2 The hidden curriculum

A theory of medical education

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Preface

It is 30 June and a new crop of interns has gathered to hear the Fish (Chief Resident and 'permanent Slurper'), Leggo (Chief of Medicine), the Pearl (an Attending), Dr Frank (the House psychiatrist), and other House representatives describe how things work (for example, parking, rounding schedules) and the values (for instance, covert autopsies) that govern the House of God. Amid this flurry of advice and information, the Fish and Dr Frank direct their trainees to seek their counsel if the demands of the House proved too formidable. However well intentioned, this edict contained several tacit messages: all problems are personal; organizational structures and practices are inviolate; trainees adapt and cope. In *The House of God* (Shem 1978) a book that is one of medicine's great primers on medical education's hidden curriculum (via Laws of the House of God, the Fat Man, and a montage of other emblematic characters and settings), this particular injunction slips by unnoticed – most certainly by the speakers (who are sincere if ritualized in what they say), but also by the interns who will not appreciate its normative undercurrents until long after the House began to exact its terrible toll. The hidden curriculum, after all, is most effective when it appears innocuous, innocent, and invisible.

Introduction

> . . . the first wisdom of sociology is this: things are not what they seem. . . . Social reality turns out to have many layers of meaning. The discovery of each new layer changes the perception of the whole.
>
> (Berger 1963: 23)

In this chapter we examine the hidden curriculum as a theoretical construct using medical education as our template. To this end, we briefly introduce three natural histories, a case study and a futuristic scenario. The histories track the hidden curriculum as a theoretical construct within the literatures of education, medical education and sociology, in that order. In addition, and to better situate the hidden curriculum within the broader framework of sociology, we develop a

conceptual map linking the hidden curriculum to a host of other sociological concepts that address issues of social relations, group dynamics and interpersonal change. The case study examines medicine's modern-day professionalism movement. The future scenario involves our attempt to link the hidden curriculum to systems theory and complexity science.

Critical to understanding the above materials is our distinction between the hidden curriculum as an overall theoretical framework (HC), and the hidden curriculum as one particular process of student learning (for example, the messages conveyed about core organizational values that are embedded within medical-school award ceremonies) that unfolds within the complex milieu of medical education. This distinction between theory and process is often obscured in the medical-education literature. Scholars frequently use the term 'hidden curriculum' to represent/symbolize one half of a dichotomy (the formal versus the hidden) in which lessons learned outside the formal stand in some opposition to what is being acquired within the curriculum-as-stated, or what Martin (1976) labels the 'curriculum proper'. While this framing of formal and hidden as polar opposites possesses a certain heuristic appeal, it also collapses a large number of heterogeneous types of learning processes into a single conceptual category, thus limiting our understandings of medical training as a complex social system. To move past this dichotomous roadblock, we employ the symbol 'HC' when talking about the theory as a whole and 'hc' when we explore one particular type or subset of learning that exists within that overall theoretical framework.

The HC and theories of education

> Hidden curriculum refers to messages communicated by the organization and operation of schooling apart from the official or public statements of school mission and subject area curriculum guidelines.... The messages of hidden curriculum usually deal with attitudes, values, beliefs and behavior.
>
> (Berger 1963)

The HC has its most extensive natural history within the education literature. As both a concept and theoretical framework, material on the HC routinely appears in education textbooks, encyclopaedias and journals. Historically, the HC traces its conceptual roots to Philip Jackson's 1968 volume *Life in Classrooms*. While this attribution is technically correct, it is somewhat misleading. Jackson did use the term in his study of student learning and did frame (à la Durkheim) school-based learning within an overall process of socialization. Nonetheless, the phrase appears only twice in this volume, once on pages 33–4 and once on the inside flap of the dust jacket. Instead, a more nuanced (if psychiatrically oriented) development of this concept would have to wait until Benson Snyder published his 1971 comparison of student life at MIT and Wellesley College. Snyder, a physician and psychotherapist, wanted to explore the dissonance students experienced as they negotiated the space between what each school formally required of its students versus the more tacit cues students picked up about what their

school 'really' expected of them (something Snyder defined as the 'emotional and social surround of the formal curriculum' (p. 4)). Among other things, Snyder concluded that student success was determined less by academic prowess than by the ability of students to navigate the space between these two sets of expectations, and then to engage faculty in strategic gamesmanship based on these nuances. Moreover, the burden of having to negotiate this space also produced feelings of hypocrisy and cynicism in students. Snyder considered the ability to navigate these waters to be a skill and one not equally available across racial and ethnic lines. In a point we will revisit, Snyder drew upon the conceptual terminology of social ecology because he wanted to emphasize the interdependence of social actors and their surroundings, and thus the need (as we will argue) to address issues of the HC in terms of complexity and systems thinking.

