receive from the laity. Their autonomy thus tends to insulate them: in part, professionals live within ideologies of their own creation, which they present to the outside as the most valid definitions of specific spheres of social reality.

In a sense, the more traditional view of the professions starts where Freidson arrives after a long process of analysis. Talcott Parsons writes, for instance:

The importance of the professions to social structure may be summed up as follows: the professional type is the institutional framework in which many of our most important social functions are carried on, notably the pursuit of science and liberal learning and its practical application in medicine, technology, law and teaching. This depends on an institutional structure the maintenance of which is not an automatic consequence of belief in the importance of the functions as such, but involves a complex balance of diverse social forces.¹⁴

Yet in most cases, the "ideal-typical" or institutional approach tends to emphasize the functional relations of professions with central social needs and values, at the expense of the "complex balance of diverse social forces" which supports such relations. The functional importance of the professions appears to explain the historical continuity of the oldest among them, medicine and the law. The evolution of these two, and the "modernization"—the advance of science and cognitive rationality and the progressive differentiation and rationalization of the division of labor in industrial societies.

While the attributes of special status and prestige imply that the professions are linked to the system of social stratification, the emphasis on the cognitive and normative dimensions of profession tends to separate these special categories of the social division of labor from the class structure in which they also are inserted.¹⁵ In particular, the ethics of disinterestedness claimed by professionals appear to acquit them of the capitalist profit motive. The ideal-typical approach seldom takes account of the concrete historical conditions in which groups of specialists have attempted to establish a monopoly over specific areas of the division of labor. The class context in which authority is delegated and privileges are granted to these particular occupations tends to be neglected. Thus, while Freidson's analysis emphasizes that a profession must gain support from strategic social or political groups, the institutional approach suffers from a tendency to present professions as categories which emerge from the division of labor in unmediated connection with society as a whole.

Both sociological ideal-types and the self-presentation of professions imply that the professions are independent from or at least neutral vis-à-vis the class structure. Professions can be viewed as themselves constituting a class—especially if class is reduced to its indicators, socioeconomic status and occupation. But the emphasis on the professions' cognitive mastery and the implication of "class neutrality" place them, rather, in the stratum of educated and "socially unattached" intellectuals whom Karl Mannheim described in these terms:

Although they are too differentiated to be regarded as a single class, there is, however, one unifying sociological bond between all groups of intellectuals, namely, education, which binds them together in a striking way. Participation in a common educational heritage progressively tends to suppress differences of birth, status, profession, and wealth, and to unite the individual educated people on the basis of the education they have received. . . . One of the most impressive facts about modern life is that in it, unlike preceding cultures, intellectual activity is not carried on exclusively by a socially rigidly defined class, such as a priesthood, but rather by a social stratum which is to a large degree unattached to any social class and which is recruited from an increasingly inclusive area of social life.¹⁶

Mannheim's notion that cultural life in capitalist societies was becoming "increasingly detached from a given class" contrasts sharply with the Marxist tradition.¹⁷ Marxist thought concedes to intellectuals a measure of autonomy and detachment from any predetermined social group, but it sees those attributes as a potential which remains within the confines of a class society. In the same perspective, intellectual products either break with the dominant ideology (by a self-conscious effort of their authors), or remain within its bounds.¹⁸ The social function of intellectuals is normally that of consciously articulating, propagating, and organizing culture and ideology, giving them internal coherence and realistic flexibility. For Antonio Gramsci, intellectuals—a category that includes practically all "intellect workers"—are "organically" tied to the class whose interests are actually upheld by the intellectuals' work and productions. Intellectuals are obviously of strategic importance for the ruling class, whose power cannot rest on coercion alone but needs to capture the "moral and intellectual direction" of society as a whole. A revolutionary class must secrete and develop its own "organic" intellectuals in order to challenge the hegemonic power of the ruling class and strengthen the "counter-hegemonic," consciousness of the masses. A complex historical formation includes, however, intellectuals whose function in the "organization of culture" is not as directly linked to the maintenance of ruling class hegemony. Gramsci calls them "traditional" intellectuals: their organic ties to the ruling class have been lost, because they remained attached to a class which itself has lost its central position of power; other, more vital groups of intellectuals have superseded them in the creation and transmission of ideology. The relative social superfluity of "traditional" intellectuals enhances their isolation within institutions that are relatively autonomous from the state and the predominant fractions of the ruling class. "Traditional" intellectuals thus tend to constitute closed, caste-like bodies, which are particularly difficult for a revolutionary movement to co-opt or absorb. Defending corporate vested interests, they speak for abstract intellectual freedoms, for the

independent service of disembodied knowledge and "pure" ideas. Examples of "traditional" intellectuals would be the clergy (in an increasingly secularized society), certain branches of the professoriat, and, in Gramsci's analysis of the Italian South, the legal "caste" tied to a landowning class which has not risen to national power.¹⁹

This outrageous oversimplification of Gramsci's analysis of the intelligentsia suggests, at least, why I think that analysis is so relevant for understanding the position and functions of professions in a class society. Different professions, and different groups within a profession, form different ties with a ruling class which itself consists of changing coalitions. The model of profession which emerges from most sociological ideal-types appears to confer upon the established professions the seal of "traditional intellectuality." Historical continuity is not only implied; it is deliberately and actively sought in the attempts by organized professions to give themselves a culture with roots in a classic past. The caste-like appearance of established professions is reinforced by their jealously defended autonomy and their guild-like characteristics. Yet this "traditional" presentation is contradicted by the professions' involvement in the everyday life of modern societies and also by the proximity to power of many professional elites. The contradiction is resolved if we recall that the "organic" or "traditional" character of a category of intellectual workers is not a static feature, but the outcome of a complex historical situation and of ongoing social and political conflicts.

It is clear, at this point, that Gramsci's perspective on the intelligentsia complements Freidson's account of how a particular occupation rises to the status and power of profession. As it rises, an occupation must form "organic" ties with significant fractions of the ruling class (or of a rising class); persuasion and justification depend on ideological resources, the import and legitimacy of which are ultimately defined by the context of hegemonic power in a class society; special bodies of experts are entrusted with the task of defining a segment of social reality, but this trust is also to be understood within the broad confines of the dominant ideology. One could say that the professions seek special institutional privileges which, once attained, steer them toward relatively "traditional" intellectual functions. But the need to defend these privileges, and particularly the professions' immersion in the everyday life of their society, counteract this tendency toward "traditionalism." Not surprisingly, the appearance of detachment and "pure" intellectual commitments is more marked in academic circles than in the consulting professions. However, one may ask with Freidson how far a profession (or an academic discipline) can move toward the "traditional" role and still retain social support; for, indeed, "traditional" intellectuals have little relationship to the predominant forms of knowledge and concerns of their society.

These brief comments on the literature suggest how the initial focus of my research began to shift as I looked at what contemporary sociology has to say about professions, and as I tried to relate the problem of professions to the more general problem of intellectuals in a class society. It appeared to me that the very notion of profession is shaped by the relationships which these special occupations form with a type of

society and a type of class structure. Professions are not exclusively occupational categories: whatever else they are, professions are situated in the middle and upper-middle levels of the stratification system. Both objectively and subjectively, professions are outside and above the working class, as occupations and as social strata. In the first half of the nineteenth century, many professionals may have shared the life conditions of small artisans and shopkeepers; changing work conditions in our century may be drawing increasingly large numbers of professionals closer to a proletarian condition. The fact remains that individual professional status is still undeniably a middle-class attribute and a typical aspiration of the socially mobile children of industrial or clerical workers. The internal stratification of professions cannot be ignored; but the market of labor and services within which professionals operate is structurally different from the labor market faced by less qualified workers. Their relative superiority over and distance from the working class is, I think, one of the major characteristics that all professions and would-be professions have in common.

Another general point emerges from the sociological literature on professions: most studies implicitly or explicitly present professionalization as an instance of the complex process of "modernization." For professions, the most significant "modern" dimensions are the advance of science and cognitive rationality, and the related rationalization and growing differentiation in the division of labor. From this point of view, professions are typical products of modern industrial society.²⁰ The continuity of older professions with their "pre-industrial" past is therefore more apparent than real.

Modern professions made themselves into special and valued kinds of occupations during the "great transformation" which changed the structure and character of European societies and their overseas offshoots. This transformation was dominated by the reorganization of economy and society around the market.²¹ The characteristic occupational structure of industrial capitalism and its characteristic mode of distributing rewards are therefore based on the market. Weber, in particular, defined the ability to command rewards in the marketplace as a function of both property and skills, and the possession of skills may be seen as a typically "modern" form of property.²² A contemporary sociologist observes that "to characterize the occupational order as the backbone of the reward structure is not to ignore the role of property, but to acknowledge the interrelation between the one and the other."²³ And he adds: "Broadly considered, occupational groupings which stand high in the scale of material and symbolic advantages also tend to rank high in the possession of marketable skills. . . . To be sure, positions which rank high in expertise generally attempt to maintain or enhance their scarcity, and thus their reward power, by various institutional means . . . it is no simple matter for an occupation to restrict its supply in this way."²⁴

My intention is to examine here how the occupations that we call professions organized themselves to attain market power, I see professionalization as the process by which producers of special services sought to constitute and control a market for their expertise. Because marketable expertise is a crucial element in the structure of modern inequality, professionalization appears also as a collective assertion of special social status and as a collective process of upward social mobility. In other

words, the constitution of professional markets which began in the nineteenth century inaugurated a new form of structured inequality; it was different from the earlier model of aristocratic patronage, and different also from the model of social inequality based on property and identified with capitalist entrepreneurship. In this sense, the professionalization movements of the nineteenth century prefigure the general restructuring of social inequality in contemporary capitalist societies: the "backbone" is the occupational hierarchy, that is, a differential system of competences and rewards; the central principle of legitimacy is founded on the achievement of socially recognized expertise, or, more simply, on a system of education and credentialing.

Professionalization is thus an attempt to translate one order of scarce resources—special knowledge and skills—into another—social and economic rewards. To maintain scarcity implies a tendency to monopoly; monopoly of expertise in the market, monopoly of status in a system of stratification. The focus on the constitution of professional markets leads to comparing different professions in terms of the "marketability" of their specific cognitive resources. It determines the exclusion of professions like the military and the clergy, which do not transact their services on the market.²⁵ The focus on collective social mobility accentuates the relations that professions form with different systems of social stratification; in particular, it accentuates the role that educational systems play in different structures of social inequality.

These are two different readings of the same phenomenon: professionalization and its outcome. The focus of each reading is analytically distinct. In practice, however, the two dimensions—market control and social mobility—are inseparable; they converge in the institutional areas of the market and the educational system, spelling out similar results but also generating tensions and contradictions which we find, unresolved or only partially reconciled, in the contemporary model of profession.

The image or model of profession which we commonly hold today, and which we find as well in social science, emerged both from social practice and from an ideological representation of social practice. The image began to be formed in the liberal phase of capitalism, but it did not become "public"—that is, commonly understood and widely accepted—until much later. Not by accident, the model of profession developed its most distinctive characteristics and the most clearcut emphasis on autonomy in the two paramount examples of laissez-faire capitalist industrialization: England and the United States. In the Anglo-Saxon societies (and, one could add, in Anglo-Saxon social science) the image of profession is one which implicitly accentuates the relation between professional privilege and the market. Profession is presented, for instance, as the antithesis of bureaucracy and the bureaucratic mode of work organization. The development of professions (and of their image) was, in a sense, less "spontaneous" in other European societies with long-standing state bureaucracies and strong centralized governments. For instance, engineering emerged in Napoleonic France as a *corps de l'état*, and this model has informed the aspirations of other professions, such as architecture; the Prussian legal profession was reformed by direct and repeated state intervention and remains to

this day closely supervised and regulated by the state; Westernized medicine was similarly created in Tsarist Russia by the political authority.²⁶ The model of profession should be closer in these cases to that of the civil service than it is to professions in England or, especially, in the United States. For this reason, I believe it should present its "purer" features in the Anglo-Saxon countries.

In the United States, in particular, the model of profession has acquired a singular social import. It shapes, for one thing, the collective ambitions of occupational categories which in other countries could never hope to reach the status of profession. The extension of professionalization reflects, among other things, the particular openness of the American university to new fields of learning and the widespread access to higher education in American society.²⁷ Basing occupational entry on university credentials does not lead, in other words, to excessive social exclusiveness. Furthermore, professions are typical occupations of the middle class, and the vision of American society and culture as being essentially "middle class" is not challenged as strongly as it is in Europe by the alternative and autonomous vision of a politicized working class. The strategy of professionalization holds sway on individuals and occupational categories which are inspired elsewhere by the political and economic strategies of the labor movement.

To limit my analysis of profession and professionalization to England and the United States is not entirely an arbitrary choice, but it is a restrictive one. My account of the establishment and the meaning of professional privilege can in no way be generalized. However, because it is based on societies in which the professional model has developed the most freely out of the civil society, and where it structures the diffuse perceptions and aspirations of large numbers of people, it may help to illuminate efforts and representations which, in other societies, are less systematically tied to the model of profession than they are in the United States and England.

