The Increasing Complexities of Professionalism

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Abstract

Organized medicine's modern-day professionalism movement has reached the quarter-century mark. In this article, the authors travel to an earlier time to examine the concept of *profession* within the work of Abraham Flexner. Although Flexner used the concept sparingly, it is clear that much of his writing on reforming medical education is grounded in his views on physicians as professionals and medicine as a profession.

In the first half, the authors explore Flexner's views of profession, which were (1) empirically (as opposed to philosophically) grounded, (2) case based and comparatively framed, (3) sociological in orientation, and (4) systems based, with professionalism conceptualized as dynamic, evolving, and multidimensional.

In the second half, the authors build on Flexner's systems perspective to introduce a complexity science understanding of professionalism. They define professionalism as a complex system, introduce a seven-part typology of professionalism, and explore how the organization of physician work and various flash points within medicine today reveal not one but several competing forms of professionalism at work. The authors then develop a tripartite model of professionalism with analysis at the micro, meso, and macro levels. They conclude with observations on how best to frame professionalism as a force for change in 21st-century medical education.

Flexner's reforms were grounded in his vision of two particular types of professional—the physician clinician and the full-time academic physician–scientist. The authors propose reform grounded in professionalism as a complex system composed of competing types.

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Medicine in the United States today is awash in a sea of complexities. Millions lack access to basic medical services.[1,2] Health disparities abound.[3,4] Efforts to improve patient safety are labyrinthine.[5] Quality in patient care remains elusive, and quality initiatives are often contradictory.[6–8] Health expenditures have surged into the trillion-dollar stratosphere.[9] Medical school graduates court lifestyle specialties and are abandoning primary care in record numbers.[10–13] Mandated limits on resident duty hours have upended traditional teaching practices, and questions about the commitments of newer physicians to traditional professional values have become part of the national educational dialogue.[14–17] Reports of economic opportunism and conflicts-of-interest (COIs) within researcher, educator, and clinician ranks have become a media staple.[18–21]

Within this maelstrom of work and identity, organized medicine has called for change along a number of fronts, including quality of care, patient safety, evidence-based medicine, physician workforce, and, in the face of a self-perceived loss of public trust, a call for physicians to recommit themselves to the principles of medical professionalism. In sum, medicine currently struggles with what it means to practice high-quality scientifically grounded medicine, how one best trains physicians for an ever-changing work environment, and what it means to be a professional.

One hundred years ago, medicine and medical education faced a similar crisis of identity and identification. An emerging science of clinical medicine was being held hostage by the practice patterns of clinicians trained in another era and under a different value system—much like today's controversies over evidence-based medicine, the nature of scientific evidence, and the "necessary" restructuring of physician practice patterns.[7,22,23] Commercialism, which at that time was emblematized by a gaggle of proprietary medical schools, cast a very long and stifling shadow. Meanwhile, a rapidly expanding (numbers and geographic) population lacked access to well-trained physicians. Into this vortex stepped a number of change agents, including Abraham Flexner, Frederick T. Gates, Franklin Mall, Henry Pritchett, and William H. Welch. They represented a new vision of medical education and medical practice and the emerging power of philanthropic organizations. Flexner's *Bulletin No. 4* (the "Flexner Report")[24] was one important blueprint in that reform.

As visionaries conceived and philanthropies conspired, change began to bubble. In this article, we focus on one particular percolate—professionalism. Flexner's efforts to reform medical education and medical practice were very much grounded in his views of physicians as professionals (or at least "potential professionals") and of medicine as a *profession*.* Flexner's approach to

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*Throughout this article, we alternate between the term *profession* (as a conceptual referent, similar to how one might use the terms *bureaucracy* and *free market*) and the term *professions* (a descriptive label and more fitting when speaking about several professions and/or professions in general). For the most part, Flexner used the term descriptively.

professionalism is notable in several respects.

- His approach was empirically (as opposed to philosophically) grounded.
- His approach was case based and comparative. Flexner drew on other occupations and other educational systems in crafting his analysis.
- Flexner's orientation was philosophical, with society and social forces playing a determining role in the evolution of professionalism.
- Flexner took a systems approach, treating professionalism as an evolving and dynamic force.
- Flexner's view of professionalism was multidimensional: He conceptualized professionalism at both the individual and organizational levels.
- Flexner saw professionalism embodied in two somewhat countervailing types: the full-time academic physician–scientist versus the practicing clinician.

Of additional interest is the similarity of Flexner's approach to current educational reform and the new *science of complexity*, an approach being adopted by a growing network of faculty within academic medicine. Like Flexner, these scholars conceptualize many of the challenges facing medicine today in systems terms, ranging from disease etiology[25,26] to community health,[27] primary care,[28] and medical professionalism.[29–31] Key to these initiatives is the promise of improved health policy[27]—which leads to yet another way these complexity science scholars are similar to Flexner. Although Flexner did not write extensively about professionalism, it is clear that his methodological approach to change cast professionalism as an engine of reform. More specifically, he grounded his reform of medical education in a particular type of professional, the full-time academic physician–scientist. In sum, the success of Flexner's reforms was, in part, a function of the method he adopted, which often is the case with results seeped in complexity analysis as well.

We believe that these previously unexplored linkages between Flexner's systems-like view of professionalism and his visions for medical education reform have considerable import for more contemporary calls for change. We also believe that further insights can be gained by revisiting Flexner's original vision for change, his underlying methodological approach, and the role of professionalism in that change, and, in turn, placing all three within a more formal complex systems framework. We wrote this article to demonstrate why we hold these beliefs.

Overview

We organized this article into two major sections. In the first section, "Flexner and Professionalism," we review what Flexner had to say about the nature of professions and professionalism, paying particular attention to Flexner's view of professionalism as a dynamic and fundamentally social process and the transformative role Flexner envisioned for altruism in the growth of medicine as a true profession. Also core to Flexner's visions of educational reform was his view that commercialism is antithetical to professionalism and his identification of a new type of medical educator—the full-time academic physician–scientist. We highlight Flexner's relatively sophisticated systems view of professionalism, his sensitivity to context, his views of how different models of medical education have evolved out of different social and cultural environments, and his penchant for using comparative case studies to develop an ideal, yet nuanced, model of medical education in the United States.