Over time, the HC has undergone several waves of theoretical reframing within the education literature. Early treatments of the HC, focusing on K-12 education, adopted an uncritical functionalist perspective in noting how schools can operate as agents of social control via the teaching of 'virtues' such as patience, docility and respect for authority. Later writings were more Marxist in orientation with schools depicted as operating in the service of dominant socio-political and capitalist interests and by reproducing pre-existing relations of social class and power. Still later writings on the HC adopted more of a symbolic interactionist perspective by stressing the active participation of students in resisting dominant (if tacit) messages of social inequality and in creating countervailing forces such as student subcultures. Howard Becker and colleagues would employ this latter interpretive framework in their famous *Boys in White* study (Becker *et al.* 1961). Work on the HC peaked between the 1970s through the 1990s. While the concept remains widely used in the education literature, it has also been labelled a mythical social force and an irrelevant social construct (Lakomski 1988) – claims that have generated considerable debate within the education community (for instance, Eisner 1992).

Finally, and as a historical note, an awareness that learning involves more than formal pedagogy substantially predates Jackson and Snyder. Cotton Mather (1663–1728), for example, proposed a 'collegiate way of living' at Harvard as he advocated bridging the formal learning of the classroom with the more informal exchanges that emerge among students. Similarly, John Dewey's (1859–1952) concept of collateral learning, and William Heard Kilpatrick's (1871–1965) concepts of primary, associate and concomitant learning, depict teaching and learning as distinctive social phenomena.

The HC curriculum and medical education

> If one wants to find out how a modern American city is governed, it is very easy to get the official information about this subject.... However, it would be an exceedingly naive person who would believe that this kind of information provides a rounded picture of the political reality of that community. The sociologist will want to know also the constituency of the 'informal

> power structure'. When sociologists study power, they 'look behind' the official mechanisms supposed to regulate power in the community.
>
> (Berger 1963: 32)

Introduction

The HC is a relatively recent arrival in medical-education literature. Most contemporary publications in medical education date the HC to a 1994 article by Hafferty and Franks. However, the concept was first applied to medical education more than a decade earlier by sociologists Jack Haas and William Shaffir in their study of the new McMaster medical-school curriculum (Haas and Shaffir 1982). In this study, the authors employed a symbolic interactionist perspective to examine student socialization and how students sought to create a 'cloak of competence' via ritualized practices of impression management in their dealings with faculty. Although Haas and Shaffir used the HC as an interpretive tool, they did not extend or develop it as a theoretical construct – in spite of using the term in their title.

Over the past 15 years, the hidden curriculum (HC) has become somewhat of a buzzword within the medical literature. Both PubMed and ISI Web of Science track articles using the HC as a keyword. Medical journals from education and ethics to clinical orthopaedics, internal medicine, oncology and healthcare analysis, have highlighted the role of the HC in medical work and professional acculturation. The HC has also been featured in the nursing, physical therapy, dentistry, emergency medicine and dietetics literatures, and across countries such as the US, Canada, the UK, Australia and New Zealand. Special sessions have been organized at national and international meetings, and efforts are underway to measure its dimensions and impact (sponsored by organizations such as the National Board of Medical Examiners (NBME) and the American Board of Internal Medicine (ABIM)). Most recently, the Liaison Committee for Medical Education (LCME) has used the concept (see below) to develop a new medical-school accreditation standard. Within this broad and evolving set of literature and educational practices, the HC is most often linked to issues of professionalization and professional socialization and to calls for a 'fundamental change' or 'paradigm shift' in the organizational and occupational culture of medical schools.

Over time, the HC has assumed a rather ubiquitous presence within the medical-education literature. The Association of American Medical Colleges' (AAMC) flagship journal *Academic Medicine* has published 73 articles employing this concept since 1994. A somewhat atypical and yet illustrative example is a recent (November 2007) issue of *Academic Medicine* largely devoted to the issue of professionalism. The issue includes a thematic overview by the editor, three lead articles (the first by medical students on the disconnects in medical training, the second by a leading physician–writer on medical professionalism, and the third by the outgoing president of the AAMC), a research paper on peer evaluation and professionalism, and case materials from nine medical schools.

All three lead articles and six (Vanderbilt, McGill, North Dakota, Mayo, Indiana, Chicago) of the nine school-specific articles draw upon the HC to advance their arguments. The three that did not (Pennsylvania, New York University and University of Washington) employed related concepts such as organizational culture, the informal curriculum and/or appreciative enquiry in their discussions on the creation of a new 'culture of professionalism'.

This growth notwithstanding, most authors who employ the HC use it as a sensitizing concept, making only minor attempts to develop it as a theoretical construct. When using the concept, most authors stress the theme of 'disconnects' – be that a disconnect between:

1 What is taught in the basic science versus clinical years.
2 What is taught in 'the classroom' versus 'the clinic'.
3 What role models preach and what they practice.
4 How formal organizational policies are transformed on the shop floor.

Overall, the HC is framed as having a negative impact on student learning – by promoting something bad (such as cynicism) or in preventing something good (such as professionalism). In association with, and in a partial outgrowth of, this literature, educators have begun to call for major changes in the structure, process and content of medical training (using terms like 'fundamental' or 'paradigm shift') in order to transform a faculty-centric emphasis on teaching to a student-centric emphasis on learning (see Hafferty and Watson 2006 for an examination linking the HC to learning communities).