Finally, my historical account of professionalization is relevant to the experiences with which I started. The model of profession emerged during the "great transformation" and was originally shaped by the historical matrix of competitive capitalism. Since then, the conditions of professional work have changed, so that the predominant pattern is no longer that of the free practitioner in a market of services but that of the salaried specialist in a large organization. In this age of corporate capitalism, the model of profession nevertheless retains its vigor; it is still something to be defended or something to be attained by occupations in a different historical context, in radically different work settings, and in radically altered forms of practice. The persistence of profession as a category of social practice suggests that the model constituted by the first movements of professionalization has become an ideology—not only an image which consciously inspires collective or individual efforts, but a mystification which unconsciously obscures real social structures and relations. Viewed in the larger perspective of the occupational and class structures, it would appear that the model of profession passes from a predominantly economic function—organizing the linkage between education and the marketplace—to a predominantly ideological one—justifying inequality of status and closure of access in the occupational order. This book is concerned with exploring that passage.

PART I

THE ORGANIZATION OF PROFESSIONAL MARKETS

monopolized by their creators-possessors. Moreover, the fruits of their application are also a monopoly: in effect, the services that rest on cognitive specialization are almost exclusively reserved to the small literate elites on whom the specialists depend for their existence.³ Their association with elite groups is obvious for the law profession, and also for architecture in the great empires: although architects in Rome were often drawn from the class of slaves, architecture, whether private or official, was considered by Cicero and Vitruvius as "one of the learned professions for which men of good birth and good education are best suited."⁴ As for medicine, given the universal need for healing and the ineffectiveness of most therapies, it was more sharply stratified and divided by the social position of the practitioners' clientele than by the origins of the techniques that were applied.⁵

The distinction between "specialists for the elite" and "practitioners" for more popular clientele became far clearer with the rise of institutionalized centers of learning, that is, with the rise of the universities in medieval Europe. With some exceptions, the medieval origins of the older professions show a bifurcation between university and guild. The universities had started as associations of students and teachers, or "guilds of learning," but they soon came under the dominating influence of the Church. Secularization gradually emancipated law and medicine from this tutelage. But the association with the university and, especially, the knowledge of Latin, distinguished the "learned" professions from the craft guilds that developed in the towns between the eleventh and the thirteenth century. The links with the Church, presumably, increased the aura of mystery surrounding the professions' esoteric knowledge, while Latin clearly associated them with the world of the elites. Their specialized counterparts in the guilds—scrivener, common lawyers, apothecaries, barber-surgeons, master-masons, millwrights—had relatively more democratic origins and clientele. Some of these specialists appear, much later, in noble or rich households in a master-servant relationship with their aristocratic patrons.⁶ As a rule, however, the common practitioners of the craft guilds appeared together with the urban markets of medieval Europe as free artisans and tradesmen. Their orientation was primarily commercial—that is, geared to a market of services. In England, these pre-professional specialists survived the decline of the craft guilds and, as the "lower branches" of medicine and the law, played a dynamic part in the nineteenth-century constitution of the modern professions.⁷

Two aspects of the professions' pre-industrial past deserve to be emphasized, for they illustrate well the continuity of form and discontinuities of substance between traditional and modern professions. First, from their pre-industrial days, the professions were closely bound to the stratification system. For the learned professions, establishment and social standing were equivalent to their association with the elites and with the state.⁸ But until almost the nineteenth century, we cannot speak of an internal stratification of the professions, for "common" and "learned" practitioners inhabited different social worlds. Even though they practiced in related fields, the rigidity of the stratification system prevented the constitution of unified areas within the social division of labor. Thus, there were limitations to what their association with the dominant class could ensure for the learned professions: ensconced in the world of elites, they did not compete with their plebeian rivals and

Chapter 1

THE HISTORICAL MATRIX OF MODERN PROFESSIONS

PRE-INDUSTRIAL ANTECEDENTS

Before the industrial revolution, the profile of the free practitioner was defined for lawyers and physicians, and, to a lesser degree, for architects as well.¹ But even the profession of law—which was the first to disengage itself, in the fourteenth century, from the tutelage of the Church—had not yet developed the stable and intimate connection with training and examinations that came to be associated with the professional model during the nineteenth century. This dependence on "objectively" legitimized competence is characteristic of the modern professions; it dates from the "great transformation" which became visible in England toward the end of the eighteenth century. The ethical concept of work which professions inherited from the Reformation is not much older. Professions are, therefore, relatively recent social products. However, a few elements from their pre-industrial past are important to recall, for they suggest why the post-revolutionary societies became a fertile ground for the professions' development and multiplication.

Specialization of function and the creation of special bodies of practical or theoretical knowledge are a function of the accumulation of resources. In preliterate societies, according to Wilbert Moore, the specialized services that are performed outside of kinship structures are those clearly connected with the "salience of the knowledge or skills for individual or collective welfare."² But, even before the appearance of writing, "salience" cannot be understood outside of the limits which the preservation of a given social order imposes on the possible definitions of "individual and collective welfare." Therefore, as soon as we consider class societies, the development of specialized roles and functions is broadly determined by the structure of inequality from which it is inseparable: dependent upon the unequal distribution of wealth, power, and knowledge, the institutionalization of specialized functions itself contributes to the unequal distribution of competence and rewards.

The emergence of the state differentiates the advisers of the rulers from the mass of the ruled. Writing, which allows the accumulation and transmission of knowledge on an unprecedented scale, is monopolized by a caste of scribes with special power. In general, all the special bodies of knowledge that appear in a class society can be

could have only weak claims against them. As Eliot Freidson remarks for medicine, passage through a university or membership in a guild gave physicians the means to distinguish themselves from other kinds of healers. These institutional links, however, did not establish their superiority in the eyes of a broad public; by themselves, these marks of distinction were not sufficient to monopolize the healing function. The favor of an elite did not necessarily bring with it wide public support.⁹ To equip themselves for the conquest of public confidence was one of the main tasks of the professions during the "great transformation."¹⁰ Both logic and historical evidence indicate that the heirs of the pre-industrial professional elites were not the main actors in this effort: secure in their privileges, they had no urgent reason to become the vanguard of the modern process of professionalization.¹⁰

A second point, intimately related to the first, concerns the medieval association of the learned professions with the Church and the university: from this association, the established professional elites derived a clear notion that what distinguished them from traders and artisans was, chiefly, a "liberal education"—that is to say, an education fit for a gentleman, based more on classical culture than on practical skills: The latter had always been acquired through varied forms of apprenticeship, traditionally viewed as an extension of the education conducted within the family.¹¹ The social position and contacts of the family from which a youth set forth to be apprenticed to a father-like master defined the kind of master, and therefore the kind of training, he got. General culture was a further statement about rank, a way of acceding to the cultural province of an elite.

This conception of liberal education also affected the democratic United States, through its British heritage, and especially through the clergy's enormous influence on higher education: since education bore a clearly religious stamp, the study of the classics seemed useful and practical for the perpetuation of what was the moral and intellectual core of colonial community life.¹² Higher education was essentially classic, aimed at the formation of clergymen and gentlemen who would later acquire a trade, despite the efforts of men such as Franklin and Jefferson to give education a more practical and more secular imprint.

Thus, although formal education appears early in the professional constellation, its import changes radically with the assertion of a modern form of professionalism. The established professional elites could indeed secure their social position through their gentlemanly education, which symbolized their claims on social status; to claim superior competence was based on a different use of education and certification. The rise of a system of formal education which includes basic pre-professional instruction and practical training was crucial: it reorganized and superseded apprenticeship, thus signaling the triumph of a new conception of professionalism over the old one. From dependence upon the power and prestige of elite patrons or upon the judgment of a tightly knit community, the modern professions came to depend upon specific formal training and anonymous certificates.¹³

THE RISE OF MODERN PROFESSIONALISM

In the Anglo-Saxon world at the beginning of the nineteenth century, the recognized gentlemanly professions were, in practice, only three: divinity, and its recent

offshoot university teaching; the law, which filled, with the exception of architecture, most of the relatively prestigious specializations that could be considered "professional" before the industrial revolution; and the profession of medicine.¹⁴ In England, the three traditional professions were hierarchically divided into higher and lower branches. The hegemonic social position of the landed gentry reserved the careers in government and the military to those with family connections. In the professions, connections with eminent practitioners were more useful than connections with the Court, the Parliament, and the ecclesiastic hierarchy; but they similarly restricted the mobility of the middle orders and reinforced the predominance of patronage.¹⁵

The French Revolution had sharply signified, for France and for the world, that careers were to be open to talent. But even in France, except for the military in wartime and the government, the opening was more ideological than real until 1830 and the industrial take-off.¹⁶ Both the rise of the modern professions and the reform of the civil service (which in Britain became a fact only after the Medical Act of 1858 and the 1855 report of the Civil Service Commission) were crucially linked to the use of the competitive examination system. This move by merit against birth and patronage was closely connected to the political fortunes of the middle classes and, in England, to the electoral reform of 1832. The democratization should not be overestimated; however, the constitution of modern professions and the emergence of a pattern of professional career represented for the middle classes a novel possibility of gaining status through work.¹⁷

The modern model of profession undoubtedly incorporates pre-industrial criteria of status and pre-industrial ideological orientations. Any concrete historical process, such as the first phase of modern professionalization, inextricably binds together elements which, analytically, pertain to different and even antithetic structural complexes. The collective project of professionalization, furthermore, has its roots in a time of radical and rapid change: the men involved in this project were the "carriers of social structure" and they carried the imprint of changing historical circumstances. Their product, however, was an innovation—if nothing else, because it reorganized and transferred into a new social world parts and patterns of the old.

The general circumstances which imprinted the first phase of professionalization were roughly the same for all the professions. Like most other forms of social organization, professions emerged together in a spurt which Carr-Saunders calls "a wave of association."¹⁸ This can be shown by considering the dates at which national professional associations were founded—not because the professional association is an equivalent of profession, but because it indicates the maturity of the professional project. In England and in the United States, to which I am limiting my analysis, the principal professional associations were formed in the span of two generations. In England, of the thirteen contemporary professions listed by Harold Wilensky as "established" or "in process," ten acquired an association of national scope between 1825 to 1880—a fifty-five year span. In the United States, eleven of the same thirteen were similarly organized into national associations in forty-seven years, from 1840 to 1887 (see Appendix Table 1).

The professions that were formed in America were clearly inspired by their Euro-

pean models—especially the British, in the beginning—but, obviously, there were structural differences between the New World and the old which account for many differences in the professional process and in the emergent pattern. Nevertheless, both in England and in the United States, modern professionalization is connected with the same general historical circumstances; it coincides, that is, with the rise of industrial capitalism with its early crises and consolidation and, toward the end of the nineteenth century and the beginning of the twentieth, with the evolution of capitalism toward its corporate form.

In a seminal essay on organizations and social structure, Arthur Stinchcombe elaborates the proposition that a given society determines the "social technology" available for the invention of new organizational forms. Organizations with these new forms tend to appear, therefore, at the time when it is precisely possible to find them and when they can function effectively with their new structure. Effectiveness reinforces the tendency to institutionalize an organizational form; hence, organizational structures which were invented "at the right time" tend to become relatively stable. For Stinchcombe, the "social technology" available includes prominently the "economic and technical conditions," which determine what resources will be available to the creators of new organizations. To these factors I would add ideological conditions, which, among other things, limit the alternatives available or imaginable and are a most important determinant of the motivation to organize. Ideological conditions are particularly relevant in the case of those organizations which, like the professions, aim at "increasing the amount of trustworthiness among strangers" in order to market expert advice.¹⁸

The type of resources mobilized by the professional project* had a determining impact on the resulting organizational and ideological structure. These resources were heterogeneous, for the available "social technology" mixed elements pertaining to the social division of labor with elements pertaining to status stratification in a time of rapid and fundamental social change.

Stinchcombe's analysis relates organizational capacity at a given time with certain basic societal variables which have a positive effect on both the "motivation to found organizations" and the "chances of success of new organizational forms." As a consequence, the rate at which new organizational forms appear tends to increase. These basic societal variables are "literacy, urbanization, money economy, political revolution, and previously existing organizational density."¹⁹ That most of these general conditions greatly improved in England after 1830, and in America some decades later, hardly needs to be belabored.