The second section, "A Theoretical Model for Researching Professionalism," outlines an agenda for investigating professionalism as a complex system. This section is divided into three parts. First, we begin with a basic definition of professionalism as a complex system. From this standpoint, we argue that the current conception of professionalism being advanced within organized medicine, something we label *nostalgic professionalism*[29] (a label tied to organized medicine's explicit and repeated calls for physicians to *rediscover* and *recommit* themselves to traditional professional principles), is an overly restricted and ultimately unproductive way to leverage professionalism as a tool in the transformation of 21st-century medicine. In contrast, we present a systems-based approach to medical professionalism. We trace the evolution of medicine's modern-day (mid-1980s to present) professionalism movement, and in doing so we explore how sociohistorical data reveal not one, but rather multiple, forms of professionalism (e.g., entrepreneurial, lifestyle, nostalgic, activist) at work. Second, we explore the web of relations among these types, and we propose a multipronged and complexity-driven research agenda to both study and understand the structure and dynamics of medical professionalism. Third, we explore how best to frame professionalism as a force for change in the evolution of 21st-century medical education, and we seek to do so in a spirit similar to Flexner's. Flexner proposed educational reform based on his vision of the physician educator. We propose educational reform based on our understanding of professionalism as a complex system composed of competing types.

Flexner and Professionalism

Despite his wealth of writings on medical education and its reform, it is important to note from the outset that Flexner did not often use the concept of *profession* as a *core* element in his analytical armament. This should not be surprising, given that concept's relatively undeveloped presence in the early decades of the 20th century both within sociology and medicine. Nonetheless, what Flexner had to say about medicine as a profession, both directly and indirectly, is essential to understanding his overarching agenda of educational reform.

Flexner's six-part definition and case-based comparative approach to *profession*

Flexner's most detailed statement about professions did not appear in *Bulletin No. 4*, nor in any of his other writings on medical education, but rather in an invited 1915 address ("Is social work a profession?") to the National Conference of Charities and Correction.[32] In his presentation, Flexner advanced a six-part definition of profession, along with a host of other comments that reflected a highly contextual, dynamic, relational, and systems-oriented view of professions.

For Flexner,

> professions involve essentially intellectual operations with large individual responsibility; they derive their raw material from science and learning; this material they work up to a practical and definite end; they possess an educationally

> communicable technique; they tend to self-organization; they are becoming increasingly altruistic in motivation.[32(p156)]

Fundamental to understanding Flexner's approach to professions is how he employed each of his six definitional elements within a case-based, comparative analysis. In his 1915 address, Flexner used each criterion to assess the professional prospects of several occupational groups, social work being only one of many occupations he reviewed. In doing so, Flexner underscored what would become a signature element in his approach to policy and reform initiatives—the use of data from multiple sources (be they nation-states, occupational groups, or a universe of medical schools) to drive an analysis constantly grounded in a comparative method. His address also reflected another signature proclivity, his tendency to be disconcertingly candid in his assessments—which included, in this instance, the unapologetic conclusion that social work fell short in its claim to be a profession.

Using his definitional template, Flexner walked his audience through a step-by-step analysis of pharmacy, banking, plumbing, journalism, and social work—rejecting each, in turn, as a profession. In other comments, Flexner repeatedly identified medicine and engineering as professions, closely followed (in frequency of mention) by the clergy, law, and architecture. He also repeatedly characterized business as a nonprofession. In one isolated burst, but without any further explanation, Flexner identified literature, painting, and music as professions.[32(p158)] Finally, and in a fascinating and uncharacteristically equivocal aside, Flexner labeled the professional prospects of nursing as a "live wire" and nursing itself a "twilight [i.e., betwixt and between] case."[32(p158)]

Flexner's sociological approach to professions

Along with being empirically grounded, Flexner's approach was resolutely sociological—in that he sought to depict professionalism in its wider social context. For example, although Flexner consistently referred to professionalism as "a calling," he also recognized professionalism as a social status and one that is tied to public recognition. Flexner identified professionalism as a shared occupational identity tied to a "strong class consciousness," something he viewed as both "aristocratic in form" yet "highly democratic," with the training process based on individual achievements rather than an ascribed social status.[32(p153)] Moreover, Flexner was cognizant that even by 1915, the label *professional* had been culturally hijacked/expropriated by a large number of occupational groups, thus undercutting at least some of its cultural capital. Finally, and anticipating a key issue in the contemporary professionalism debate, Flexner addressed the balance between family and work, concluding that "the social and personal lives of professional men and their families thus tend to organize around a professional nucleus."[32(p156)]

Flexner's systems approach to professions

The third distinction of Flexner's approach is its systems orientation. Simply put, Flexner believed professionalism to be a dynamic and evolutionary force. Nonetheless, when discussing medicine, he did limit his focus exclusively to physicians' attainment of professionalism and did not explore the possibility that medicine itself might lose its status as a profession at some point in the future.

Flexner also recognized (shades of the 1980s) that occupational groups may strategically embark on their own professionalism initiatives and that any deliberate striving for professional status could spark "battles" and "trench warfare."[32(p164)] Here, Flexner's concerns foreshadow Abbott's[33] famous 1980s work (at least within sociology) on professions as a system of countervailing interests.

Key to understanding Flexner's vision of professions as dynamic and evolving are his views on the role of altruism in the evolution of professionalism as a transformative social force (see the last of Flexner's six criteria in the quote above). Flexner was unequivocal in insisting that this "professional spirit" had yet to be realized across professional groups in general and within medicine in particular. For Flexner, altruism was something that "*may* . . . come to be a mark of professional character" and is something where the "pecuniary interest of the individual practitioner . . . [is] *apt to yield gradually* before an increasing realization of responsibility to a larger end" (italics ours).[32(p156)] For Flexner, medicine and other professions were not yet "fully socialized" and currently "fall short" in this regard.[32(p161)] Ever sociological in his framing, Flexner was convinced that any move to a service orientation would be as much (or more) driven by the "pressures of public opinion"[32(p156)] than by internal motivations.

Flexner was not alone in this vision of an evolving and altruistically driven professionalism. In his introduction to the Carnegie Foundation's *Bulletin No. 6*, foundation president Henry S. Pritchett noted,

> As the commercial medical school disappears, and the profession comes to be composed of educated men alive to the ideal of service to their communities and to humanity, the opportunity to exploit medicine for gain will disappear. The youth who is looking for a fortune, or the parent who seeks for his son a remunerative occupation, should look elsewhere.[34(p xvii)]

Another element in Flexner's views on professionalism as a dynamic and transformative force is his vision of the full-time academic physician–scientist as a key element in engineering organizational change. In his 1924 *JAMA* appraisal of historical changes in U.S. and European medical education between 1909 and 1924, Flexner explicitly labeled the move to full-time clinical faculty as "professional" in nature.[35(p834)] He also characterized schools that had moved only somewhat in this direction as being "partly professionalized."[35(p836)] Flexner's main biographer, Thomas Neville Bonner,[36(p1068)] concurs, noting that Flexner's drive to "create institutions that were as free as possible from the commercial spirit that had dominated so much of America's experience in medical education" was, in fact, "taking a strong stand for professionalism and against greed in the teaching of medicine."

Micro-level versus macro-level types of professionalism

Fourth, and a key element in Flexner's systems thinking, was his tendency to differentiate between the professionalism manifested by individual practitioners and the professionalism exhibited by organizations. The latter, for Flexner, had separate and distinctive public service

responsibilities and could just as easily lose sight of those responsibilities as could individual clinicians.