In contrast to this thematic and reform-focused literature, there is a relatively small movement to assess the content, process and the products/outcomes of the HC. Notable efforts include work by Haidet and colleagues (Haidet *et al.* 2005), along with some preliminary efforts by the National Board of Medical Examiners (NBME) and the ABIM Foundation to measure the impact of the HC. Most striking (in terms of immediate impact) is the LCME's new (July 2008) accreditation standard (MS-31-A) that requires medical schools to 'ensure that the learning environment for medical students promotes the development of explicit and appropriate professional attributes (attitudes, behaviours, and identity) in their medical students'. This standard calls for medical schools to take responsibility for student learning – as opposed to faculty teaching – and is an obvious work in progress. How medical schools will attempt to meet this standard, including how the LCME responds to their efforts, will be grist for medical educators – and sociologists.

A shift in perspective: the popularization of the HC as an analytic tool

The fact that the HC fell on deaf ears within the medical-education community in the 1980s, yet attained cult-like status a decade later, invites an obvious question: 'What changed?' While singular answers are always suspect, one primary

shift was organized medicine's discovery of its own 'crisis of professionalism'. Although medicine's status as a profession has been studied by sociologists since the late 1800s, and while sociology had been documenting medicine's loss of professional status since the late 1960s, organized medicine did not itself begin to acknowledge, and critically reflect on, its fall from professional grace until the early 1990s (Hafferty and Castellani 2008). The HC, in turn, became one tool by which medical educators sought to understand this fall.

Medicine's self-perceived crisis of professionalism represented a conundrum for medical educators. On the one hand (and according to the prevailing discourse of medical educators), medical schools were continuing to train 'excellent physicians'. On the other hand, evidence had begun to accumulate that the public-at-large no longer perceived medicine as having an unwavering commitment to public service. The rise of corporate medicine, the emergence of a medical marketplace (a relatively new term), Wall Street's discovery of healthcare as an object of capital investment, and even the growth of the academic health centre (AHC) as a research enterprise and the marginalization of the medical school's teaching mission in favour of emergent research and clinical enterprises, all helped to highlight medicine as an occupation that had 'lost its way'.

Medicine's acknowledgement of this crisis began to alter the way medical educators framed the nature of their work. It was not that educators had been altogether blind to the negative aspects of physician training. Studies documenting the loss of idealism and the rise of cynicism have long been a staple of medical-education research. So too are studies documenting a loss of moral reasoning and patient-centred skills by students during training. Other studies tracked the seemingly trenchant presence of medical-student abuse (termed 'bullying' in the UK medical-education literature). Persistent evidence of medicine's failure to recruit and train non-majority students only added to the picture of medical schools as negative and/or dysfunctional learning environments.

If evidence about medical training's dark side was nothing new, why are today's medical leaders calling for a shift in physician education at the level of organizational and institutional culture – something quite different from the decades of initiatives Bloom (1988) once characterized as 'reform without change'? What has shifted, we feel, is not the discovery of 'new' sins or even the accumulation of some critical mass of old transgressions, but rather a reframing of the meaning and import of long-accepted educational practices. Two factors have contributed to this conversion. First, new information technologies began to emerge to study healthcare quality – and thus new data sets from which to frame the consequences of medical-learning environments (be they school-based or the workplace). Second, and equally important, educators needed a new way of thinking about that training, something that held both face validity but would also be palatable (and thus reassuring) to those who were, after all, captains of the old (and sinking) ship. One such reframing was the HC. Thus, when researchers began to accumulate data in the 1990s documenting the widespread presence of health disparities in the diagnosis and treatment of disease, the fact

that only 50 per cent of patients were likely to get recommended medical care, that medical errors were killing upwards of 100,000 patients per year in the US, and the presence of considerable conflicts-of-interest (COI) within medical practice and research ranks – and when medical education's long-standing defence ('yes-but-we-still-produce-the-best-doctors-in-the-world') began to crumble as the product of medical education came under increased scrutiny (and criticism) – the HC was there to fill the conceptual (and reassurance) void.

What turned out to be both conceptually assuaging and organizationally palatable for educators was a particular reading of the HC that emphasized that there was *another* curriculum at work – a 'hidden curriculum'. The problem (according to medical education's evolving discourse on the HC) was not the formal educational experience, but rather a subterrestrial set of factors that were hindering the formal curriculum from doing the job it was designed (by these very same medical educators) to do. The logic of the HC (again as constructed within medicine) was both reasonable and palatable – if ultimately self-serving.

If medical education was indeed buffeted by a self-defined crisis of identity and structure, and if indeed reform was needed at the level of culture, then the HC became the perfect oil to pour upon these troubled waters. There was, however, more than self-serving discourse at work. The slowly evolving realization that there was far more to medical education than the formal curriculum provided educators with an analytical framework from which to reconsider decades of data detailing the loss of student idealism, the rise of cynicism, the persistent (and troubling) presence of medical student abuse, the actual loss of moral reasoning skills and the failure of medical education to correct long-standing deficiencies in the recruitment and training of non-majority students. Some educators began to acknowledge that 'trying harder', admitting 'better' students, and/or adding more ethics courses to an already overburdened curriculum were not going to do the trick. Somehow the entire educational enterprise had to be reconceptualized. It is at this point of reconceptualization that we find medical education today.