It is true that education in England was hardly something to boast about, despite the survival of the parish schools and the liveliness of the Scottish universities. Eric Hobsbawm calls English higher education before 1848 a "joke in poor taste" and

* According to Webster, "project" means "a planned undertaking." As the term is currently used in sociological analysis, it does not mean that the goals and strategies pursued by a given group are entirely clear or deliberate for all the members, nor even for the most determined and articulate among them. Applied to the historical results of a given course of action, the term "project" emphasizes the coherence and consistency that can be discovered ex post facto in a variety of apparently unconnected acts.

adds that "special fears discouraged the education of the poor."²⁰ But literacy, at least, must have been common in the coarse business circles painted by Dickens. The conditions of the working poor were tragic, both before and after the repeal of the Poor Act; however, the political and cultural vitality of the working class, so admirably documented by E. P. Thompson, indirectly attests to the spread of literacy.²¹ The Charter of 1839 was signed by 2,283,000 persons, and that of 1842 by 3,317,702.²² The self-serving efforts of the middle classes to discipline the poor also afford indirect evidence of the spread of literacy: in 1787, "Robert Raikes estimated that a quarter of a million children were attending Sunday schools. . . . By 1833, the number . . . had increased to a million and a half."²³ In 1851, the year in which the urban population first outnumbered the rural, there were in England about 76,000 men and women, both laymen and religious, who described themselves as schoolteachers.²⁴ Primary education did not become compulsory until 1880, for children up to the age of ten.

In America, the public system of education began to take shape after 1860. By 1880, however, there were only 8.7 percent illiterates among native whites older than ten years—a fact which undoubtedly attests to the unreliability of statistics, but also probably to some progress in the spread of literacy in previous years.²⁵

Besides literacy, the fantastic development of road networks, railways, the telegraph, the organization of a postal system, the multiplication of newspapers and periodicals, attest that the industrialized countries were accomplishing in the second half of the nineteenth century a qualitative leap in actual and potential communications.

Some facts are too well-known to bear much elaboration: the nineteenth-century industrial revolutions were preceded and then accompanied by an unprecedented acceleration in the annual rates of population growth. The shift in the distribution of labor from agriculture to manufacturing contributed to the sustained growth of towns and cities. The revolutionary transformation of the mode of production entailed an increase in the rate of growth of the gross national product that had no historical precedent. In other words, the term "industrial revolution" presupposes the transformation of agriculture and a revolutionary increase in agricultural productivity; it implies a correlation with a demographic revolution, with urbanization and with the sustained growth of aggregate measures of national wealth.²⁶

Politically, the Anglo-Saxon countries had not experienced and would not experience (if we grant the American Civil War the status of a special political phenomenon) the revolutionary intensity that France had known and that the major European states would know as well in 1848 and thereafter. But the middle classes had won extended political rights in England in 1832, and by 1840 the United States had already experienced the disruptions of independence and the impact of Jacksonian democracy, which achieved, in most states, free suffrage for white males.

In France and in the United States outside the South, before the middle of the nineteenth century the larger concentrations of wealth were no longer in the hands of landowners. In Britain, despite the lingering economic predominance of the peerage, the income of peers depended more and more on the economic enterprises of the bourgeoisie. Hobsbawm warns, however, that the social transformation should not be exaggerated. The ranks of the middle classes were still quite thin: from 1801 to 1851, the number of people earning more than 150 pounds annually passed in

Britain from about 100,000 to about 340,000. Given the large families of the time, this means that approximately a million and a half persons, or about 7 percent of the total population, enjoyed this status. "Naturally," says Hobsbawm, "the number of those who sought to follow middle-class standards and ways of life was very much larger." But the rich among them were few. Hobsbawm thinks that those with incomes above 5000 pounds per year could not have numbered much more than 4,000, including the peerage, and he adds: "the proportion of 'middle-classes' in other countries was not notably higher than this, and indeed was generally rather lower."²⁷

The modern professions were spawned, thus, by incomplete but nonetheless awesome developments. The possibility of organizational creation had arisen for them, as well as for the industrial bourgeoisie that was "shaping the world in its image." But the resources for the professional project were still limited, as attested by the narrowness of their potential middle-class clientele—which was the only imaginable one, besides the traditional elites. In England, the working masses, for the most part living close to abject poverty, inhabited the "other nation," outside the ken of bourgeois "civilization." And although the market for professional services was potentially larger in the United States, it was in fact limited by other factors: the newness and dispersion of Western settlements, the ideological resistance everywhere, the modesty of the average standards of living. Emerging themselves with an emergent social order, the professions first had to create a market for their services. Next, and this was inseparable from the first task, they had to gain special status for their members and give them respectability. The organizational devices they used reflected both the new and the traditional social order, drawn as they were from two different worlds.

Chapter 2

THE CONSTITUTION OF PROFESSIONAL MARKETS

The emergence of professional markets in the competitive phase of capitalism was an accessory development in a much more formidable transformation. In structure and ideology, the emerging modern professions foreshadowed much that could be realized in practice only in our century, when capitalism entered its corporate phase. In the first half of the nineteenth century, however, when professions began to organize and reform themselves, they were part of a world that was being subverted and reshaped by "the utopian endeavor of economic liberalism to set up a self-regulating market system."¹ These words, as well as the very expression "great transformation," are Karl Polanyi's; the general thrust of his brilliant interpretation is well known:

For a century, the dynamics of modern society was governed by a double movement: the market expanded continuously but this movement was met by a countermovement checking the expansion in definite directions. Vital though such a countermovement was for the protection of society, in the last analysis, it was incompatible with the self-regulation of the market, and thus with the market system itself.²

Now it is customary to say that professions are "those occupations in which *caveat emptor* cannot be allowed to prevail and which, while they are *not pursued for gain*, must bring to their practitioners income of such a level that they will be respected and such a manner of living that they may pursue the life of the mind."³ It would be tempting, then, to consider the professions as expressions of Polanyi's "countermovement" and thus account for their paradoxical position: for they are, in fact, one of the distinctive features of industrial capitalism, even though they claim to renounce the profit motive and appear to some as "a mere survival of the medieval guild."⁴ But such an account would not only be too simple; it would also incorporate uncritically much of the professions' appearances and ideological self-conceptions.

A first step to render modern professions sociologically intelligible is to reflect on their historical origins: professions were and are means of earning an income on the basis of transacted services; in a society that was being reorganized around the centrality of the market, the professions could hardly escape the effects of this reorganization. The modern model of profession emerges as a consequence of the necessary response of professional producers to new opportunities for earning an

income. A collective effort was needed on the part of the actual or potential sellers of services to capture and control expanded markets. For this, new forms of eliciting and guaranteeing the buyers' preference and trust had to be devised and implemented.

From this point of view, the constitution of modern professional markets represents one more instance of social reorganization around the "cash nexus," since a market society means that the money bond has become a predominant principle of social cohesion.⁵ The motor of the transformation was the revolutionary affirmation and extension of the capitalist mode of production: after its first steps had been duly protected by state and monopoly privileges, capitalism—that is, its entrepreneurial leaders and intellectual spokesmen—rejected all traditional restrictions to the indispensable development of competitive markets.

The professions were in a special position: unlike the early capitalist industries, they were not exploiting already existing markets but were instead working to create them.⁶ The most lucrative markets were small and monopolized: through patronage and frozen corporate privileges, castles of traditional professionals controlled the access to universities and guilds, and thereby to elite clientele. Below these guarded grounds, competition was keen. The task of professional organizers was twofold: to open the ranks of traditional professional elites by direct or indirect attack upon their gatekeeping institutions; and to organize the expanded markets opened by urbanization and by the relative enrichment of certain publics.

Ancien régime privileges had hindered, though never stopped, the rise of a new class and the disintegration of the old social order. Where political revolution smashed the privilege of guilds and corporations, as it did in France, new warrants of professional worth had to be devised swiftly. Where change was more gradual, as in England, the traditional professional elites had more time to respond and adjust; nevertheless, their insufficient arrangements for controlling an expanding profession and an expanding market had to be replaced. Even if the institutional mechanisms that emerged seemed less new than in post-revolutionary societies, or less effective than those imposed from above by a centralized state, they still served analogous functions with regard to the widened market for professional services. The secular processes that prepared bourgeois hegemony had also altered the pre-industrial social matrix of the professions: for one thing, urbanization had already begun to dissolve in the eighteenth century the "interfusing of family, community, and profession which for long remained typical of nineteenth-century villages, small towns, and even urban neighborhoods."⁷ Elite clientele could always confer special status to their favored practitioners, as they still do in our day; they could not, however, serve as guarantors for every profession, nor deliver to their protégés the means to conquer wide and anonymous publics.

COMMUNITY-ORIENTED AND MARKET-ORIENTED SOCIETY

In the United States and England, as in most other European societies, the professional modernization that started in the nineteenth century was oriented toward a society in which community and aristocratic tradition were no longer sufficient to

guarantee credit and credibility. The ideal-typical passage from community-oriented to market-oriented society gives similar contours to the task faced by professional reformers. Concrete historical contexts in turn, determine what resources are available for such an effort, sharpening the contours of the general model and marking the limits of its usefulness.

In late eighteenth-century England, economic and social transformations had only begun to encroach upon the well-guarded bastions of the traditional professional elites. Yet the existence of a national market and the success of the English Revolution of 1688 had signaled the definitive dissolution of the feudal order since the seventeenth century.⁸ The advance of bourgeois society in the wake of the structural transformations of the economy could not have left unaffected the conditions of professional practice.

The official professional elites of the Royal College of Physicians or the Inns of Court, centered in London, had monopolized since ancient times the right to license medical practitioners or to call lawyers to the bar. The rise of the "middle orders," however, had multiplied the numbers of practitioners who were in the lower branches, and thus excluded from the institutionalized sanctions of professional status. Medical practitioners of lower standing practiced chiefly in the provinces, outside the jurisdiction of the traditional corporations, and they worked in expanding though bitterly competitive markets. From the sixteenth century on, there is evidence, both in England and abroad, of a growing number of medical men. By the seventeenth century, extensive practices were bringing substantial wealth to an elite of London physicians, while lower down in the social hierarchy apothecaries were practicing medicine and setting themselves apart from shopkeeping druggists. In the eighteenth century, the apothecaries' standing as *bona fide* medical practitioners was recognized, even though their clientele as well as their status were quite modest, compared to those of the Royal College fellows, or the licentiates, or the increasingly prestigious surgeons.⁹

In the law, attorneys and solicitors—an amalgamated class, for all practical purposes—were reaching in this century the position they occupy at present in the English legal system. The Inns of Court discouraged their membership and excluded them from the bar, unless they abandoned their practice in the lower branch for at least two years before being called. However, the already expanding business of representing and counselling the government's various departments fell entirely into the hands of attorneys and solicitors. Strengthened by their new respectability, they had begun to organize in voluntary societies since the first decades of the eighteenth century. "Complaints were made", we are told, "of the number of attorneys; and the difficulty of applying any measure of discipline was increased by the existence of 'vagabond attorneys', that is, attorneys with no fixed address."¹⁰ To this, Parliament responded with the regulatory act of 1729. Formed in the 1730s, the Society of Gentlemen Practisers in the Courts of Law and Equity, in turn, took up supervision and enforcement of the act's provisions against unworthy attorneys as one of its main tasks.

Toward the end of the eighteenth century, pressures for professional organization were mounting. The most significant and longer-lasting of these movements

came from outside the small worlds of the traditional professional corporations. With the decline of amateur and clerical practitioners, professional callings had become full-time specialized vocations. Urbanization and improved communications were breaking the isolation of the large numbers of provincial practitioners.⁹ Expressing the general movement of the bourgeoisie for national reform, the organizational efforts of the new professional societies were centrally concerned with regulating competition, and therefore with the terms of access to the marks of professional fitness. As demands for entry or recognition increased, the traditional professional bodies tended to respond by making membership more exclusive. Both the Inns of Court and the Royal College of Physicians reasserted the privileges of Oxford and Cambridge graduates, even though the two ancient universities could hardly be commended for their standards of legal or medical education.¹² Passage through the hallowed English universities—from which Catholics, Dissenters and all but a few poor commoners were excluded, either *de jure* or *de facto*—was, if nothing else, a test of social fitness. In fact, the elite professionals of the traditional corporations tended to reserve entry into their ranks to those whom they considered social peers.