Professionalism versus commercialism

Finally, in his 1915 talk on social work as a profession, and throughout his writings as a whole, Flexner maintained that there was a sharp cleavage between commercialism and professionalism. In terms of his systems thinking, commercialism functions as an environmental force, having a negative impact on the system of professionalism.

For Flexner, an emphasis on "financial profit" is antithetical to the spirit of professionalism ("professions may not be cultivated for mere profit").[32(p163)] Moreover, the motive of service (in terms of professional status) is a "spiritual striving from within," where the rewards of work are devoted to "impersonal ends."[32(p162)] Professions strive to minimize "selfish and mercenary motives" and to "minimize personal profit" as a motive.[32(p159)] For Flexner, the two occupations best reflecting an ethos of altruism were teaching and social work. Medicine, interestingly, was not mentioned in this context, nor was the clergy. Flexner perceived altruism ("unselfish devotion"/"a genuine regard for the public interest as against its own")[32(p159)] as core to professional status—even as he concluded, based on a constellation of other criteria, that social work was not a profession. For Flexner (this time quoting from his book *Universities*: *American, English, German*[37]), "professions have primarily objective, intellectual, and altruistic purposes," and while they are "not always in fact free from selfish purposes," they do hold the "ideal" of being "devoted to the promotion of larger and nobler ends than the satisfaction of individual ambitions."[37(p30)] Professions have "a code of honour."[37(p30)] Flexner's denouncements of commercialism and its corruptive influences had a frequent presence both in his writings on proprietary medical education (see, for example, *Bulletin No. 4* or his later "Medical education 1909–1924"[35]) and within the context of his views on the need to establish clinical teaching as a full-time academic enterprise, a theme that began to appear more fully in his follow-up *Bulletin No. 6* for the Carnegie Foundation, *Medical Education in Europe.*[34]

Flexner's conclusion that neither physicians nor organized medicine had become fully professional (as of the 1920s) brings us to an interesting conundrum. Today, the consensus, within both sociology and organized medicine, is that medicine has *lost* its service ethos and/or violated its social contract with society and therefore needs to make explicit efforts to regain that trust and related social status.[38–42] If Flexner was correct in identifying medicine's professionalism as nascent and as a force driven by incipient altruism, then the more contemporary observation of loss requires a corollary conclusion that medicine did, in fact, attain such an ethos of selfless service somewhere between Flexner's time and today. If this indeed is the case, then we should be able to locate this "golden age" somewhere between the 1920s and 1980s. Alternatively, we would have to conclude that any such attainment of altruistic grace (thus allowing for a fall) has been more hyperbole than historical fact—with both sociology and medicine guilty of attributing more to medicine's past (in terms of some overall service ethic) than is historically warranted.

Flexner, medical education, and the rise of a new type of professional

As stated in our introduction, a key element in Flexner's plans to reform medical education was his vision to have medical schools adopt a new type of clinical faculty position, the full-time academic physician–scientist. Flexner considered this type of physician to be distinct from the practicing physician—primarily because this type of physician would not have to generate an "outside" income by seeing private patients and would play out the role of altruism in his or her daily work.

Flexner's primary connection between professionalism and medical education was through his vision of medicine as a social good and his fundamental belief in what we refer to today as medicine's "social contract" with society.[43] For Flexner, physicians were "social instruments,"[42(p154)] and medical schools were "public service corporations."[24(p ix; 154),44(p49)] Given this status, neither had the right, according to Flexner, to "exploit" the public for personal/organizational gain.[24(p127),42(p49)] Correspondingly, and once again because of medical education's "social function,"[24(p127)] Flexner saw society as being obliged to underwrite the cost of educating new physicians. Flexner took this position, in part, to minimize the possibility that schools would become dependent on tuition and thus subject to further corruption. Flexner also saw tuition as an insufficient source of revenue to support a university-based educational mission. Furthermore, and because medicine was "an organ differentiated by society for its own highest purposes,"[24(p19)] Flexner believed that society had the right and obligation to set standards for who should become physicians. In turn, Flexner believed that no one had the preordained right to become a physician, nor was this limitation to be viewed as an infringement on individual liberties.[24(p155)]

Flexner's professional ideal

A related cornerstone in Flexner's overall vision of medical education reform was his belief that the clinical faculty member must become a full-time academic position. Once again, while this theme is mentioned in *Bulletin No. 4*, it is more fully developed in Flexner's later writing. He envisioned this shift in faculty status more as a third wave of reform—after the closing of proprietary medical schools (wave one) and the geographic and administrative relocation of those remaining schools to a university setting (wave two). Thus, it would not be until Flexner joined the Rockefeller Foundation's General Education Board that he would begin to push for funding specific to such positions, first at Johns Hopkins, then at Washington University in St. Louis, and then at Yale.[45] Once again, commercialism was the main culprit, with then-current clinical educators needing to be freed from the "handicap" of having to "make their living by practice"[45(p176)] and of having to "snatch what time they could to devote to clinical research and teaching."[45(p176)] (For further details, see chapters 12 and 17 in Flexner's autobiography, *I Remember*[45]). Although Flexner rarely used the term *profession* in this context, the full-time clinical faculty member was Flexner's epitome of the professional educator. This was the educator–researcher Flexner envisioned when he differentiated between graduate/professional education and undergraduate (college) education, the latter, for Flexner, having a fractured focus (trying to be too many things for

too many people) and being awash with what Flexner saw as strong commercial (e.g., correspondence schools) pressures.[37] In addition to pouring millions of foundation dollars into encouraging medical schools to adopt this model, Flexner eventually would build an educational monument to house this ideal—the Institute for Advanced Study at Princeton, where Flexner would be the first president and where initial faculty were paid the same salary as the president of Princeton University.[46]

Medical education as a system

Finally, it is important to note that Flexner was, at root, a systems thinker whose work and writings emblemize his commitment to analysis that was data driven, contextually grounded, and comparatively framed. Although *Bulletin No.4* may have been his legacy, its voluminous state-by-state listing of school-specific data renders it more a report card than an analytic inquiry. A more complete, comparatively focused, and contextually nuanced presentation of his views on medical education thus had to wait until his underappreciated 1912 examination of medical education in Europe,[34] his 1925 work on medical education (*Medical Education: A Comparative Study*),[47] which he considered to be his magnum opus, and his highly reflective yet analytically detailed 1940 autobiography, *I Remember*.[45] In all three of those works, and in a bevy of related publications, Flexner was explicit in recognizing the importance of both context (e.g., the important role of environmental forces) and comparison (e.g., linking reforms in the United States to models derived from other countries). In his 60-plus-year career as an educator, Flexner not only crisscrossed the United States and Canada but also made multiple visits to medical schools across Germany, France, England, Austria, Switzerland, Belgium, Holland, Denmark, Norway, and Sweden—all in search of a better (i.e., more comparative) understanding of the relative strengths and weaknesses of different culturally bound approaches to medical education. Flexner may have had his favorites (e.g., Germany), but he was never a sycophant, and rarely would he ever sing praises without enumerating countervailing weaknesses.