Some issues of concern

There are some points of caution in this story of rediscovery and reclamation. For example, the LCME's new accreditation standard explicitly frames the HC (relabelled as 'learning environments') solely in terms of professionalism and this rather narrow focus limits the applicability of HC theory to broader issues of medical training. After all, the tacit lessons students learn during training are not limited to issues of ethics, patient communication or COI. For example, the science that faculty teach medical students is a fundamentally different science than what these same faculty teach to their graduate students. The difference is not a matter of amount (with medical students receiving 'the same but less'). Rather, medical students are taught a science of absolutes and certainties. Graduate students, meanwhile, are presented by these same faculty with a science grounded in uncertainties, ambiguities, probabilities and nuances. In short, while

the HC is an important vehicle for teaching professionalism, it is also essential in conveying information to students about what it means to be a physician.

A second concern is how the LCME characterizes the HC. The LCME treats the HC as a dichotomous variable composed of a formal and 'informal' curriculum, the latter being shaped by 'informal lessons' that unfold as students interact with others. Within the HC literature, this distinction highlights that space between what the organization says is happening within its formal curriculum and the lessons students learn in the unscripted, idiosyncratic interactions that take place between students and faculty or students and their peers in the cafeteria, hallways, elevators, and/or on-call rooms (Hafferty 1998). One problem with this particular division is that it ignores the organization – and thus that space between what a medical school says it does (via its formal pronouncements, practices and policies) and how that school conducts 'business' on an everyday basis. In short, this new LCME standard ignores the hc and directs faculty (who are, after all responsible for meeting LCME accreditation standards) to focus on individuals (faculty and students) while ignoring the school as an operational force.

One possible downside of this marginalization is that medical educators (and administrators) may come to mimic a common medical-student coping device – and thus focus more on 'the test' than on what really needs to be accomplished. With schools being held responsible only for their formal and informal curriculum, medical educators may fail to examine (in terms of learning environments) the overall allocation of resources to the teaching, research and clinical service missions of the medical school, the actual formation of school COI policies versus their implementation and enforcement, or how the overall profile of medical-student or faculty awards sends messages to students and faculty about what is truly meritorious and 'award-worthy' within the organizational culture of a given school. Nor may schools be encouraged to imagine how the underlying value structure of the school itself, the overall structure of the curriculum (for example, patterns in the types of courses deemed required versus elective, or what courses or faculty get the prime times for class), or how a school's physical plant and architectural layout might contribute (in positive or negative ways) to student learning experiences. Nonetheless, the fact that medical educators will now be responsible (in ways yet to be determined) for more than what they teach is a notable step in making the HC more visible.

The HC as a dichotomous variable: extending the concept

The tendency of medical educators to frame the HC as a dichotomy (formal vs. informal) is more than limiting. It is also conceptually incorrect. The HC and the informal curriculum are not synonyms. While considerable student learning takes place within social networks, this is not the only 'alternative' site/source of learning. The education literature, for example, identifies a number of different ways to deconstruct student learning. Wilson and Wilson identify eight different types of curricula (overt, societal, hidden, null, phantom, concomitant, rhetorical

and curriculum-in-use) (Wilson and Wilson 2007). Goodlad and colleagues identify five (ideal/ideological, formal, perceived, operational, experienced) (Goodlad *et al.* 1979), while Coles and Grant (1985) identify seven (using a Venn diagram of three overlapping circles). One notable example of an alternative curriculum is the null curriculum – or what gets learned when something is *not* mentioned (Eisner 1985). Our point here is neither to enumerate all possible learning modalities, nor to introduce new labels even for the sake of valid refinements, but rather to underscore that student learning is a multidimensional process – and one that is not well served by reducing complex social processes and a complex social system (medical education) to a dichotomy.

A related issue involves accessibility – this time the accessibility of the participants (faculty and students) to the learning processes taking place around them. Within the medical education literature, the hc has been linked to the concept of organizational socialization and organizational culture – the latter focusing on how new recruits 'learn the ropes' and come to understand 'the way things happen around here'. For example, Edgar Schein conceptualizes organizational culture as unfolding across three dimensions:

1 Artefacts.
2 Espoused values.
3 Basic assumptions and values.

(Schein 1992)

While artefacts (for example, dress, course syllabuses) are surface phenomena, quite visible yet difficult to interpret (their meaning to insiders may be quite different from their meaning to outsiders), and while Schein's treatment of espoused values has important similarities to our formal curriculum, Schein considers the core of any culture to be represented by its basic or underlying values. Many of these values, however, reside at an unconscious or unexamined level, and thus are not readily available (if at all) to the immediate social actors. This unavailability represents a challenge to educators who call for change at the level of organizational culture. How exactly is this to take place? For students, medical training is fundamentally a process of identity change and personal transformation – something that unfolds, in many respects, at a subconscious or unreflexive level. While faculty and administrators may indeed have their fingers on the pulse of the formal curriculum, they too have only limited access to student subcultures, and to their own assumptions about how their medical school actually works – as opposed to how they feel it is (formally) supposed to work. In short, much of what goes on in a medical school is not readily accessible to its inhabitants – unless promoted by direct (and often outside) questions and/or when 'jostled' by an unanticipated and unusual event. Nonetheless, medical educators continue to call for a 'culture change' and link this type/level of change to the HC.