Thus, despite the existence of a minority of very successful middle class practitioners, the "first-class" marks of professional distinction were practically monopolized by aristocratic or quasi-aristocratic elites. That these marks were significant for the successful practitioners in the "lower branches" of medicine and law is shown by the leading role they took in the efforts to democratize the government of the traditional corporations. The bulk of the rising professional middle class was even more seriously damaged by the traditional monopolies over professional titles. Beyond the local sphere in which reputations were established, there were few recognized guarantees of competence and probity. Without these visible signs, respectable common practitioners found themselves helpless against the competition of the unscrupulous and the inept, who proliferated in unregulated markets. Their problems were sometimes acknowledged by the traditional corporations but seldom acted upon with determination. The position of the professional middle class was improved almost solely by the organizational efforts of their own leaders and of their own voluntary associations, which moved both against traditional monopolies over titles and licenses to practice, and against the competition of disreputable "colleagues."¹¹

Such pressure to break the closed ranks of a professional caste did not arise in America until much later. There had been great progress in higher education and the importation of British professional models in the eighteenth century, but the colonies remained poor, provincial, and sparsely populated. In a decentralized setting, the nine American colleges that existed before the Revolution could not hold the same consecrating power that Oxford and Cambridge held, despite their intellectual and political liveliness. These colleges gave a gentlemanly seal to those many graduates who did not enter the professions; the more numerous graduates who entered the ministry, most especially, or the law, or lastly medicine, constituted an elite among professionals. In the two secular callings, those practitioners who had studied abroad were an elite of the elite.¹³ The bar, in particular, had risen to

great power and prestige during the eighteenth century: from being an occupation of "mostly pettyfoggers and minor court officers . . . who stirred up litigation for the sake of the petty court fees," it had become in urban centers a social and political elite which matched the clergy in importance and tended toward closure.¹⁴ The Revolution purged the bar of its best practitioners, democratizing it, on the whole, but also setting back the general standards of a profession based on apprenticeship and creating a wide gap between the urban legal elites, who shaped the new republic's institutions, and the mass of a growing profession.¹⁵

But the existence of urban and Eastern professional elites did not mean that they constituted the apex of a recognized professional hierarchy. The difference between cities that looked to Europe and hinterland communities created almost unbridgeable chasms in all professions and trades. In remote frontier areas, geographic isolation assured a *de facto* monopoly to the lone attorney or physician; it must, however, have been a short-lived advantage, since isolation and decentralization also made self-appointment easy and thus made competition keener. Moreover, professional practice in eighteenth-century America most often was a part-time avocation, except for clergymen, one of whom each township was legally required to support in the old settlements, and who often doubled as part-time lawyers or healers. But even the clergy, which enjoyed in smaller towns the undisputed position of an intellectual elite, was prevented by denominationalism and decentralization from forming a united hierarchy. The clergy, besides, was unable to maintain its lifetime tenure and traditional social standing, as economic development and its sequel of regional depressions shook the foundations of stable community life.¹⁶

Thus even if decentralization, social mobility, and religious tolerance kept the American professional hierarchy much more open and fluid than in England, the differential sanction of different communities also distinguished in the United States the established urban professionals from the upstarts, the "learned" from the empirics, the gentle from the coarse, and soon, the native sons from the striving immigrants as well. Yet in an expanding social context, restricted professional monopolies could not hold for long. Whether it was the challenge against corporate privileges characteristic of professional modernization in England, or the decline of community warrants which affected both England and the United States, the breakdown of particularistic legitimations demanded the organization or the reconstruction of the competitive professional markets that were emerging in urban centers. In all walks of life, the industrial revolution was separating work and training from the household and from the community. Professional work was becoming a *full-time* means of earning a livelihood, subject to the dictates of capitalist competition for income and profit. To insure their livelihood, the rising professionals had to unify the corresponding areas of the social division of labor around homogeneous guarantees of competence. The unifying principles could be homogeneous only to the extent that they were universalistic—that is, autonomously defined by the professionals and independent, at least in appearance, from the traditional and external guarantees of status stratification. Thus, the modern reorganization of professional work and professional markets tended to found credibility on a different, and much enlarged, monopolistic base—the claim to sole control of superior expertise.

THE ORGANIZATIONAL TASK

The “great transformation” presented the professional “entrepreneurs” with expanding and “free” markets: despite the profound differences in social structure among the national societies that underwent the transformation, the general task of professional organization had similar structural requirements. It was substantively different, however, from the task that industrial entrepreneurs had confronted.

First, for a professional market to exist in a modern sense, a distinctive “commodity” had to be produced. Now professional work, like any other form of labor, is only a *fictitious* commodity; it “cannot be detached from the rest of life, be stored or mobilized,” and it is not produced for sale.¹⁷ Unlike craft or industrial labor, however, most professions produce intangible goods: their product, in other words, is only formally alienable and is inextricably bound to the person and the personality of the producer. It follows, therefore, that *the producers themselves have to be produced* if their products or commodities are to be given a distinctive form. In other words, *the professionals must be adequately trained and socialized so as to provide recognizably distinct services for exchange on the professional market.*

Second, in the formative period, most of the markets for professional services had to be created, for the existing markets were unstable and far from unified; common standards of what this unique commodity—intangible services—meant, and even of what needs it served, were lacking. For a secure market to arise, the superiority of one kind of services had to be clearly established with regard to competing “products.” The various professional services, therefore, had to be *standardized* in order to clearly differentiate their identity and connect them, in the minds of consumers, with stable criteria of evaluation. A tendency to monopoly by *elimination* of competing “products” was inherent in this process of standardization; for if other standards of evaluation were allowed to prevail, the preference of the public could not easily be reclaimed away from older “consumer loyalties.” Professional entrepreneurs, not unlike their counterparts in industry, were therefore bound to solicit state protection and state-enforced penalties against unlicensed competitors—that is to say, those producers of services whose training and entry into the market they had not controlled. However, no amount of coercion could force a clientele to switch allegiances and seek professional services which it did not even know it needed—at least not in the form that the leaders of professional reform were giving to those professional services. To establish in the public at large common bases for an evaluation of both need and professional competence was, therefore, an ideological task to which the rising professions actively contributed; but obviously, its magnitude was such that it could not be advanced by their efforts alone—ideological persuasion ultimately depended on the completion of the general social shift to a new “symbolic universe.”¹⁸ In consequence, the road that the professional reformers had mapped in the liberal phase of capitalism could not be traveled to the end with the “social technology” they had available.

Third, because the standardization of professional services is bound to the production of producers—that is to say, to education—it depends upon inducing new

recruits to accept the economic and social sacrifices of training. Hence, at least a moderate guarantee that the recruits’ educational investment would be protected had to be sought from the beginning. In a market situation, the guarantee against risks incurred tends to take the form of monopoly, or at least of special protection by the public authorities. In this case, the nature of the products and the state of their markets were such that only the state, as the supreme legitimizing and enforcing institution, could sanction the modern professions’ monopolistic claims of superiority for their “commodities.” The attitude of the state toward education and toward monopolies of competence is thus a crucial variable in the development of the professional project.

In sum, creating professional markets required, as in every other case, establishing social credit or, to paraphrase Durkheim, creating non-contractual bases of contract. Because of the pre-existing competition, this task demanded strong and quasi-monopolistic protective devices. Because of the unique nature of the products to be marketed, and because their use value to the large public was as uncertain as it was new, control had to be established first “at the point of production”: the providers of services had to be controlled in order to standardize and thus identify the “commodity” they provided. For this, a cognitive basis was crucial. The *kind of knowledge that each profession could claim as distinctively its own was therefore a strategic factor of variation in their organizational effort.* However, a cognitive basis of any kind had to be at least approximately defined before the rising modern professions could negotiate *cognitive exclusiveness*—that is, before they could convincingly establish a teaching monopoly on their specific tools and techniques, while claiming absolute superiority for them. The proved institutional mechanisms for this negotiation were the license, the qualifying examination, the diploma, and formal training in a common curriculum. The typical institutions that administered these devices were, first, the guild-like professional association, and later the professional school, which superseded the association in effectiveness.

Obviously, none of this was in itself an organizational invention. The guilds of merchants that sprang up in eleventh-century Europe were also voluntary associations tending toward the monopolistic control of a new form of trade. The craft guilds, which were organized everywhere by the thirteenth century, were also devices for establishing social credit in a phase of rapid development of small commodity production. In that historical situation, the merchant guilds moved from de facto monopoly to a right acknowledged by lords and cities. The assembling of producers along craft lines was encouraged by the public authorities as a means of regulating the new urban markets. That the craft guilds later strove to emancipate themselves from the municipal tutelage probably had more to do with the politics of the medieval cities than with the dynamics of professionalism.¹⁹ Nevertheless, the survival of the guild form in the midst of the industrial revolution no longer appears paradoxical: it suggests, rather, that associations of “free” producers backed by public authorities and tending toward monopoly are a general feature in the constitution of new markets based on free skilled labor.

What was genuinely new in the strategy adopted by professional reformers for constituting and controlling their markets was neither the tactical devices they

employed, nor even their institutional forms, but the particular combination of these elements into a specific structure. The kinds of market warrants that were needed by the modern professional entrepreneurs had, in turn, new and vastly significant structural implications. These warrants ultimately rest upon the predominance of formal training over various forms of apprenticeship. They attain their full effectiveness when the production of professional producers is conducted within monopolistic systems of education: in their modern form, these systems appear to match rewards with merit by means of formally universalistic criteria of recruitment and promotion. **This appearance legitimizes both monopoly and the hierarchical organization of educational systems.**

The establishment of national systems of public and compulsory education was in some cases led "from above" by "enlightened" autocratic states; in others it was the piecemeal outcome of diverse ideological and political struggles. In the latter instances, it coincided with the bourgeoisie's conquest of social hegemony.²⁰ In England, the first industrial society, it was the middling professional men who led the public negotiation of cognitive exclusiveness, in their effort to unseat the traditional professional elites and to separate themselves from the trades. Their progress involved nothing less than the creation of a graded system of comprehensive education and the reorientation of its higher-level institutions. It was hindered by the peculiarities of England's stratification system and by the persistent ideological influence of its aristocracy.²¹

The formidable task of setting up the educational apparatus of bourgeois hegemony involved the whole structure of each society and was shaped by each society's historical development. It necessarily concerned more numerous and diverse social forces than the narrow professional sector of the middle classes. What varied nationally and historically were the particular balances achieved between the upper classes, the clergy, sectors of the industrial bourgeoisie, *ancien régime* intellectuals, and the "organic" intellectuals of the capitalist class, including the professional reformers and organizers.²² However, the structures that emerged were analogous beneath the surface: *insofar as they were modern*, all levels of the new educational systems were spawned by capitalist industrialization. Determined by the specific class structure of each capitalist society, they determined it in turn, functioning as the characteristic instruments of legitimation of the mature capitalist order. The professions contributed their own specific amalgams of old and new ideological structures to the emerging systems of national education. They were obviously not the only ones to do so, but they led the way in asserting the crucial social function of credentialing systems.

To recapitulate and complete the steps of this analysis: the passage from restricted monopolies of practice to the organization and control of expanded and competitive markets was a necessary one for the professional sectors of the middle class, seeking to improve their position in the emergent stratification systems of capitalist society. Their task presupposed the abandonment—deliberate or involuntary—of the restrictive corporate warrants of professional credibility. It tended toward the reconstruction of monopoly on the universalistic principles dictated by the new dominant ideology. The crowning of this monopolistic project appears to be a set of legally

enforced monopolies of practice. However, the actual effectiveness of such sanctions depends on the parallel construction of a "monopoly of credibility" with the larger public. The conquest of official privilege and public favor was, for the professions, a double *external* task of ideological persuasion, which had an *internal* precondition: the unification of the corresponding areas of the social division of labor under the direction of a leading group of professional reformers. The crucial means for this unification, and therefore the concrete core of the professions' organizational task, was systematic training—or, in my terms, the standardized and centralized production of professional producers.

Traditional professional elites had monopolized the marks of distinction conferred by universities. But the actual content of their education, in relation to professional practice, was not that important: protected by traditional corporate privileges, the old professional elites did not need to submit their specific "commodities" to the test of market competition. Market competition, on the other hand, determines the necessary centrality of both training *and* the content of training in the structure of modern professions. The importance of *cognitive* exclusiveness in the control of expanded professional markets suggests some additional remarks.

The industrial revolution and the consolidation of capitalist social systems created new areas of practice and new occupational roles. The application of science to industry and to practically every other area of life gradually and constantly changed the cognitive bases of the social division of labor. It is logical to assume that their structural position in the division of labor gave an advantage to certain occupations: from the point of view of cognitive exclusiveness, those professions or professional sectors which had the opportunity of appropriating and standardizing *new* bodies of knowledge should have been favored in the creation of a distinctive "commodity" and in the attainment of a monopoly of competence. New techniques should be susceptible of monopolization by their inventors or first users: the novelty of a knowledge should therefore facilitate the task of erecting protective boundaries around it.

Professions, however, were not always in control of new knowledge relevant to their practice, for the good reason that much of it was produced by outsiders—researchers in related scientific fields, and also practical men in politics, in business, and in the arts. A profession's cognitive base can evolve in complete independence from the profession itself and from its production of professional producers, *until the production of knowledge and the production of producers are unified into the same structure*. Or, in other words: the link between research and training institutionalized by the modern model of university gives to university-based professions the means to control their cognitive bases. Once again, the emergence of modern systems of education—and here, in particular, the transformation of their higher branches into centers for the production of knowledge—appears as the central hinge of the professional project.

The monopolistic and standardized production of professional producers is a necessary step in the march toward market control, but it is by no means a sufficient one: indeed, the structure of the market in which a profession transacts its services does not depend on the profession's action and intentions—or at least not until the

profession gains considerable social power. The structure of a particular professional market is determined by the broader social structure which shapes the social need for a given service and therefore defines the actual or potential publics of a given profession.