An additional window into Flexner's systems-based thinking about medical education is reflected in his emphasis on connectedness and his understanding that changes in one part of medical education would generate (sometimes for the better and sometimes for the worse) changes in other parts of that system. For Flexner, a medical school was much like the human body: "an organic whole [where] to comprehend or remove a disturbance in any part of which requires, first of all, a comprehension of its entire structure and function: for no part is, strictly speaking, separable from the whole."[34(p11)] Flexner held a similar "organic whole" and interconnected view of the university. Universities, for Flexner, were dynamic entities, influenced by "the social evolution of which they are part,"[34(p4)] and thus very much a part of the "social fabric of a given era."[34(p3)] Thus, while Flexner sought to create a university system that would be more focused than what he viewed as a more chaotic college environment, Flexner was not an enemy of internal differentiation (on a structural level). Complexity was to be embraced so long as this diversity of function was unified/connected around some common vision or "unity of purpose."[37(p178–179)] Nonetheless, Flexner's obvious distaste of the polymorphous undergraduate campus rendered him vulnerable to criticisms by later educational leaders, such as Clark Kerr,[48] for not seeing "the creative tensions of divergent forces."

Flexner's overall strategy of educational reform also was relational and decisively interactive in nature. Although he would eventually direct several hundred million dollars toward his reform efforts,[46] he was decisively strategic in disbursing these funds. In network terms, Flexner sought to create "hubs," or centers of influence, from which successive waves of reform would, in his view, spontaneously spread. Thus, when Flexner, working with the Rockefeller Foundation's General Education Board, sought to transform the culture of clinical teaching by funding full-time clinical faculty positions, he targeted specific schools, beginning with Johns Hopkins, before eventually extending support to 25 of the nation's then 66 four-year schools. Furthermore, and in search of leveraging his dollars, Flexner was quite attentive to other relational variables such as geographic location and the necessity to fund public as well as private institutions.

Finally, even though Flexner was a proponent of strategic planning and order, he was no determinist. Flexner's tripartite typology of medical schools (*clinical*—France and England, *university*—Germany, and *proprietary*—America) was underscored by his belief that each national type was the product of "circumstances," whose starting point was a "matter of chance."[47(p14)] Flexner saw no "evidence of initial planning" across his major types of medical education and no "proof that national genius originally selected one type rather than another."[47(p14)]

A Theoretical Model for Researching Professionalism

As we have noted, Flexner offered a unique approach to professionalism. He saw it as a complex system comprising competing types, taking place at multiple levels, and threatened by the environmental forces of commercialism, particularly within the organization and practice of medical education. Drawing on the uniqueness of this approach and its importance for the reforms he suggested, we seek here to outline an agenda for studying professionalism in complex systems terms. We begin with a definition of professionalism as a complex system.

Professionalism as a complex system

Those familiar with complexity science have encountered the almost stereotypical litany of characteristics sometimes used when scholars define or redefine a topic as a complex system. This litany includes terms such as *emergent, self-organizing, agent-based, operating-far-from-equilibrium, chaotic, dynamic, nonlinear, sensitive to initial conditions, stochastic, autopoietic, network-based*, and so forth.[49,50] This proliferation of descriptors, however, often results from the quick or uncritical application of complexity science to a topic, as if the mere evocation of these terms automatically made that topic applicable to a complex systems analysis.[51] As Cilliers[50] and others (e.g., Byrne[52]; Capra[49,53]) explain, science is still struggling to articulate what makes something a complex system, the general argument being that the only real answer will come slowly and methodologically as researchers roll up their sleeves and engage in the nose-to-the-grindstone labor of real empirical inquiry.

Our definition of professionalism as a complex system comes from several years of empirical sleeve-rolling-up. As such, it seeks to avoid a normative, or a this-is-what-it-should-be, approach to a definition. Instead, our definition is grounded in the examination of two primary sets of data: (1) the fact that physicians carry out their work based on how physicians as a group define what they do as professionals, and (2) the evolution of modern-day medicine's own professionalism movement and how organized medicine has sought to advance a certain normative framework within that movement, along with an analysis of consequential system reactions to that framing.

For us, there are several major ways in which professionalism acts like a complex system.

- Medical professionalism comprises several competing types.
- As we will explain below, professionalism seems to have splintered into a system of several competing types. Understanding these types requires a case-based, comparative approach to the analysis of professionalism.
- The differing types of professionalism seem to form an emergent system. Without any external guidance or internal oversight, the different types of professionalism have been self-organized, without the organizers' awareness, into an emergent system. What is particularly interesting about this system is that those individuals who organize specific types of professionalism often are constrained by local knowledge, an example being a limited awareness of the other types or the conflicting aspects of those types.
- The emergent system of professionalism is best conceptualized in network terms. As depicted in Figure 1, the system of professionalism comprises a series of networks within networks. At each level (micro, meso, macro), the structure and dynamics of those networks explain how professionalism today is taking place as a system of interlocking types with interdependent meanings.
- The system of medical professionalism seems to be taking place at multiple levels. Although the different types of professionalism physicians practice are ultimately micro-level and agent-based, these types form a system that is more than the sum of its parts, going all the way to the macro level to form a major social movement. Equally important, these different levels are interdependent. What happens at one level (e.g., macro) plays out at the other levels.
- The system of professionalism has an inside and an outside. Following Flexner, it seems that the best way to understand the challenges facing professionalism today, such as commercialism, is to think of these challenges as environmental forces that, although external to the system of professionalism, nevertheless, like any environmental force, have an impact, primarily in terms of how the system adapts to these forces. In our concept of the various forms of professionalism, for example, entrepreneurial professionalism embraces commercialism, whereas activist professionalism rejects it.[30]
- The system of professionalism is internally conflicted and dynamic. Following an earlier point, while the different types of professionalism at work today often are constrained by local knowledge and the invisibility of