Because the overall medical literature on the HC tends to bifurcate student learning into formal versus HC (thus lumping together the informal and HC),

and because the LCME tends to focus on the formal versus the informal curriculum (leaving aside the hc), we find it helpful to:

1 Differentiate among *at least* three curricula (formal, informal and hidden).
2 Take particular care to differentiate between the informal and the hc.
3 Add other types of learning (for example, null) as needed for the deconstruction of student learning.

Second, we strongly suggest that the labels formal, informal, hidden and so on, not be unyieldingly linked to given settings, situations or roles. Although the medical literature frequently labels 'the classroom' as formal and 'the clinic' as informal, the classroom (as a physical place) can (and almost always does) contain all kinds of curricula (informal, hidden, null and so forth), just as the clinic can be a site of many important formal learning opportunities. Similarly, if the student handbook states, 'medical student well-being is our primary concern', then student well-being is a part of that school's formal curriculum. The HC, in turn, asks how this value statement is operationalized/manifested within school practices and policies. Conversely, while issues of 'lifestyle', 'balance' and 'student-centredness' currently have a high profile within medical education, what if a given student handbook fails to mention any of these themes? Perhaps what we have here is an instance of a null curriculum at work?

Role models are another example. Although role models have long functioned for students as an important source of tacit learning, the implicit nature of this learning changes if a given school:

1 Identifies 'role models' as a critical resource for student learning.
2 Establishes formal expectations for those faculty around this form of student learning.
3 Develops training modules to advance faculty skills in role modelling.
4 Employs assessment tools to monitor faculty performance as role models, then this school is treating role models as a part of their formal curriculum.

In fact, the recent move toward 'mentors' and mentoring programmes within medical education circles reflects a shift from something (role models) that has long functioned outside the formal curriculum to something (mentors) that fits more squarely within the formal curriculum. Role models, after all, need not even know they are considered as such by another. Mentors, however, cannot hide behind this form of social distance.

As our final example, while a medical school may announce, with great enthusiasm and sincerity, that it offers its students an 'integrated curriculum', it sends an altogether countervailing message when students are told to answer test questions based not on any sense of integration but rather on who wrote the question. In short, the potential to say one thing and do another is omnipresent within both organizational structures and social relations and thus it is a mistake to link particular settings or situations to particular types of curricula. The HC is

about layers of learning and about systems of influence. A penchant for labelling X as ‘formal’ (in some overarching sense), Y as ‘informal’ and/or Z as ‘hidden’ often gets in the way of untangling medical student learning as a dynamic and integrated process.

The HC and sociological theory

The HC, as a formal construct, has virtually no presence within the sociological literature – and this despite the fact that many sociological concepts can be directly and indirectly tied to the HC. Even the presence of the HC within the general education literature matters little within sociology. The sociology of education is a well-established subdiscipline within sociology. Nonetheless, neither the *Sociology of Education* nor the *British Journal of Educational Studies*, both sociology of education journals, contain a single article whose primary focus is the HC – the *British Journal of Educational Studies*’ primary contribution to this literature being a 2002 book review (50, 3: 393–5) of Eric Marolis’s *The Hidden Curriculum in Higher Education*.

Nonetheless, and as captured in the quotes by Peter Berger that headline the previous two sections of this chapter, sociology is all about the HC. The distinction between formal and informal social norms or between official workplace rules and the more informal normative practices that govern work on the shop floor directly speak to the difference between the formal curriculum and other types (for instance, hidden, informal, null and so on) of learning. Also relevant are the sociological literatures on occupational culture, socialization and identity formation, the transformation from out-group to in-group status, interaction rituals and/or the differences that exist between surface (or manifest) social phenomena versus the ‘deep structures’, the ‘underlying grammars’, ‘cultural codes’, or the ‘generative rules’ that underscore social action. Finally, we note how everyday social action, because of its mundane and taken-for-granted nature, readily unfolds beneath the reflective radar of individuals and therefore exerts its influences at a pre-, sub-, or unconscious level. The great bulk of social life, after all, is rendered opaque by its very ubiquity.

One way to illustrate the centrality of the HC to sociological theory is to develop a conceptual map illustrating key links between sociology and the HC. Conceptual maps are useful visual tools for demonstrating the intellectual relationships among a given set of theoretical terms and/or ideas. In this respect, conceptual maps are encyclopaedias, not dictionaries. Instead of defining a term, they position each concept relative to other similar concepts. Conceptual maps are a type of network comprised of nodes (terms, theoretical ideas, concepts and so forth) and the links among them (direct ties, indirect ties, weak ties, strong ties), which, when positioned in two-dimensional Euclidian space, result in a measurable map that can be mined for important information.

To create our map, we first combed through several sociology dictionaries and encyclopaedias to create an exhaustive list of sociological terms we felt had something to do with either the spirit or specifics of the HC. For example, latent

and manifest functions relate to the spirit of the HC, while secondary socialization relates to the HC's mechanics. Our final list contained N = 68 concepts (including the HC) which we grouped into six basic conceptual neighbourhoods:

1 Discourse (ideology, values and so forth).
2 Power relations (coercion, labelling, etc.).
3 Socialization (roles, front stage, etc.).
4 Formal organizations (organizational culture, informal structure, etc.).
5 Social institutions (latent and manifest functions, etc.).
6 Sociology of education (learning environment, student–teacher relations and so on).