In conclusion, to view professional modernization as a project of market control underlines the central role of the state in the development of this project, most particularly its function of sponsoring monopolistic education systems. This point of view explains the crucial importance of two components: the professional project combines them into one complex structure, even though their character and evolution can be, until then, totally independent from each other. Those components are the potential market for a professional service, on the one hand, and on the other, the cognitive basis to which this service is or can be tied.

In the next chapter I will consider in some detail the characteristic market situation of medicine: everywhere, it was one of the first professions to strive for internal unification, although it could not become until much later the leading model of professional power and success. This analysis will lay the ground for a paradigmatic view of the constellation of elements which can increase a profession's chances of attaining market control. A comparison of medicine with engineering will then allow me to explore the interplay between market structure and the cognitive basis of a profession.

Chapter 3

AN ANALYSIS OF MEDICINE'S PROFESSIONAL SUCCESS

To analyze the structure of the market for medicine we must ask how the nature of the medical "commodity" determines, at least in part, the size of the market, the typical modes of exchange, the intensity and variety of competition, and the attitudes of the public authorities toward regulation. Secondly, we must ask how changes in the nature of the commodity affected the chances of success of the professional entrepreneurs who were attempting to unify and control the medical market.

THE MARKET FOR MEDICAL SERVICES

The first and most obvious fact to consider is that the market for medicine is based on a vital and universal need: its potential for expansion is therefore unlimited, at least in principle. The general ideological climate of Western societies has favored the functions medicine claims to serve; the value of individual life, rooted in the Judaeo-Christian religious tradition, and individualism in general, have formed one of the strongest ideological dimensions of the post-feudal world. However, the actualization of this potential depended, for medicine, on factors other than the possible size of the market.

To begin with, the paying clientele in the nineteenth century was still quite narrow. But with more people becoming moderately affluent, and the already affluent getting richer, the perception that the practice of medicine was profitable to at least some physicians encouraged entry into the field.¹ The appearance of a market in urban centers, and, particularly in America, in rural areas as well,² set in motion the mechanisms for the standardized production of producers outlined in the preceding chapter. In England, the main problem was to tie the serious forms of training that the "lower branches"—surgeons and apothecaries—were organizing in their schools and teaching hospitals to a title of uniform prestige. In America, the absence of restrictive corporate monopolies, such as that of the British Royal College of Physicians, permitted an unbridled expansion of the supply of physicians. Proprietary schools, with requirements as lax as their curricula were brief, proliferated in the first two-thirds of the nineteenth century, rapidly substituting their diplomas for the license which medical societies had granted in most states since the eight-

teenth century.³ After 1825, competition for students among these schools led to a general decline of standards and requirements. The schools, nevertheless, had a powerful effect which apprenticeship by itself could never have attained: they induced a rapid growth of the profession, while standardizing medical practice to an extent as yet unknown.⁴

However, the state of medical science in the first half of the century and its particular lack of distinction in the United States implied that standardization was conducted on the basis of mostly ineffective therapies and unfounded pathological theories. The total freedom of the market and the ease with which schools could be set up institutionalized, in America, the characteristic sectarian divisions of its medicine. The "regular" doctors who founded the American Medical Association in 1847 and controlled most state societies, as well as many exclusive elite groupings, were not distinguished by any pragmatic superiority of the savage therapies which were their trademark; their advantage was relative—general education and social rank—and it differed from that of the corporate English physician only because it was not institutionalized. In the second quarter of the nineteenth century, the rise of homeopathic medicine brought this relative superiority to an end: homeopathy, indeed, was an attack by equally "genteel" doctors upon the standard therapies used by the "regulars."⁵ Unlike previous sectarian movements, such as Thomson's herbalism or Sylvester Graham's health prescriptions, homeopathy conquered urban middle-class and upper-class clientele in the United States, as it had done in Europe. It became, therefore, the primary target of the "regular" medical organizers.

American indifference to basic science appears to have played a large role in the lack of medical research during most of the nineteenth century.⁶ Its effects on the medical profession were compounded by the repeated assertion, on the part of the state legislatures, of every American's "inalienable right to life, liberty, and quackery."⁷ But even where scientific medicine had arisen and begun its growth early in the century—that is, chiefly in France and in Germany—it did not produce valid therapeutic results until the 1880s and 1890s. Medical practitioners were, therefore, almost as reticent toward science, as impotent against their rivals in the field, and as disunited as their American counterparts. It would therefore be misleading to assume, as is often done, that the market for "real" medical services expanded gradually, by a process of cumulative expansion of its "scientific nucleus."⁸ The universal need for health services could be beneficially tapped if, and only if, the satisfaction of the need could be connected in the mind of the public with *one type* of service.⁹ The "premodern" situation could not be overcome by medicine so long as consumers, when they changed providers, also changed medical commodities: in such a situation, we cannot speak of *one* market for medicine, but of many, and the sector controlled by the regulars was, at that, a relatively small one. In fact, until the end of the century, the fastest growing "medical" market was that of patent medicines, produced outside of any respectable medical persuasion.

Considering this situation, it is not surprising that medical graduates—most particularly in the United States, where it was so easy to overproduce them—were very often poor and frustrated up to the end of the nineteenth century.¹⁰ The uni-

versal need for medical services represents a tremendous asset for a category of professional producers only *after* they have succeeded in establishing a monopolistic hold on their market. Until then, the universality of the need operates in reverse, breeding competition.

Thus, the second feature of the market for medical services was its extreme competitiveness. In England, the most significant axis of competition was between the "lower branches" and the higher rungs of the profession—until 1858, when the Medical Act established a single national register of physicians. But in England as elsewhere, the proliferation of medical commodities shows, on the one hand, that the need for health services had been activated by various forces, chief among which was the transformation in ways of life brought about by urbanization.¹¹ On the other hand, this proliferation reflects a market situation fragmented into many incompatible definitions of the commodity to be sold.

Urbanization aggravated the economic and intellectual effects of competition: it fostered incursions into a rival's practice, price cutting, advertising, professional defamation, and the like. The situation was particularly critical in the United States: there were no medical schools of wide renown, and the public authorities, perhaps as a consequence, granted medical societies the right to issue licenses but were "unwilling to enact laws which would have deterred unlicensed practitioners."¹² The chief aim of the first medical societies was to create some distinctive trademarks by means of licensure and restrictions upon membership. They hoped to limit competition by reducing the supply of "real" doctors, by standardizing medical fees, and by adopting and enforcing codes of professional etiquette. From the 1820s on, the multiplication of proprietary medical schools not only killed in the bud the societies' monopolistic efforts; it also institutionalized the competition between different paradigms of healing, thus reducing the field of operation for all graduate practitioners.¹³

The associations, nevertheless, had begun the task continued by the schools—that is, the separation in the public's eyes between "graduate" physicians and "uneducated" or unlicensed empirics. They had also begun to provide a focus for the practice of medicine, atomized by the isolation or the competitiveness of solo practice. Local and regional societies of all persuasions managed to introduce a modicum of regulation and intraprofessional courtesy, while positions on the licensing boards gave prestige to their incumbents. Later, professorships in the schools became real "passports to business," providing medical faculties with central positions in networks of apprentices, former students, and patient referrals. In the United States in particular, the founding of societies, licensing boards, and schools had effects quite independent of these institutions' actual scientific worth: their existence constructed an occupational role-image for the "doctor" and preserved it in the public's eyes even when the withdrawal of public confidence in official medicine was at its highest. According to Richard Shryock, in the second half of the nineteenth century, most laymen had nothing but contempt for medical science, while holding their own family doctor in great respect.¹⁴

The extreme competitiveness of the medical field is important from the point of view of market organization: it has the paradoxical effect of spawning and spurring

constant efforts to regulate competition by controlling the supply of producers, the interaction between them, and the very process of production.

Furthermore, in a situation where official medicine was no more successful in curing disease than its rivals, it could still rely on traditional mechanisms to establish trust. Thus, the family doctor could maintain his prestige, in the face of widespread disbelief in medicine's therapeutic soundness, because he appeared, first of all, as the man to whom one went for help with *private* problems. His medical effectiveness was probably much less important than his parental attitude, his wisdom, his willingness to provide detached yet personalized help. Like the irregular practitioners, he too was backed by the force of community traditions; furthermore, to the reliance of rituals of help, he could add the prestige of middle-class status and at least the semblance of scientific capacity.

Expert advice, when it is given in a private interpersonal situation, can always readily draw upon extraprofessional sources of credibility and legitimation. Thus, all professions contain elements that appear more starkly and more coherently in the role of the priest. In a secularized society, the family doctor of old is one of the most direct inheritors of the role of the religious minister or priest. Modern medicine, however, more than any other profession, illuminates how functionally rational elements of legitimation—scientific expertise and proved technical superiority in healing—blend with traditional, irrational, or substantively rational supports. What is to be stressed here is that medicine is relatively exceptional in this sense, because of the persistently private and purely individual basis on which professional services are provided.

The privacy of the consulting room makes the physician's services impenetrable to public scrutiny: in the actual transaction itself, the patient faces the physician alone.¹⁶ The patient, therefore, must rely exclusively on his own uninformed judgment since, indeed, the information he has about the effectiveness of the services he is getting is always indirect or ex post facto: he can judge his doctor only through the subjective assessments and experience of other patients, through the realization that he is not getting any better (or that he is not improving fast enough), through non-functional factors of confidence, or through the judgment of other doctors. This last aspect is perhaps the most significant, for it is here that professional etiquette and the informal organization of the medical profession turn against the layman.¹⁷ The profession is outraged by malpractice suits and rejects, of course, the most logical attempts by patients to have something to say about a doctor's fees or his competence. Yet, as Eliot Freidson has shown, the privacy of solo practice is also impenetrable to colleague review. Beyond the requirements of a degree, obtained no matter how many years ago, there is little more that the profession expects of its members and little more that it controls.¹⁸

Moreover, the patient's anxiety about what may be, to him, matters of life or death leads him to make an emotional investment in the doctor-patient relation. Since there is a general tendency to attribute to one's doctor quasi-charismatic powers, uncritical acceptance of his expertise is frequent: a patient wants to believe that somebody can help.

These considerations on the typical mode of exchange in the medical market point to a third market characteristic: because of the permanently individual and private nature of the actual transaction, the sum of individual consumers are not, and most probably cannot, be organized. This market situation maximizes the effectiveness of association among the producers.

I have emphasized, however, that the medical market, like all other professional markets, ultimately depends on ideological sources of social credit. On the one hand, in the act of consultation, the doctor can appeal to interpersonal factors of confidence in order to bolster the individual patient's belief in his professional competence. On the other hand, general public belief in the profession's superior skills has to be deep and widespread enough to motivate the sum of individual choices which result in consultation with a physician. Thus, medicine appears to depend more than other professions on the general state of the public's ideology about the nature and functional attributes of healing. Legally enforced monopoly, however, can compensate for lack of widespread public confidence, and at the least it reinforces the ideological bases of trust. In this respect, medicine is particularly well served by the nature of the service it provides.

The fourth characteristic of the medical market is, in effect, the relatively greater readiness of public authorities to facilitate monopolistic control over practice by those professional healers who appear more effective, or at least more convincing, than others. The fact that medicine operates in an area of vital concern for the individual and for the community compels the state to intervene. Once scientific medicine had offered sufficient guarantees of its superior effectiveness in dealing with disease, the state contributed willingly to the creation of monopoly by means of registration and licensing. Indeed, only in a quasi-monopolistic situation can the producers be supervised and a minimum of "professional" competence obtained. Thus, because of the saliency of the medical function, monopolistic tendencies received state sanction long before the rise of modern medicine, as an expression of the state's efforts to regulate and standardize health practices: "Most European governments felt the need, at least by the sixteenth century, for some regulation of medical practice. The College of Physicians in London, the *collegium-medicum* of German cities, the *tribunal de protomedicato* in Spain, were all granted some control over licensing practitioners, the inspection of drugs, and the like."¹⁹ These premodern associations became more concerned with the protection of their monopoly than with the reliable production of professional producers; their entrenchment accounts in large part for the dynamics of emergence of modern professions in post-feudal societies.

What is significant here, though, is that the vital importance of public health always kept open to the profession of medicine a privileged conduit to governmental backing for its monopolistic claims. The recurrence of epidemics was a most powerful factor in reviving the periodically faltering interest in public health; in order to exploit this potential, medicine, as I have emphasized before, needed more than a market situation favorable to monopoly. It needed a dramatic demonstration that its services were more likely than those of other healers to solve persistent health problems. But even this was not enough: scientific medicine, indeed, was not the

patrimony of any sect, but the "product of convergent influences of diverse antecedents" into a wholly new school.²⁰ Often the resistance of regular medicine to bacteriology required an intervention of the state *against* established sectors of the profession, on the side of popular demand and of public health movements in which laymen often outnumbered physicians.²¹ For medicine to appropriate the new discoveries, the bulk of the profession had to be socialized to the new tools. This required, in effect, that one or more generations of physicians be formed along new and homogeneous standards of training.