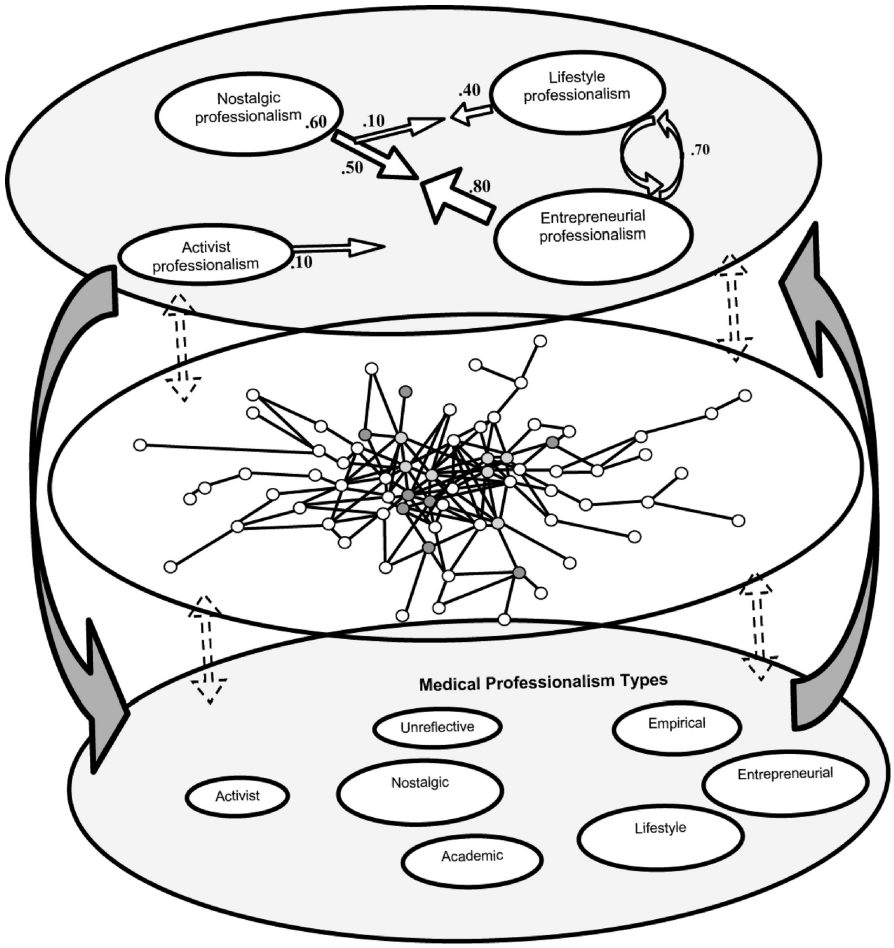

Figure 1 Medical professionalism as a complex system. The figure shows professionalism divided into three separate albeit interconnected levels of analysis. At the **micro level** (bottom oval), seven types of professionalism are conceptualized at the level of the individual and his or her work. At the **meso level** (middle oval), professionalism is viewed within the context of social interactions and relationships, using as an example a data-based network map of the relationships within a particular group of first-year medical students. At the **macro level** (top oval), professionalism is framed as a social movement; the diagram indicates the interplay among four types of professionalism. Arrow size and direction capture influence, and circle size shows the relative importance of each type of professionalism to system dynamics, with factors scores representing another indication of relative impact. Thus, nostalgic professionalism is represented as being under siege by both entrepreneurial and lifestyle professionalism—with the former being more important. See the text and Table 1 for details.

other types at work, these types are, nonetheless, in competition with one another. For example, one of the biggest challenges facing nostalgic professionalism today (see below) is its adherents' almost complete ignorance that there are other types of professionalism at work—some of which are diametrically opposed to the reforms these true believers are trying to ensure.

- Finally, the system of professionalism is situated within a larger series of systems. Medical professionalism does not take place in a vacuum. Following Flexner, it is situated within a wider social context, which can be conceptualized as a series of larger systems. Such systems include medical education, clinical practice, the health care system, Wall Street and the U.S. economy, the federal government, and various other sociopolitical institutions.

A tripartite model for studying the complexities of professionalism

Given this complexity-grounded view of professionalism, how does one study it? As shown in Figure 1, we have found that the best approach is to conceptualize professionalism as a complex system divided into three separate albeit interconnected levels of analysis.

At the micro level, we conceptualize professionalism at the level of the individual and his or her work. At the meso level, we view professionalism within the context of social interactions and relationships. At the macro level, we frame professionalism as a social movement. In turn, different methodological tools are employed within each of these levels: historical analysis being one such possibility at the macro level, the new science of networks at the meso level, and cluster and factor analysis at the micro level. Whereas investigators may focus on elements particular to a given level, these elements ultimately function within an overall, interdependent, and dynamic "field of relations."[54] At the same time, and as shown in Figure 1, factors and forces taking place at one level have implications for factors and forces at other levels. In short, an overall system of professionalism exists across all three levels. This system, in turn, functions as a sub- or corollary system within still broader complexes such as medical education or the health care delivery system.

In the following subsections, we briefly review some of these interrelationships, first by examining issues of physician work at the individual (micro) level and, second, by scrutinizing the dynamics of organized medicine's modern-day professionalism movement at the societal (macro) level. At the micro/individual level, we explore how variations in the way physicians organize their work provide us with insights into a framing of professionalism far more complex than Flexner's dual interplay of altruistic and commercial forces. Similarly, an examination of organized medicine's now 25-year professionalism movement[31] yields similar complexities. Across these two levels, we highlight how the emergence of a particular type of professionalism ("nostalgic"),[30] along with the rise of two flash points (COIs[18–21,55] and duty hours[14–17]), capture the host of pressures facing the traditional rendering of professionalism. Although we will not fully develop any of these three dynamics, we do lay out how their intersections capture the complexities underscoring professionalism as a modern social force. Finally, and to round out our micro, meso, and macro schema, we offer a brief rationale for how professionalism might be explored at the meso level using network analysis.

We end our article with recommendations showing why professionalism must be treated as a complex system if professionalism is to function as a positive force for change in 21st-century medicine.

Micro-level professionalism

When contemporary physicians organize their work, they do so within an array of forces far more tangled than the simple altruism–commercialism dichotomy so often embedded within contemporary discussions of medical professionalism and its discontents. So what does this more complex dynamic look like? In one exercise,[30] we identified 10 key aspects of medical work (altruism, autonomy, commercialism, personal morality, interpersonal competence, lifestyle, professional dominance, social justice, social contract, and technical competence) and then arranged these approaches to work within different clusters to identify seven types of professionalism (entrepreneurial, empirical, lifestyle, unreflective, academic, activist, and nostalgic—see Table 1 for more details about these types). We make no claim that these key aspects of medical work are the only ones worth examining. Nor do we insist that these seven types of professionalism (or their labels) are similarly sacrosanct. Indeed, since our original inquiries into the nature of professionalism,[30] we have found three of these types (nostalgic, entrepreneurial, lifestyle) to be far more socially active and visible than the remaining four. At the same time, and since delving into Flexner's writings, we also have discovered parallels between Flexner's conceptualization of the full-time academic physician–scientist and two (academic and empirical) of our remaining four types of professionalism. Likewise, it has been affirming to study medicine's modern-day professionalism movement at the macro level and find types of professionalism at work similar to those uncovered during micro-level analysis.