Next, we took each concept and linked it to each of the other concepts associated with it. The HC, for example, was connected to every other concept with other concepts having a more limited set of links. Our process of linking all 68 concepts resulted in a database of 1,035 links. We entered this database of links into Pajek, a software program for the study of social networks. The result is Figure 2.1.

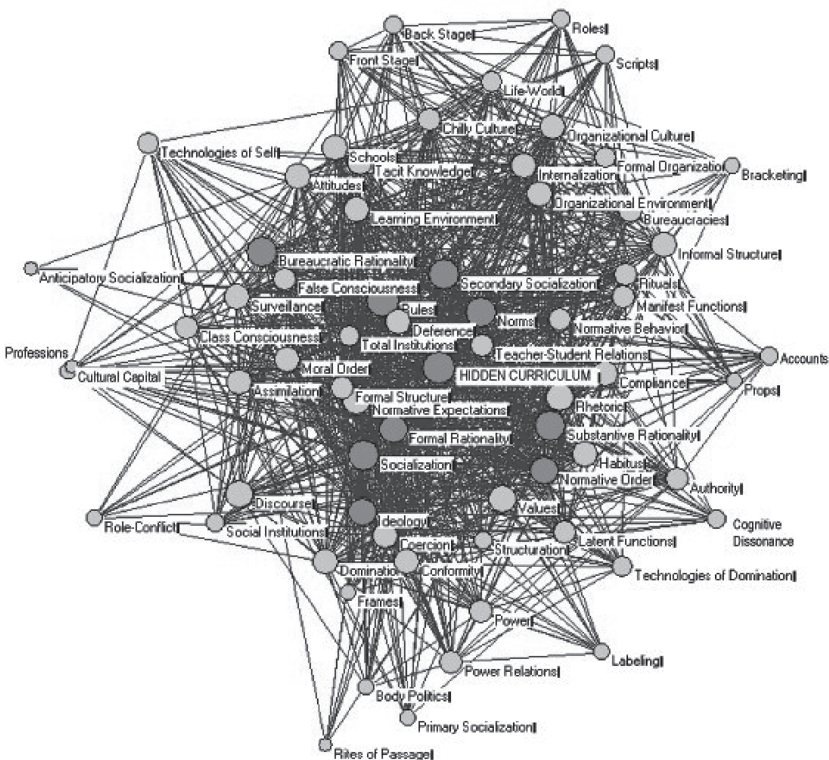

Figure 2.1 The Hidden Curriculum: a conceptual map.

Figure 2.1 is to be read as follows. The closer a node is to the centre of Figure 2.1 (where HC resides), the stronger its relationship to the HC. Similarly, the more proximal any two concepts, the more similar they are to each other. As a second-order association, the larger a given node, the more direct and indirect links that node has with the other 67 concepts. The largest nodes are referred to as hubs. Nodes that are both proximal and large have strong conceptual and relational links to HC and its associated 67 concepts.

A key to interpreting Figure 2.1 is to understand that it does not represent a definitive statement about the relationship of sociological theory to the HC. Rather, Figure 2.1 is a conceptual map depicting the relationship of these 68 concepts to the HC – *given their web of connections to each other*. Thus, Figure 2.1 does not depict how a given variable (for example, rituals) connects to the HC as an isolated entity. Rather, it captures how the term ritual links to the HC *given the relationship of ritual to all other concepts – and those concepts to each other*. Readers may select a different set of concepts and/or posit different connections. This would, in turn, produce a different map.

Figure 2.1, therefore, represents a particular window into the interconnections that exist between a theoretical framework (HC) that has largely been developed within one academic field (education) and the host of theoretical and conceptual traditions that have been developed within another academic domain (sociology). In all of these respects, we believe that Figure 2.1 represents an important first step toward exploring the place of the HC within the broader framework of sociological theory.

To illustrate how one might work with Figure 2.1, we offer two examples. First, we examined a particular sociological concept (socialization) along with its constituent parts (anticipatory, secondary and primary socialization) and watched how these various concepts emerged within the overall figure. Second, we selected one particular link (manifest and latent function – HC) to highlight and explore this particular relationship on a conceptual level. In the former instance (socialization) we sought to examine the map as a whole. In the latter instance (manifest and latent function) we wished to examine (conceptually) one particular connection.