Until that time, the state's interventions on the side of "regular" medicine should be seen more as a political response than as a matter of encouraging the best product in a vital market. Since "regular" doctors tended to be, precisely, those of higher social status, they were naturally heard with more favor and more often appointed to public positions—a fact which appeared to give governmental sanction to their definition of the medical "commodity."²² Social movements, however, could elicit from the state different political responses: the public health movements are one instance, and another is the movement by the "lower" corporate orders in England against the entrenched upper-class physicians—their victory with the Medical Act of 1858 can be interpreted as a victory of the middle class against aristocratic privilege.

State sponsorship, in short, is not sufficient to give a profession autonomous control over all its potential market. In the best of cases, state sanction can eliminate competitors, but it cannot force consumers to consume, except in minimal and routinized areas, such as compulsory vaccination. Medicine's privileged position with relation to the state was perfunctory, therefore, until the profession succeeded in unifying itself around a demonstrably superior definition of the medical "commodity" and in guaranteeing a reliable production of producers. This process, which I have called the *negotiation of cognitive exclusiveness*, was inseparable from the production and progress of medical knowledge.

All the learned professions were tied, in principle, to one organizational base for the transmission of knowledge: the traditional university.²³ Until its reform was achieved, the university hindered rather than helped the production of systematic scientific and technical knowledge. In this respect, medicine had a further advantage over the other learned professions: the centrality of its function had made it necessary for the state to support public hospitals. This was an alternative institution which could serve as an integrative focus for the profession, and could be used in the production and transmission of medical knowledge. It appears, in fact, that the number of large hospitals was one of the main reasons why Paris became the world's capital of medical science in the first half of the nineteenth century. Overcoming the *ancien régime* guild barriers, these hospitals brought together surgeons and physicians, thus allowing the physicians to incorporate the localized structural pathology, which surgeons always had spontaneously applied, and to start the scientific study of specific diseases.²⁴ Not surprisingly, countries such as the United States, in which hospitals were for a long time unfit for scientific research, lagged far behind in medical discoveries.²⁵

In sum, the market for medical services appears to have distinctive features which derive from the saliency and universality of the need it serves. The potential for unlimited expansion, the extreme competitiveness before the market was successfully monopolized, as well as the readiness of the state to act as sponsor for the dominant (or most "trustworthy") sector of the profession, flow from the nature of the need. In turn, the individual nature of the need determines the persistently interpersonal character of the *actual* transaction of services. This aspect explains the typical, albeit not unique, influence of interpersonal factors of trust, and also the insulation of the professional producer from *direct* scrutiny in his actual performance. Regulation and control of actual professional practice are therefore situated "before" and "after" the process of consultation rather than during its actual occurrence. Control of the "product" is typically indirect. The individualized mode of consumption, the vital nature of the need, as well as the influence of non-functionally rational and subjective factors of confidence, make it unlikely that the consumers will be able to exercise this control.

None of these factors is, in itself, sufficient to guarantee either professional autonomy or monopolistic market control to the dominant sector of the profession. Each of them, and all of them combined, are conditioned by the possibility of negotiating cognitive exclusiveness, which is a crucial *intervening* variable. Once this exclusiveness was achieved, the structure of its market gave medicine what I consider to be an exceptional and unparalleled capacity for monopolistic control: characteristics which favor a sellers' market controlled by the producers were particularly coherent in the case of medicine. This can best be illustrated by contrast with another profession which, during the nineteenth century, was also dealing in new and rapidly changing professional "commodities."

A COMPARATIVE CASE: ENGINEERING

It would seem at first glance that the profession of engineering should have had few competitors to fight: the industrial revolution having so transformed its function and its cognitive base, the profession should have been able to grow smoothly along with its market, cumulatively producing new knowledge and controlling its application. From this hypothetical point of view, the pressure to articulate a monopoly would have been lower than in medicine; on the other hand, the low level of competition (in America, for instance, the demand for civil engineering services largely exceeded the supply until the 1840s), and the novelty of the area of practice should have facilitated professional control of the market. In a rapidly changing technological environment, it would be logical to assume that the devisers of technological innovations would have "naturally" obtained cognitive exclusiveness. If the engineers had indeed been so favored with regard to this crucial intervening variable, their autonomy in defining the content of their work should have been high; their "natural" monopoly over new knowledge should, in fact, have maximized the positive factors—of whatever nature—in their professional market situation.

This view is misleading. To show why, we must consider the general character of

the professional service involved.²⁶ The first difference from medicine is that engineering was not—and emphatically is not today—a functionally homogeneous area of the social division of labor. True, all branches of engineering (even, indirectly, the most abstract contemporary specialties, such as systems analysis) fall in a general category which Daniel Calhoun calls coordinators or “devisers of physical objects.” In this broad category, the varieties of engineers keep company with “architects, building tradesmen, artists, mechanics.”²⁷

Among the technical devisers of a pre-industrial age, the specialized military engineer, of long European ancestry, and the architect, born of the Renaissance, carried their identity into the industrial era. Civil engineering drew much of its manpower from the specialized military corps, while overlapping, in some cases, with architectural practice. However, the task of building an infrastructure of public works for industrial expansion transformed the role and far exceeded the old pools of skilled labor.²⁸ Mechanical engineering was much more clearly a product of the industrial revolution. Its origins, like those of mining engineering, were entrepreneurial. Its elite was constituted, in America, by creative and innovative manufacturers who were at the heart of the particular social and cultural tradition of the machine shop.²⁹ Despite the egalitarian mobility myths which remained for a long time attached to the shop, this entrepreneurial elite most often came from upper-class Northeastern families and carried to its calling the social sanctions and security of its origins.³⁰ In the 1830s and 1840s, railway shops became an extension of shop culture, as well as a principal breeding ground for mechanical engineers and the first area in which the very title came into general usage. The repair and supervision of railroad machinery, however, blurred the clear stereotype of the combined entrepreneur and technological creator produced by the machine shop: at one end, the “superintendent” of motive power had a foot into management and vied for autonomy with non-technical executives; at the other, engine drivers appropriated the term “engineer,” thus eroding in the public’s mind its gentlemanly connotations.³¹

There was not, therefore, *one* earlier type out of which the modern engineer developed, nor one single functional area, as in the case of healing, but different specializations which *separately* gave rise to present-day engineering specialties—as well as to architecture, its derivations, and numerous “instrument-making” crafts which never reached or even aspired to the status of professions.

The second basic difference between engineering and medicine is that the physical nature of the engineer’s professional product immediately involves the possibility that the buyer be a different person from the consumer: if nothing else, a physical object or a physical arrangement can be transmitted to or exchanged with consumers other than the original buyer. The relation between the technical deviser and the buyer of his services is typically quite different from that which prevails when buyer and consumer are fused, and so is the set of potential loyalties and responsibilities from which the technical deviser may have to choose. At the beginning of the industrial revolution, technical devisers were either self-employed as craftsmen or manufacturers, or employed by governments in their military apparatus, by proprietors of economic units, or, sometimes, by collections of local notables, as in the early

American public works. Government service, as well as the fusion of entrepreneurship with technical expertise, reduced the chances of potential conflict between responsibility to the buyer or employer and responsibility to the consumer; however, the increasing scale of the projects undertaken and the concentration of means of production progressively reduced the entrepreneurial role of engineers; the possibility of conflicting loyalties therefore tended to become a normal ingredient of the engineer’s work situation.

The physical nature of the product also implies that it can be seen, examined, and copied. The jealous defense of industrial secrets stands to show that these secrets could be stolen without too much difficulty, and also that expertise drawn from empirical practice is tied to the *pace* of change: a rapid rhythm of technological innovation appears to guarantee the technical deviser’s skills against routinization. So long as technical expertise did not derive from the methodical application of theory—chiefly physics—to engineering problems, it was mainly the complexity and scale of a project, as well as the pace of technological change, that served to justify claims of superior competence. In America, both formal engineering education and theoretical work lagged behind Europe—particularly France and Germany—until late in the nineteenth century. Apprenticeship was for generations the main source of engineering skill:³² canals and machine shops, mines, railroads, and later the new electric, automotive, and radio industries, were principal suppliers of first-rate engineering talent. Especially in the first phase of industrialization, the gap between workmen and engineers seemed possible to bridge, as witnessed by the flowering of mechanics institutes and correspondence courses, characterized by a stronger commitment to the ideology of open mobility than to the diffusion of scientific knowledge.³³ In fact, the long predominance of apprenticeship preserved the control of gentlemanly elites—entrepreneurial, in mechanical and mining engineering, or quasi-managerial, in civil engineering.

This dominant empirical component is not what distinguishes engineering from other American professions. Apprenticeship was the accepted pattern in most other occupations, including medicine and law, during the first half of the nineteenth century. What is distinctive is that the average engineer emerged from this early phase as a *salaried professional*, in Europe as well as in the United States. Independent consultation and entrepreneurship were not the typical modes of practice, although elites of the profession exaggerated both their significance and their accessibility.³⁴ In themselves, however, the dependent conditions of practice need not have introduced a principle of heteronomy at the very core of the engineer’s role. This heteronomy was instead a consequence of the nature of the organizations for which the engineer typically worked—that is, relatively large-scale economic enterprises in a capitalist society. Within this context, the function of the engineer was dual, at once technical and economic. Cost being an inherent criterion of the “rightness of the technical solution,” the civil engineer was expected to advise on the practicability and profitability of new projects, and sometimes he was also expected to engage in promotional activities. In the United States, after the depression of 1837, the main attacks on the hiring of internal-improvements engineers focused on their unreli-

able cost estimates and on their defense of unreasonable expenditures—that is, on economic aspects of their task.³⁵ Obviously, the engineers did not ignore the fact: in the 1880s, the President of the American Society of Mechanical Engineers declared: “we must measure all things by the test, *will it pay?*”; and an eminent Columbia professor candidly defined engineering as the “science of making money for capital.”³⁶

The economic component of the engineer's function appears as a wedge of “other-directedness” in his role which overrode the independence he could derive from technical expertise. On the other hand, the economic component also appears to have played an indirect part in the upgrading of functions, which created the engineer's role and his possibilities of career. The assimilation of the engineer to the interests of project sponsors or entrepreneurs—and, later, his promotion to managerial or quasi-managerial functions within a bureaucratic context—were a crucial difference between the emerging role of the engineer and “less gentle” forms of technical devising.³⁷ Thus from the profession's formative period, even before the giant corporations became the main employers of engineers, we find a situation in which professional status appears to derive as much from organizational mobility as from technical expertise.

These considerations all point toward one overriding characteristic of the market for engineering services, which only becomes more dominant with the standardization and institutionalization of training: this characteristic is the inherent *subordination* of the engineers' market.

In all circumstances, the services of the specialized technical deviser are more likely to be mediated than those of a profession which provides intangible services; the nature of the service increases the probability that the relation between professional and user or consumer (as distinct from the buyer or employer of professional services) will be *indirect*. Thus even when the ultimate products of professional work are, indeed, destined for every man (as is the case, in theory, for public works), they are mediated by *functionally specific and organized clientèles*, which are much more frequently employers (buyers of labor) than clients (buyers of services). The modern engineer rises in the context of industrial capitalism, in which the mediation of technical devising by specific bodies becomes permanent subordination to organized and increasingly complex economic enterprises. Thus in the late nineteenth and early twentieth centuries, American civil and electric engineering societies developed tentative codes of ethics, as bargaining assets in potential conflicts with their sponsors or employers; the mechanical engineering association, by contrast, did not see the need for a code of ethics until much later. The intimate ties of the mechanical engineering elite with capitalist entrepreneurs undoubtedly explain this attitude. The reasons given are interesting, however, for they refer in fact to the structural differences between engineering and other professions. The first major reason was that the buyers of engineering services did not need special protection: “If there was one thing the average American considered himself, it was a mechanic, and as such he was qualified to judge engineering design and correctness.”³⁸ Business clients and employers, moreover, knew quite well what they wanted and how they wanted it done. It was argued, furthermore, that the engineer's works were

checked by the very laws of nature: while “men in other professions may blunder or play false with more or less impunity . . . the mistakes of the engineer are quick to find him out and proclaim his incompetence. He is the one professional man who is obliged to be right.”³⁹

Two factors that help an association of producers maximize its effectiveness were either weak or absent in the case of engineering. First, the advantage which the seller of professional services has over the ordinary individual buyer is reduced to a minimum by the engineer's dependence on knowledgeable or at least powerful employers or clients, even though this advantage can easily be used against lay consumers.⁴⁰ Second, the nature of the product implies that the public really can obtain more direct evidence about the professional's capacity than in the case of medicine, while the state can regulate and supervise the products, rather than the producers themselves. By their nature, the engineer's services and their end products are visible; what removes them from the public eye is, in fact, the mediation of a “buyer” who is distinct from the “user” and is, in many cases, a *private capitalist* enterprise. No matter how vigorously or successfully the engineering profession might have organized to secure its market and face its employers, it could not have *controlled* its professional market because that market was inherently subordinate. Though strategic for industrial growth, the services of the engineer were subordinate to general considerations of accounting and business profit. Thus, while the medical market depended, of course, on the general increase in standards of living, the market for engineering services depended almost totally on industrial investment and on the business cycle.⁴¹ In the case of medicine, the power of the profession depended, in theory, on the elimination of competitors: monopoly was necessary in order to benefit from an expanding market. But once monopoly or near-monopoly was achieved, the power of the profession grew as the market sector under its control expanded. In a subordinate professional market, monopoly, though important, does not play the same part: it cannot compensate for the ups and downs of the larger market, which may determine the contraction of the demand for professional services. Expansion—that is, a balance of supply and demand favorable to the profession—does not give a profession like engineering controlling powers, but only a better bargaining position.