Finally, it has been gratifying to observe how a particular type of professionalism at the *macro* level—for example, the embedding of nostalgic professionalism within institutionalized statements of professional ideals—can also be found within coursework or accreditation standards at the *meso* level and/or within student identities at the *micro* level. And then, reversing direction and starting at the *micro* level, it is fascinating to explore how concepts of nostalgic professionalism at that level can combine with countervailing concepts of professionalism such as lifestyle professionalism and thus begin to evolve into new forms of professionalism within student interactions (*meso*), ultimately to appear at the *macro* level within a given flash point such as duty hours.[14–17] In short, we have a two-way street, with various types of professionalism trickling down and bubbling up at the same time (dual influence), and we see similar concepts (e.g., of nostalgic or lifestyle professionalism) behaving very dynamically at each of the levels.

It also has been fascinating to see how notions of balance, lifestyle, and responsibilities to self and family are being reframed within the context of provider fatigue, patient safety, quality

Table 1

The Seven Types of Medical Professionalism Arranged According to Their Approaches to 10 Key Aspects of Medical Work*

Importance of different aspects of medical work	Types of professionalism and associated aspects of medical work						
	Nostalgic professionalism	Entrepreneurial professionalism	Academic professionalism	Lifestyle professionalism	Empirical professionalism	Unreflective professionalism	Activist professionalism
Most important	• Autonomy	• Commercialism	• Altruism	• Autonomy	• Autonomy	• Autonomy	• Social justice
	• Altruism	• Autonomy	• Interpersonal competence	• Lifestyle	• Technical competence	• Interpersonal competence	• Social contract
	• Interpersonal competence	• Technical competence	• Technical competence	• Personal morality	• Commercialism	• Personal morality	• Altruism
	• Personal morality	• Professional dominance	• Lifestyle		• Professional dominance	• Altruism	• Personal morality
	• Professional dominance				• Altruism		
	• Technical competence						
Moderately important	• Social contract	• Lifestyle	• Personal morality	• Commercialism	• Social contract	• Technical competence	• Interpersonal competence
	• Social justice	• Personal morality	• Professional dominance	• Interpersonal competence	• Personal morality	• Lifestyle	• Technical competence
			• Social contract	• Technical competence		• Professional dominance	• Autonomy
			• Autonomy				
Least important	• Lifestyle	• Interpersonal competence	• Social justice	• Altruism	• Social justice	• Commercialism	• Lifestyle
	• Commercialism	• Altruism	• Commercialism	• Social contract	• Interpersonal competence	• Social justice	• Commercialism
		• Social justice		• Social justice	• Lifestyle	• Social contract	• Professional dominance
		• Social contract		• Professional dominance			

* The authors identified 10 key aspects of medical work (altruism, autonomy, commercialism, personal morality, interpersonal competence, lifestyle, professional dominance, social justice, social contract, and technical competence) and then arranged these within different clusters to identify seven types of professionalism. The authors add that these key aspects of medical work and types of professionalism are not the only ones worth examining. See the text for details.

of care, and better models of medical education (see below). Taken as a whole, professionalism is a fluid and evolving picture, and the presence of these alternative dynamics sometimes is lost when a dominant stakeholder, such as organized medicine, seeks to advance a particular and privileged representation of professionalism (e.g., nostalgic) that limits alternative framings. As we will illustrate below, some of the best evidence of competing types can be found at the margins of medicine's modern-day professionalism movement when flash points such as COIs or duty hours appear on the scene.

In Table 1, we depict how different ways of organizing work lead to different types of professionalism at the micro (individual) level. The underlying methodology and data sources are detailed elsewhere.[30]

In this table, we summarize seven types of professionalism (academic, activist, empirical, entrepreneurial, lifestyle, nostalgic, unreflective) along with how they prioritize their respective work arrangements. For example, nostalgic professionals highly value autonomy and altruism in their work, with lifestyle and commercialism viewed as less important. Conversely, activist professionals highly value social justice and the social contract, with commercialism and professional dominance occupying less important positions. Parenthetically, it was only after developing all seven types that we discovered how the relative rankings of activist professionals seemed *more* faithful to the overall ideals of professionalism than what actually was being promulgated under the guise of nostalgic professionalism. For example, note the difference in rankings for nostalgic versus activist professionalism around the issues of professional dominance versus social justice. Meanwhile, the kind of professionalism often reflected in the career decisions of trainees and younger physicians (e.g., lifestyle) represents a different configuration from that of nostalgic professionalism, even though both share a ranking of autonomy (something we see as changing with a diminishment in the value of autonomy for lifestyle professionals). Finally, we include empirical professionalism (our nomenclature for the physician–scientist researcher) in Table 1 to highlight the place of commercialism in this particular constellation of work orientations. Flexner would not be pleased to see commercialism ranked so highly.

Figure 1 presents these seven types at the micro level. Although we did not reproduce the relationships that exist across these types, it is important to note that these seven types do not exist as isolated domains of influence. Rather, they interact in a flurry of competing interests as different configurations of professionalism jockey for the hearts, minds, and professional identities of physicians.[30] We provide examples of these interactions when we move to our analysis of medicine's professionalism movement at the macro level.

Macro-level professionalism

Although there was no "crisis of professionalism" during Flexner's lifetime, there were organized efforts by medicine to secure its boundaries against competing occupations via restrictive licensing laws and medical practice acts within the hallways of state legislatures and the conference rooms of state medical boards.[38] For Larson,[56] this was medicine's early-20th-century "professionalism project." Medicine's modern-day professionalism movement differs from those earlier efforts in that the motive-of-record then ("protect the public"), although possibly self-serving, was something quite different from the "recapturing of public trust" motives/language defining medicine's more recent and ongoing professionalism efforts. Furthermore, the initiatives of Flexner's era sought to establish the profession's autonomy (e.g., by limiting the influence of "outsiders") and to secure dominance over other health occupations—all quite different from the current rhetoric of having medicine become more "patient-centered," "team-based," and "interprofessional."[57–59]

Aside from an occasional journal reference to the threat of commercial corruption, medicine's own sense of its status as a profession during the middle half of the 20th century was more assumed than questioned. Physicians were professional by virtue of their training. There were no professionalism courses, nor were there any formally labeled professionalism initiatives. None were needed. That was a different time and a different professionalism.

All that began to change in the late 1980s as journal editors and other opinion leaders such as George Lundberg,[60,61] Arnold Relman,[62,63] and Jerome Kassirer[64] began to publish a phalanx of editorials and commentaries concluding that medicine had violated its social contract with society, lost public trust, and jettisoned its professional moorings, and that therefore it was necessary for physicians to rediscover and recommit themselves to the traditional principles of medical professionalism.[31,65] These cries of concern were followed, in successive waves, by calls to define and assess professionalism, to develop and implement professionalism curricula within medical schools, and to institutionalize core principles within codes, charters, and accreditation standards. Scholarly journals, particularly *Academic Medicine*, and medical organizations such as the American Board of Internal Medicine and the Association of American Medical Colleges took the lead in organizing special conferences and other initiatives.