Socialization

The link between socialization theory and the HC has considerable face validity. Within sociology, there is a long history identifying educational settings as sites of targeted learning and identity transformation, and much of the education literature on the HC speaks, both directly and indirectly, to issues of socialization, acculturation and to schools as sites of sociopolitical and economic reproduction. Thus, it is not altogether surprising to examine Figure 2.1 and find that socialization emerged as one of the ten nodal concepts within our web of 1,035 connections. Furthermore, the particular web of relationships captured in Figure 2.1 asks us to reconsider how different types of socialization (for example, anticipatory, secondary and primary) connect both to the master concept (socialization)

as well as to each other. Figure 2.1, for example, suggests that primary and anticipatory socialization are more peripheral to issues of the HC than is secondary (adult) socialization. This makes perfect (conceptual) sense. We are, after all, dealing with the occupational training of quasi-adults (socially speaking). Figure 2.1 also suggests that anticipatory socialization and primary socialization reside within different conceptual constellations. Merging these two pieces of information suggests we might best consider the HC as operating more in the 'here and now' than in the past or the future – or at least consider time and place when exploring issues of the HC. On a more personal note, the conceptual constellation captured in Figure 2.1 also helped the authors identify a dimension of socialization we had neglected to include in our original database – namely the concept of 'resocialization'. We noticed this missing element when we explored the proximal relationship of 'total institutions' to the HC, and then recalled a small body of sociological work linking the socialization of physicians to this particular (and extreme) form of identity transformation (resocialization). Although we have not yet done so, the dynamic nature of the relationships that exist within Figure 2.1 also allows us to imagine a 'theory experiment' whereby we would insert resocialization into our underlying database, map its connections, and then see how Figure 2.1 re-calibrates. Such an experiment (along with others) would further enrich our understandings of the connections between the HC and sociological theory.

The HC and manifest/latent function

Robert Merton's concept of manifest and latent function (Merton 1957) is an excellent example of a prima facie link between the HC and sociological theory. Merton's distinction between the stated and/or recognized purpose(s) of a given social action or activity (to those participating) and the unstated or unrecognized purpose(s) of that action (latent function) has obvious parallels to the formal curriculum versus other forms of social learning. In developing his distinctions between manifest and latent functions, Merton drew attention to a number of different social properties and dynamics including:

1 The difference between insider accounts and observer/outsider accounts, thus legitimating the role of the social scientist as a valid source of interpretation.
2 Freud's distinction between conscious and unconscious motivations.
3 Durkheim's notion of social facts and the legitimacy of placing social situations and structure on the same playing field as psychological dispositions and biological tendencies in explaining human behaviour.
4 The ways in which culture and social structure might operate at cross purposes.
5 The paradoxical and counterintuitive aspects of social action.
6 The distinction between subjective disposition and objective consequences.
7 How irrational human behaviour may still be functional.

8 Links between manifest and latent functions and Merton's earlier work on unintended consequences.

Each of these themes has a parallel place within HC theory.

The HC and the symbolic interactionist (SI)/dramaturgical perspective

While there are a number of vantage points from which to explore the interface of HC and SI/dramaturgy, we will highlight Erving Goffman's (1959) work on how individuals engage in culturally and strategically managed interactions ('performances') as they seek to craft 'presentations of self' within strategies of 'impression management'. In developing his theoretical framework, Goffman utilized the metaphor of the theatre and of social life as a staged performance replete with props, sets, staging, scripts, costumes and an audience. One important parallel between HC theory and Goffman is Goffman's treatment of setting, particularly his distinction between front-stage (the performance as intended and viewed) and back-stage social action (not privy to the audience, but both accessible and necessary to the performers who share some social identity). For Goffman, the social action that takes place back stage can knowingly and intentionally contradict the formal presentation, with Goffman even characterizing back-stage renderings as being more 'truthful'.

The linking of social roles and dramaturgy also highlights the fact that individuals can give different performances to different audiences and that furthermore, what social actors present (in whatever setting) may not be what they think or believe. Goffman also differentiated between the expressions we give (intentional) and the expressions we give off – and thus (in part) the potential inconsistencies between what we say and what we actually do (both intentionally and not). Finally, Goffman's theoretical framework allows for a connection between his concept of situated identity and the HC's focus on situated learning.

The HC and professionalism: a case of pedagogical disruption

The rise of a modern-day professionalism movement within organized medicine (from the mid-1980s onward) has been detailed elsewhere (for example, Cohen *et al.* 2007; Hafferty and Castellani 2008). Here, we do not seek to decipher the forces underlying this movement, explicate its evolution or even explore its substantive implications for the future of medical practice. Rather we wish to highlight the HC and what happens when something that has traditionally functioned at a tacit and informal level (professionalism) becomes the object of formal pedagogy. Medicine's modern-day professionalism movement represents an excellent case study in this regard because of the way medicine has come to define the problem (the loss or lack of professionalism as a core occupational attribute); its principal solution (the 'rediscovery' of, or 'recommitment' to, that core); the

principal locus of remediation (medical schools and medical training); and finally, the scope of that remedial effort (a change in the 'culture of medical education') (see Cohen *et al.* 2007). Stated differently, organized medicine has created a discourse of professionalism over the past 20 years where a focus on loss and reclamation has generated a cottage industry devoted to:

1 Establishing 'core definitions'.
2 Developing 'unambiguous assessment tools'.
3 Identifying professionalism as a 'core competency'.
4 Including professionalism within accreditation standards at the undergraduate and graduate medical education levels.
5 Creating formal statements of core organizational principles around issues of professionalism (for example, the *Physician Charter*).
6 Publishing special issues of journals, organizing special sessions at national meetings and special conferences sponsored by national medical organizations.
7 Creating national initiatives (for instance, conflict-of-interest policies within clinical and research settings).
8 Developing formal instruction in professionalism at medical schools across the UK and North America.