Faced with a market structure so unfavorable to monopolistic claims, engineers should have concentrated on what they could, after a point, control: namely, the production of producers, and in particular, the advantageous adjustment of supply to demand. Here, however, the profession has faced another difficulty: as pointed out, the various branches of engineering emerged from areas of practice which had not been *autonomously* defined by the profession. The technical devisers in engineering controlled new and rapidly changing cognitive areas; yet, in practice, their fields of action were created by processes of economic development in which the expert technician intervened either as entrepreneur or in a subordinate capacity. The specialists, as such, did not decide who would be taken into training, nor did they control the principal rewards. The acquisition of theoretical bases and the methodic systematization of empirical knowledge defeated apprenticeship and gave to educators their usual leadership in professionalizing efforts. But even though

the profession had gained control over the production of producers, it had not unified its cognitive basis, except at a very general level, nor freed it from external determination. Today, the attempts by the academic sectors of engineering to create a common cognitive basis are successfully resisted by the practitioners and their employers. Thus despite the engineer's role in defining new knowledge or new applications of knowledge, the essential element of autonomy remains weak in this profession. The attempts to standardize the "production of producers" independently of industry's predefinitions simply reveal again the inescapable structural subordination of the professional market.

The "strong" market characteristics of medicine were not sufficient in themselves to ensure monopolistic control. Cognitive exclusiveness appeared to be the intervening factor which maximized the effectiveness of each market characteristic and of all of them combined. The analysis of engineering shows, in turn, that autonomy in defining the content of work—or the control over new cognitive areas—does not by itself compensate for the structural subordination of the professional market. The subordination of the engineer's role submits the selection of the technical problem and the criteria that are brought to bear in its solution, at least partially, to heteronomous considerations. Autonomy is chiefly gained *outside* the professional role, by acceding to positions of command or responsibility in the *dominant* market.

In the concluding words of Daniel Calhoun's study, the American civil engineer before the Civil War appears already as the typical professional of a transitional stage, "between an earlier proprietary society and an emerging industrial, corporate society."⁴² Tied to a peculiar kind of business market and to persistent entrepreneurial forms, the elite of mechanical engineering maintained for a long time the myths of the "proprietary society." By the beginning of the twentieth century, however, the growing numbers of mechanical engineers, as well as their colleagues in mining and, most particularly, in the newer fields of electricity, radio, and automobile production, had never known any other condition than salaried employment in bureaucratic organizations. Professionalism meant for them that a salaried and subordinate position should be conceded as much deference and prestige as the independent professional whose image was crystallized in the general ideology. Their professionalizing project was dominated, in Edwin T. Layton's words, by "an obsessive concern for social status," and was marked as well by specific ideological attempts which exalted the *expertise* of this dependent professional and made it the base of a grandiose social role.⁴³ As the first modern professional to emerge within a large-scale economic organization, the engineer stands in sharp contrast to the medical doctor; his profile also anticipates later professional forms, in which the "model" provided by medicine may be fading.

This analysis of engineering establishes a general and important point: the *subordination of a professional market minimizes the effects of cognitive exclusiveness*. It also suggests which conditions of knowledge facilitate the constitution of a specific area of competence. The rapidity of change in the cognitive basis is important, for it prevents the routinization of technical skills. The visibility of a profession's

accumulated skills and achievements, its "demonstration effect" vis-à-vis the public at large and its specialized clients, is a potent resource for ideological persuasion. Medicine, incidentally, acquired this resource much later than engineering: in the 1840s the popular negative judgment about medicine was influenced by the tangible achievements of physical science, as if the public tacitly asked "where were the medical equivalents of the steam engine or the telegraph?"⁴⁴ Finally, the increasingly firm ties which engineering established with scientific theory magnified the cumulative aspect of engineering's achievements by making them a part of general scientific knowledge. This gave some credibility to "the engineers' claim to be the agents of progress and enlightenment."⁴⁵ On the other hand, the monopolization of scientific education by colleges and universities made the possession of scientific training into a crucial element of distinction between professional engineers and mere technical devisers.

Turning now to a more systematic examination of the cognitive basis for professional claims to market monopoly, I will try to show not only that medicine was favored by its market structure but also that it was exceptionally well equipped to establish its claim to cognitive exclusiveness.

THE COGNITIVE CONDITIONS OF PROFESSIONAL MONOPOLY

The technical and cognitive conditions for the emergence of profession are so abundantly treated by the sociological literature that I will indicate only those factors which, in my framework of analysis, facilitate market control and standardization.

Wilensky observes that "if the technical base of an occupation consists of a vocabulary that sounds familiar to everyone (social science and the arts of administration) or if the base is scientific, but so narrow that it can be learned as a set of rules by most people, then the occupation will have difficulty claiming a monopoly of skill or even a roughly exclusive jurisdiction."⁴⁶ But even a body of knowledge that is both esoteric and theoretical—and therefore difficult to routinize—is still not a sufficient condition for the control of a competitive market. Take, for instance, the case of the Protestant ministry in America: despite the undeniable existence of an esoteric body of theological knowledge, and despite the rise of separate seminaries from 1784 on, the established denominations could not protect themselves from the challenges of the evangelist movement. Similarly, the law was not protected from outsiders until the institutionalization of formal teaching and qualifying bar examinations.⁴⁷

I have suggested that the "best" cognitive basis for a monopoly of competence is one which reveals, or activates, or maximizes the favorable characteristics of a professional market. It must be specific enough to impart distinctiveness to the professional "commodity"; it must be formalized or codified enough to allow standardization of the "product"—which means, ultimately, standardization of the producers. And yet it must not be so clearly codified that it does not allow a principle of exclusion to operate: where everyone can claim to be an expert, there is no expertise.

tion have a sociological condition: "the unparalleled insulation . . . from the demands of the laity and of everyday life" which Western societies have conceded them. As Kuhn observes, "Just because he is working only for an audience of colleagues, an audience that shares his own values and beliefs, the scientist can take a single set of standards for granted."⁵⁰

Thus, at the limit, scientific communities are their own market: scientists are simultaneously the producers and the main consumers of their products. Because their practice is relatively independent from all external factors except financial sponsorship, it *appears* to be solely determined by the state of each discipline and by its internal tradition of research. If cognitive consensus breaks down, the autonomy and insulation of the scientific professions facilitates the resolution of the crisis, that is, the striving toward reintegration of an area of work under new paradigmatic standards.⁵¹ The task of persuasion is arduous, but limited, nevertheless, to a very narrow community which shares a life commitment and basic norms of interaction. For Kuhn, persuasion cannot supplant the "act of faith" which is, ultimately, at the heart of a "paradigm switch." But in this too, the scientific communities have an advantage: because of their autonomy and insulation, they can *afford* to convert, even if the new paradigm is only "at the start, largely a promise of success discoverable in selected and still incomplete examples."⁵²

By definition, the consulting professions do not have such freedom. Their market is an *open* market, in the sense that it necessarily includes a *lay* clientele, no matter how specialized and organized it may be. Because the consulting professions "survive by providing to a varied lay clientele services that are expected to solve practical problems," even their most scientific sectors depend on practical, external considerations.⁵³ The inquirers in the fields of applied (or applicable) science do not address themselves to "puzzles" posed by the internal evolution of a paradigm, nor do they concentrate on "insoluble" anomalies. The sociologist of science Joseph Ben-David observes: "For the professional physiologist and pathologist seeking to understand bodily functions in physical and chemical terms, the statistical inquiry of Ignaz Semmelweis into the etiology of puerperal fever made no theoretical sense. And initially, the same applied to the discovery by Pasteur and others of the bacterial causation of illness."⁵⁴

For these fields which receive their problems from everyday life, Ben-David proposes the name of "quasi-disciplines." By definition, they cannot attain the insulation which characterizes scientific communities. Furthermore, the practitioners who carry the results of "quasi-disciplinary" research into everyday practice tacitly evaluate a new technology of work in terms of its market potential. The paradigmatic standards under which the research has been conducted are not important, if its practical effects are demonstrably valid. Thus in his study of nineteenth-century American physicians, William Rothstein convincingly argues that the conflict between medical sects hinged on the effects of different therapies, and not on theoretical incompatibilities between systems. Where therapies were demonstrably valid—as was the case with smallpox vaccination or the quinine cure of malaria—all the medical sects adopted them.⁵⁵

The significant differences between pure scientific disciplines and quasi-disciplines

I have also indicated that change in the cognitive basis is a necessary component, for it prevents excessive routinization and therefore maintains the relative inaccessibility of expertise. At the same time, change must not be so rapid nor so fragmentary that it forecloses the possibility of socializing the aspiring experts into a unified and unifying body of knowledge. Furthermore, change, to be legitimate, must be perceived as progress. Were it not so, it could (and ultimately would) be perceived simply as the deliberate manufacture of pseudo-expertise, a device for excluding the non-initiated.

These considerations point in the direction of a type of cognitive activity which is esoteric, yet formalized and standardized enough to be, in principle, accessible to all who would undergo prolonged training. This activity is also characterized by a tendency to cognitive consensus among its practitioners; its products result either from periods of continuous cumulative growth or from discontinuous, revolutionary changes in the consensual norms that define the goals and the forms of cognition. In any case, both the cumulative and the qualitatively discontinuous achievements are recognized as progress. *This cognitive activity is science.* In Thomas Kuhn's words, "We tend to see as science *any field in which progress is marked.* . . . If we doubt, as many do, that non-scientific fields make progress, that cannot be because individual schools make none. Rather, it must be because there are always competing schools, each of which constantly questions the very foundations of the others."⁴⁸

The sociological content of Kuhn's approach to scientific production is relevant for the analysis of professions.⁴⁹ An apparent tautology, which needs to be explained, sums up a central part of his interpretation: science is inseparable from a perception of progress because it is the exclusive product of specialized communities of scientists. The perception of progress presupposes a tacit acceptance of what problems are worth solving or what goals are worth reaching. Scientific communities, says Kuhn, are characterized by sets of shared tacit understandings, which he calls scientific paradigms. A paradigm is not an abstract system of explicit rules, but a *practice*, accessible through a long process of socialization. The guidelines of this practice are embodied in concrete examples of successful scientific inquiry, which include "law, theory, application, and instrumentation together," and are learned by replication. These examples are "concrete puzzle-solutions" which contain the promise that all the remaining problems proposed within a paradigm can, indeed, be solved. Because their shared definitions of reality are based on relatively uniform and standardized practices, scientists work toward and reach cumulative results: normal science consists of converging attempts to solve the same puzzles, to elaborate, articulate, and adjust the same paradigm. Mature scientific communities are thus distinguished by a structural tendency to paradigmatic unification, which excludes those who engage in a different practice and therefore have different standards of what is relevant and different perceptions of what constitutes progress.

Because scientists are the only producers of science, the lay public has no other choice but to accept, *without sharing them*, their definitions of scientific practice and scientific progress. Scientific communities can define autonomously the standards of correct practice. Their exceptional autonomy and singular degree of integra-

cannot be ignored. The problem, however, is to discern how a scientific basis can be an advantage to a profession in its attempts to secure market control. Leaving aside the obvious—the superiority of the scientific method over prescientific approaches for knowing and mastering physical aspects of reality—a scientific basis appears to offer the best potential for the unified and standardized production of professional *producers*. After all, quasi-disciplines also follow scientific methods and tend, themselves, toward paradigmatic unification—their practice and, to a much lesser extent, the use of their products, require a broad scientific basis. What professions obtain from this basic training in pure science has no *immediate* bearing upon their practice; but the passage through broad scientific training puts the future professionals through one first phase of effective unification and standardization. Also, as in any other case, longer training periods complete or perfect this standardization by selectivity and by deepening the effects of socialization. No less importantly, basic scientific training provides a clear principle of separation for the exclusion of the “non-standardized,” empirically trained professionals. For instance, in the 1870s, when American engineering programs were not yet producing the majority of American engineers, the teaching of mathematics—a subject which the shops could not teach—had already opened a growing cleavage between shop-trained professionals and school graduates.⁵⁶ The understandably heated arguments of the shop-men and other defenders of practical skills against what they saw as an exclusive and practically useless emphasis on mathematics cannot hide that they had already lost the battle.