A key element in this movement was the emergence of a particular and highly privileged type of professionalism, a type we have labeled elsewhere as "nostalgic professionalism."[30] As mentioned earlier, the call for providers to "rediscover" and "reconnect" themselves to "traditional medical values" was very Flexnerian in that all of these calls identified altruism as core to professionalism while tagging "commercialism" as the single overriding threat to that call. Key players in this rise include Herbert Swick's[66] highly influential definitions of professionalism, along with the emergence of various professionalism codes, the most widely cited being the physician charter, a product of an organizational consortium led by the American Board of Internal Medicine.[67] Altruism was the first of Swick's "nine behaviors of professionalism," and Swick's definition ("physicians subordinate their own interests to the interest of others") proved as popular with the medical establishment (Swick's definitions were key in the wordings of many codes and statements of professionalism principles, including the charter) as it was unpopular with students (who did not like the notion of subordinating their own interests).[68] Similarly, the charter led with its own altruism statement ("primacy of patient welfare") as well as

warnings about "market forces" in both its preface and summary. These nostalgically oriented depictions of professionalism also began to appear in medical schools and residency coursework, professionalism assessment tools,[69–71] core competencies at the residency level,[72] and accreditation standards (e.g., MS-31-A) for undergraduate training.[73]

All these traditionally focused professionalism activities were viewed as quite rational and necessary—to insiders. After all, the very identification of the problem (a *loss* of professionalism), the cause of this threat (commercialism and market forces), and the necessary solution (having physicians *rediscover* and *recommit*) practically demanded that organized medicine perceive professionalism as something grounded in the practices and principles of an earlier (and structurally less chaotic) era. In turn, when problems or schisms appeared, this logic also required that "causes" be located on the micro level within individuals and their practices, such as those in the rank and file who lacked nostalgic professionalism's core values; not-yet-fully socialized students; inadequate teaching tools; incomplete assessment practices; and/or inadequate enforcement of "professional standards." That there might be other ways of thinking about professionalism did not fit into this overall mindset. Instead, a rather narrow and almost trenchant conception of professionalism battled on.

Within a decade of its launching, undeniable schisms began to appear, particularly as these tradition-laden conceptions of what it meant to be a professional began to clash with alternative renderings. Medical students, for example, were uncomfortable with the emphasis on altruism or with professionalism codes that applied to trainees but not to faculty. Students did not like the idea that they might have to subordinate themselves to the needs of others. They viewed calls to "selfless service" as a prescription for burnout, as just another way for higher-ups to get them to work harder or for manipulative patients to take advantage of them.[68]

As coursework about professionalism became more formalized, students found themselves trapped within a hidden curriculum, as lessons taught in the "classroom" proved to be inconsistent or contradictory to the more tacit lessons they were learning in clinic and on the wards.[74–76] Cynicism oozed and anger bubbled.[77–79] Students began to push back, treat their professionalism curriculum as "just another course" (i.e., "just pass the test"), evince strategies of evasion or duplicity, and/or adopt the facade of chameleon socialization.[80] Students accused faculty of hiding behind the power of hierarchy and (rightly in some instances) of generating student codes while they refused to apply the same standards and principles to themselves. Faculty, feeling bewildered, defensive, and angered, began to label students as self-centered slackers.[81–83] Generational rifts widened.[82]

Meanwhile, and somewhat outside the medical school gates, additional points of tension began to erupt. The first was COIs.[18–21] Although COIs have always been a sentinel issue within medicine—after all, Flexner's concerns about proprietary medical schools and the general issue of commercialism were, at heart, COI issues—it was not until the beginning of the 21st century that issues moved beyond the particulars of physician referrals and ownership of medical facilities to a broader call by medical leaders for academic health centers and other organizational entities to divest themselves from a litany of industry gifts and inducements that had begun to engulf medical work.[19] A firestorm ensued. Some insiders urged a ban.[84,85] Others argued that relations with industry should be "managed."[86] Of particular interest within this ongoing debate was the infusion of an organized student presence when the American Medical Student Association decided to issue a "report card" to grade (A through F) medical schools on the basis of their COI policies.[55] There has been considerable organizational squirming (driven by press coverage) since many schools received an initial grade of F.

Although COI is not the only professionalism issue, it is a signature one, given the altruism-infused issue of who is being served, provider or patient. In turn, the debate between calls to ban versus to manage COIs is, at root, a debate about the meaning of professionalism and how medicine's professionalism movement should continue to evolve. A similar debate (although one we will not explore here) focuses on continuing medical education (CME) and its long-standing reliance on industry funding. Here, too, calls to ban versus to manage industry funding of CME are, in fact, a debate over the meaning of professionalism. Within all of these conflicts, Flexner's warnings about "proprietary" medical education seem well founded and prophetic.

A second flash point is resident duty hours.[14–17,87] Once again, the history and particulars will not be reviewed here, but where COI captures the tension between commercial and nostalgic professionalism, duty hours reflects the tension between nostalgic and lifestyle professionalism—the former built around the issue of physician autonomy and the "right to make a living" and the latter around the issues of patient safety, student supervision, and the "appropriate" pace and structure of medical work.[88] Both duty hours and COIs continue to receive extensive media coverage, with COI reports highlighting physician "greed,"[89] while duty hours coverage depicts sleep-addled and unsupervised residents who placed patients at risk.[90] Across all, medicine's insistence that it is a profession in the service of others is placed under a disbelieving lens.

In Figure 1, we provide a brief rendering of the interplay among four types of professionalism (activist, entrepreneurial, lifestyle, and nostalgic) at the macro level. Arrow size and direction capture influence, and circle size shows the relative importance of each type of professionalism to system dynamics, with factor scores representing another indication of relative impact. Thus, nostalgic professionalism is represented as being under siege by both entrepreneurial and lifestyle professionalism—with entrepreneurial professionalism more important than lifestyle professionalism. After all, the variety of work/lifestyle options available to physicians is facilitated, in part, by the increase in the types of employment structures (e.g., part-time, job sharing, locum tenens) generated by entrepreneurial forces. Meanwhile, the role of activist professionalism is more peripheral (at least to date) to the clashes between nostalgic professionalism, entrepreneurial professionalism, and lifestyle professionalism. Furthermore,

and when exerted, we see it occurring more in entrepreneurial professionalism than in lifestyle professionalism.