The sociological center of the process of unification is the system for the production of producers. The broad scientific moorings of the “quasi-disciplines” *require*, as Abraham Flexner pointed out for medicine, affiliation with the modern university. At the same time, these scientific bases *qualify* a profession for affiliation more readily than any other, in a world where science is the cardinal system of cognitive validation and legitimation. Entry into the university gives any profession a core of educators; because of the university's apparent universalism and independence from lay demands and private interests, these educators are in the best position to defend the universalistic guarantees of professional competence and to legitimize the professionals' claim of autonomy and monopoly. As professionals themselves, they are interested in the market in which their products—the graduates—will have to secure income and status. In the modern university, which centralizes the production of knowledge as well as that of producers, *scientific* educators control and produce a constantly changing body of knowledge. The cumulative change characteristic of normal science makes the passage of aspiring professionals through the centers for the standardized production of producers *compulsory*, not only because of a legislative fiat but “naturally,” because these centers monopolize new knowledge. Lawyers and architects, for instance, produce professionally relevant new knowledge in their practice; but the bulk of relevant new knowledge in medicine, optometry, engineering, and the like is produced by research. Changes in the cognitive basis of professional practice no longer appear arbitrary, but are determined by the internal logic of scientific inquiry and are *legitimized as progress*.

This effect can be grasped by illustrating its opposite—a deliberate attempt to change a technology of work in order to give an advantage, among other things, to the standardized products of formal schooling. From the 1880s on, American engineering educators had advocated the adoption of the metric system. Unlike the manufacturers, they had nothing to lose from such a switch; quite the contrary. As the historian Monte Calvert remarks: “What could be more of a boost to the status of the college-trained engineer than for him to possess a new and arbitrarily determined system of measurement? What could better assure his ascendancy over the boy from the shop? Knowledge of the metric system could become, like calculus, a badge of the formally trained.”⁵⁷ Metric conversion could make complex calculations immediately accessible to the average technical school graduate, thus destroying one of the few advantages that experience gave to those trained on the job. But the arbitrariness of the change denied legitimacy to the educators and graduates’ stance, which was of course ardently opposed by the engineering-entrepreneurs and their allies.

In sum, the tendency toward paradigmatic unification—inherent in scientific communities and determined in large part by their insulation—is extended to the consulting professions when they connect themselves with a “quasi-discipline” and with the quasi-monopolistic center for the production of new knowledge—namely, the modern university. A profession's capacity for standardizing training and research within the confines of normal science and for excluding competing paradigms is not only greatly augmented by its connection with science; it is also given the ultimate legitimation of an objective, independent, incontrovertibly more effective inquiry, which opens up the possibility of unlimited progress.

The evolution of medicine concretely and exactly illustrates the impact of a scientific foundation on a professional field. The “pre-paradigmatic” situation lasted for most of the nineteenth century. Attempts by “regular” physicians to unify the profession tended to take the form of arbitrary exclusive practices against other practitioners. In the United States, where the near-total freedom of the market had encouraged proliferation, physicians attempted to institutionalize one particular orthodoxy by founding schools, in both the physical and the intellectual sense. “The United States and Canada,” wrote Flexner in 1910, “have in little more than a century produced 457 medical schools, many, of course, short-lived, and perhaps 50 still-born; 155 survive today.”⁵⁸ Until the foundation of the Johns Hopkins graduate school of medicine in 1893, America had no training center that could even remotely be compared to those in Germany, or even in Paris or Edinburgh. For a long time, external considerations were given more weight than unsupported and unsystematic “scientific” convictions—as shown, for instance, by the clash between contagionists and anticontagionists (the latter strenuously supported by commercial interests opposed to quarantine) over how to deal with the epidemics of yellow fever and cholera during the first decades of the nineteenth century.⁵⁹ This situation was obviously not unique to the United States. In Europe, however, institutional affiliation—with hospitals, in England and France; with research institutions connected with universities, as was often the case in Germany; or in conflict

with the academy, as happened in France—had given a potent weapon to groups of scientifically oriented physicians and scientists interested in medical problems. These organizational nuclei gave both continuity and coordination to the attacks on traditional medicine, while providing the researchers with the situation of relative insulation necessary for autonomous scientific production. By the middle of the nineteenth century, writes the historian of medicine Richard Shryock, "a monistic pathology and a related therapeutics were no longer tolerated in regular medicine . . . medicine had come of scientific age."⁶⁰

Clinical and pathological studies had been coordinated; physiology had been established on a firm scientific footing by Claude Bernard in Paris and by Helmholtz's group in Berlin; the numerical method inaugurated by Pierre Louis in the 1830s had laid the grounds for modern medical statistics and large-scale investigations in matters of public health; new drugs and new instruments, heretofore unused, such as the achromatic microscope, had been incorporated into practice or research, while the threat of epidemics had led to great developments in the administrative infrastructure concerned with public health. The stage was set for the incorporation of the bacteriological discoveries begun in the 1870s. The research branch of modern medicine was approaching paradigmatic unification by that time, even though practice lagged far behind.

One significant example of this unification is the case of the Viennese doctor Rokitansky, who had been one of the foremost representatives of the French scientific approach to medical problems. Despite this background, he ended up, inexplicably, with a speculative theory of humoral pathology—a clear regression to the monistic systems of the past. Shryock observes that a mere fifty years earlier, Rokitansky's fame would have sufficed to found another school on his theoretical system. But in the 1850s, the young Rudolf Virchow, who was still an obscure pathologist, examined the theory, found it a "monstrous anachronism" and it was abandoned, even by the author himself. "There was in fact no other choice," says Shryock, "unless he wished to take both himself and his theory without the pale of the medical profession."⁶¹

The emergence of shared criteria of validity and reliability within a sector of the medical profession constituted a major advance toward control of the market. By unifying its cognitive basis, medicine was emancipating itself from the support of its sponsoring elites. It had also acquired the instruments necessary for standardization of the services it provided; and standardization tied every transaction to the superiority, soon to be definitively proved, of the scientific medical "product." In Freidson's words, the accomplishments of modern surgery and, in particular, modern bacteriology "created a qualitative break with the past, making possible for the first time the predictable and reliable control of a wide spectrum of human ills by virtually any well-trained practitioner of the occupation, not solely by a great clinician."⁶²

Both the internal and external preconditions for market control had been achieved. Internally, medicine had found independent means to put its house in order. As the example of Rokitansky shows, the charismatic clinician was no longer immune to challenge by comparatively obscure colleagues: both leaders and rank-and-file

member of the profession were subjected to the tacit rule of accepted and transcendent cognitive norms. Externally, medicine had acquired independent means—means autonomously elaborated within the profession—of convincing both government and the public of its superior therapeutic effectiveness. The triumph of scientific medicine marked the end of medical sectarianism. In the United States, from the mid-1870s on, the states reinstated licensing, entrusting it this time to those medical schools which were proving capable of producing the new breed of medical practitioners.

What was still needed, in fact, to reach the power and scientific capability of today's medicine was the thorough modernization of training in schools and hospitals. This process was the most rapid and complete in the United States—perhaps, as Shryock suggests, because previous efforts at medical reform had failed and modern centers for the production of producers had to be created practically from scratch. The influence of the 1910 Flexner Report on Medical Education helped concentrate medical training in a few centers (Flexner had recommended 31, out of the existing 155), and it transformed most medical schools in a single decade. In a parallel development, from 1913 on the major hospitals began to modernize, in large part as a result of the American College of Surgeons' policy of approval or disapproval of existing facilities. From a backward and provincial state, American medicine, after the "bacteriological revolution," started on its way to practically unparalleled professional power.

We need not enter here into the factors that gave American medicine an amount of corporate power apparently unmatched in other societies; medicine is an exceptionally powerful profession everywhere, and I want to emphasize the *exceptional character of medicine's professional success*. Medicine alone entered a market which, for a long time and in most places, approached the ideal conditions for attainment of monopoly, with a scientific product to sell. No other "old" profession serving unspecialized and unorganized clientele had, at the same time, a potentially limitless market and an organic connection with science and scientific technologies of work.

Freidson's view that medicine, because of its preeminence among all other occupations, "has come to be the prototype upon which occupations seeking a privileged status today are modelling their aspirations," needs to be examined in the light of the preceding analysis.⁶³ In the first place, the model provided by medicine appears impossible to duplicate, because the market conditions facing the "new" professions are markedly different from those encountered by medicine at the end of the last century. Secondly, Freidson himself suggests a criterion of profession which adds another dimension to medicine's exceptionalism. He argues, in fact, that the status of profession is relative to that of other occupations and inseparable from their subordination to professional dominance in a structured work setting.⁶⁴ He proceeds to show that physicians define the content of practice and even the content of training for a host of allied and highly skilled occupations, such as nurses, anesthetists, therapists, laboratory technicians, radiologists, chiropractors, and the like. Now, all professions—and perhaps all specialized occupations—gain what E. C. Hughes calls the power to "delegate dirty work."⁶⁵ But it is difficult to find a profession,

other than medicine, that dominates a role set constituted in large part by highly skilled and highly prized occupations, often regarded themselves as professions by their members and by the public. Indeed, with the questionable exception of the military, no profession except medicine *controls a complex organization* such as the modern hospital, which by virtue of its advanced bureaucratic and technological base continuously spawns new and highly skilled specializations.

In other parts of his work, Freidson analyzes professional autonomy as founded not on dominance in an area of the division of labor, but on control over the technical content of work. But does not every specialized occupation involving some skill command "the exclusive competence to determine the proper and effective method of performing some task?"⁶⁶ There is no better supporting evidence than the helplessness most of us feel in dealing with plumbers or auto mechanics. Professions, however, are granted the power to determine the *scope of the service*. Despite the increasing specialization of all professions, we give professionals, however reluctantly, much broader discretionary powers than we give a craftsman. Who would take at his word a mechanic who recommends a valve job when he is asked to change the oil? Yet, many people find themselves incapable of resisting a surgeon who recommends an operation, or a lawyer who advises against going to court.⁶⁷ As Freidson brilliantly shows in the case of medicine, a profession, "in developing its own 'professional' approach . . . changes the definition and shape of problems as experienced and interpreted by the laymen."⁶⁸

This discretionary power, which goes far beyond mere technical autonomy, derives from monopoly: a monopoly of competence legitimized by officially sanctioned "expertise," and a monopoly of credibility with the public. Of the two, the first is more important: it leaves the public without legal or credible alternatives, and it restricts the control by outside agencies over the actual ethicality of the transaction of professional services.

I have analyzed the emergence of the professional model in the liberal phase of capitalism as the outcome of a project tending toward market control. The autonomy of technique is a central element in the negotiation of cognitive exclusiveness, but it is *only one element in a structure* which comprises both the profession's market and the profession's resources for market control. In order to understand how the autonomy of technique extends into other areas and comes to function as a principle of exclusion and a mark of distinction, it must be seen in the context of a profession's efforts to achieve market monopoly. We are back, therefore, to the unique combination of advantages which medicine enjoyed in this regard.

This singularity of medicine is important. For, indeed, to choose it as an occupational model when neither the advantages of its market structure, nor in many cases the advantages of its cognitive basis, can be reproduced, in an *ideological* choice. As such, it suggests the general ideological functions of the professional model. I can only argue here that autonomy of technique is inseparable from the privileges on which it is founded and into which it extends; and if it is true that medicine provides the standard model of professionalization, it is because of those very privileges, which for other occupations represent the prize at the end of the road.

There is one final aspect which makes medicine distinct: in a secularized society, medicine serves the most directly the "sacred" value of life. Of all the professions,

it appears to have the strongest claims to an ideal of service and devotion to human welfare. This view is widespread. It constitutes a massive capital of social credit on which medicine draws. This capital was accumulated, in part, by actual results and by the active participation of some sectors of the profession in the public health movements of this century and the last. However, if such a generalized image is used in justification of a market monopoly, it becomes a double-edged sword: when people are motivated to seek a physician's services because they believe only a physician can help them, and when they also believe that they have a right to health care, the implicit contradiction between service function and market structure becomes very clear. As one author remarks, "Doctors have convinced the public that they alone are competent to give good medical care, but then are unwilling or unable to make good on the expectations they create."⁶⁹

The universality of the need it serves gave medicine unique advantages in its quest for market monopoly. It also made it into one of the principal diffusors of the stereotyped image of profession among the public. The contradiction between the use value and the market value of the service renders the profession of medicine particularly vulnerable to challenge, if ever the lay clientele could overcome their characteristic atomization and attack medicine's corporate power politically, with the strength of a social movement. This potential for challenge is particularly significant today: the *general* demystification of the professional model and of its ideological functions may, indeed, begin with the attack on the archetypal profession of medicine.