Meso-level professionalism

Although the oral culture of medical education is rife with stories about students who managed to "sail through" their training without attending class and/or were able to "game" their way by manipulating faculty during their clerkship and residency experiences, becoming a physician is a highly social activity marked by considerable interaction among and between trainees, faculty, and patients. Efforts to create a formal curriculum of professionalism may be a pedagogical initiative-de-jour, but students have always "augmented" these faculty-centric efforts with a host of informal, tacit, and often idiosyncratic learning experiences (the informal, hidden, null, etc., curricula), which form the cultural backbone of medical practice and of the medical school as a social system.[91]

To date, efforts to untangle the structure, process, context, and impact of these informal/hidden types of learning and, in turn, how they interact with the formal curriculum, have been hampered by the lack of conceptual and methodological tools that would allow researchers to analyze the various components of student learning and their interactions. Part of the problem has been the tendency within medical education research to frame problems and their analysis in terms of individuals and their characteristics. Thus, although any number of social factors (e.g., age, race, sex, social status, popularity) may function as key explanatory variables in some investigations of medical education, they remain "attached" to individuals. As a consequence, we may learn something about factors that predict career choice, the delivery of quality of care, or even professionalism—but with the underlying model treating students as discrete, and fundamentally isolated, entities.

The new science of social networks[92–94] challenges this particular depiction and asks that we consider models that are not only dynamic but also grounded in relationships/interactions. Thus, although we might want to learn what *types of* students trigger professionalism warning flags during training or in practice, we also want to know where these students "fit" within the social networks of their peers. After all, we will have completely different sociological pictures depending on whether these "unprofessional few" (e.g., studies of student "lapses" almost always identify such students as a "small minority") function as key nodes, or hubs, within their webs of relations or whether, instead, they are peripheral (e.g., fringe) members of their communities. Similarly, we could map how national medical organizations (specialty groups, associations, etc.) work together (or not) to influence the overall direction of medicine's modern-day professionalism movement. To do so, however, would require that we locate our explanations within the interactions of system elements rather than within the characteristics of system pieces. Another example focuses on students and their role models. Although it would be wrong to minimize the importance of role models and mentors as a key element in professional development, the fact remains that neither students nor role models function within isolated dyads. A more robust understanding of professionalism requires that we move beyond these couplets of influence and into the networks of influence that engulf them.

Another example of how network analysis can be employed to better understand the overall learning environment of medical students is the move within medical schools to form learning communities and academic societies.[95] Learning communities are formal structures designed to link students, usually across years of training, and to facilitate the education and socialization processes. That Student X has been assigned to Learning Community Y, and that this cohort is formally brought together in certain ways, are all structural conditions of the situation. But to what import? Do students "stay" within these groups? Perhaps these formal communities exist on paper but have very little functional presence otherwise? Perhaps students form "outside" and more informal networks of peers for the purposes of study and/or social interactions? Social network analysis can begin to address these issues and, in turn, build bridges of understanding between what takes place at the interface between the formal and the informal/hidden curricula.[96] As noted by Haidet and Stein, "there is little empirical work in the medical literature that explores the development and meaning of relationships in medical education." For those authors, and for us, "relationships are a critical mediating factor in the hidden curriculum."[97(pS16)]

To date, network analysis has not been employed to examine medical education. Nonetheless, this conceptual framework and related empirical tools are being used to understand a variety of clinical and basic science research questions including colorectal cancer screening,[98] health inequalities,[99] obesity,[100] and smoking.[101]

The network map superimposed in Figure 1 at the meso level is data based and depicts the relationships that exist within a particular group of first-year medical students. Although the scale used here makes particulars difficult to discern and renders impossible the inclusion of underlying statistics of connectedness and node centrality, there are certain obvious patterns worth noting. Some students, for example, are more linked than others (either through their actions or the actions initiated by classmates), with a few being highly linked "hubs" whose absence—if removed from the network—would threaten the structural integrity of the group. How this network changes over time as students continue their training would make for a fascinating study and a more textured understanding of medical education and its effects.

In sum, social networks matter, and medical students operate within webs of interrelationships whether the issue at hand is learning pathophysiology, clinical skills, or professionalism.[102] The structure and dynamics of these networks need to be better understood.

Conclusions

Flexner's universe contained two types of professionals. The first, incomplete and evolving, was his physician clinician. The second was his full-time academic physician–scientist. Flexner viewed this first type as the product of changing social forces. He viewed the second as a force for social change, as core to the restructuring of medical education, and therefore something that needed to be inserted—with financial inducements if

necessary—into the structure of the medical school.

Since Flexner's heyday, the practice of clinical medicine, the content and organization of medical education, and even how we conceptualize professionalism have become more nuanced and complex. For Flexner and his contemporaries, professionalism was something that emerged within the rollback of commercial influences. Although there were other elements in Flexner's six-part definition of *profession* (see his statement quoted earlier), the professionalism–commercialism conundrum was his crucible. Issues of lifestyle, or professional dominance (in the way we think about these now), were not a part of his conceptual equation.

Today, medical practice, medical professionalism, and medicine's relationship with society are more complex. Conceptions that served Flexner well have lost their robustness. What remains relevant, however, is Flexner's systems-oriented approach to the interplay of social forces and social change, including professionalism. The tension between professionalism and commercialism continues, but it is not the same (structural) tension as it was in Flexner's era (after all, medicine has yet to adequately define what is and what is not "unprofessional commercialism").[65] Nor is this the only tension. We have reviewed issues of lifestyle and entrepreneurial professionalism (in the context of duty hours and COIs), and in closing we offer readers yet one more type for their reflection—professional dominance. Although not yet at the level of a flash point (like duty hours and COIs), calls to bridge relations among health professions, to create a true team-based practice (no "captain of the ship" here), and to construct interdisciplinary training across the health occupations have surged in recent years.[57,103] Nonetheless, these calls, particularly for a team-based approach to patient care, have been around for decades. So what is different today? Complexity. The health care workforce has become more highly differentiated. Physicians truly are "one of many." Traditional definitions of professionalism, within both medicine and sociology, have identified professional dominance as key to medicine's professional status (although medicine's definitions have been more normative, with sociology's being more descriptive). Nonetheless, a top-down hierarchical model of work (as reflected in the professional dominance model) no longer seems to capture these complexities—even as the underlying complexity of medical work, the uncertainties of knowledge and its application to patient care, and the tremendous variabilities that exist with the patient population continue to demand some measure of individual expertise and discretionary decision making. What remains an underlying truism within all this is that the debates over workforce issues, like those of patient safety, COIs, duty hours, and others are debates about the nature and meaning of medical professionalism. How organized medicine responds to the problems of internal integration (e.g., increasing subspecialization) and to the challenges of external adaptation (e.g., the buyer's revolt) will have a great deal to say about the nature and sustainability of medical professionalism in the future. Traditional conceptions of what it means to be a professional—as a stand-alone entity—are neither *system*atically realistic nor ultimately sustainable. Like it or not, we remain awash in a sea of complexities.

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