Taken as a whole, these initiatives and related discourses constitute a veritable 'professionalism project' within organized medicine.

Befitting medicine's framing of its professionalism problem (loss), its professionalism solution (rediscovery and recommitment), and its definition of the HC (as something that needs to be removed or neutralized in order for the formal curriculum to achieve its intended goals), it is not surprising to find medicine (as an occupation steeped in power and hierarchy) crafting highly traditional definitions which are then inserted into a top-down educational model (where faculty teach – and students learn). Furthermore, it is equally predictable that assessment tools have been designed to reassure faculty that students indeed are learning what they (faculty) teach and to buttress this newly formalized curriculum of professionalism. The fact that medical students may perceive professionalism differently from faculty, be resistant to faculty teachings, create subcultural or counter definitions of professionalism, or be cynical about their overall instruction generally are not part of this pedagogical picture – at least as constructed by faculty (Hafferty 2002). Nor should they be, at least from within medicine's discourse of professionalism. After all (and again according to this discourse), medical students are 'naturally' professional, and therefore faculty 'need only' flood the curriculum with formal instruction on core professional principles, all delivered by wise elder role models, in order to counter whatever problems may arise during an educational process that organized medicine itself acknowledges is a source of countervailing values.

If only educational reform was so simple.

In fact, the effort by medical educators to shift professionalism from the

world of the tacit, informal and hidden to that of formal pedagogy is a study in organizational tension and irony – and one riddled with unintended consequences. Moreover, it is a lesson in the interconnected and symbiotic nature of medical-learning environments – and therefore, as we will discuss in just a moment, of the medical school as a complex social system. As students are introduced to formal definitions, and as they join faculty in formally structured discussions about these principles, students (unwittingly) are brought face-to-face – and inescapably so – with the presence of those inevitable disjunctures that exist between these principles and the values reflected in the actual work of medicine as it is carried out on the shop floor. For example, it is good to formally teach students that professionalism is steeped in altruism and the primacy of patient welfare (a 'nostalgic' view of professionalism – see Castellani and Hafferty 2006), but what values do students actually internalize when they find themselves in a variety of research and clinical-practice environments that are awash with normatively sanctioned and routinized conflicts of interests?

Furthermore, since faculty seek both to profess and evaluate, what lessons do students learn when students find that faculty seek only to evaluate students while exempting themselves from any similar set of standards? Even more disingenuous, what do students learn when some of these very same faculty are seen by students as being chronic violators of professional standards – and where such transgressions occur without rebuke or sanctions? One consequence, according to Brainard and Brislen (2007), is that students identify with learning environments where 'power and personality are more important than patients' and that the only way to 'navigate the minefield of an unprofessional medical school or hospital culture' is to become 'professional and ethical chameleons'. Although Brainard and Brislen do not reference the following, their arguments are reminiscent of Goffman's concepts of front stage–back stage as well as the impression management/cloak of competence language used by Haas and Shaffir in what was the very first article in medical education to use the HC as a conceptual tool.

While none of this collateral learning is a part of anyone's formal professionalism curriculum, this is what students are learning about professionalism – and inescapably so. Once again we find the HC at work, even as medical education launches a professional project built around the (flawed) premise that if medicine is to be saved, the principal method would be to bring the HC more under the control of formal pedagogy.

Conclusions: medical education as a complex system

In this last section we offer an alternative way to think about the HC based on the new science of complexity (for instance, Capra 2002). Complexity science is a far-reaching, interdisciplinary field of research devoted to the study of complex systems. Some of its more popular ideas include the small-world phenomenon, self-organization, emergence, fractals and agent-based modelling. The last concept is an umbrella term for the latest advances in computer-based modelling,

ranging from neural networks to cellular automata to fuzzy logic (Gilbert and Troitzsch 2005).

One of the most popular areas of substantive inquiry in complexity science is the study of formal organizations – including businesses, educational institutions, non-profit companies and medical practices (see Anderson and McDaniel 2000 for an example of the latter). Across the managerial-sciences literature, the basic argument is that formal organizations are really complex social systems and therefore best studied and managed as such (Richardson and Cilliers 2001).

Our own research, for example, has explored the integration of complexity science and sociology (Hafferty and Castellani 2008), as well as the more focused question of multiple (and competing) types of medical professionalism (Castellani and Hafferty 2006).

Using this literature as a backdrop, our goal is to briefly sketch what the HC might look like from a complexity science perspective. A more formal review would be necessary to actually build a defendable model. In what follows, we will list our ideas as a series of numbered points.

The system of medical education

1 As argued in the body of this chapter, it is a mistake to imagine the formal curriculum as something educators construct 'ahead of time', deliver to students (as passive recipients), assess in terms of some point-in-time impact, and then make adjustments to (even if these adjustments are framed in terms of the HC). This model (develop, deliver, assess and remediate) is *relatively* hierarchical, static and unidirectional. Teachers still deliver pre-established blocks of material and students are still the objects of faculty pedagogical affections, all operating within one feedback loop. Transforming this model (which some might still characterize as 'progressive') to a systems perspective (where education is complex, emergent, self-organizing and so on) will require thinking about education in new and different ways. This will be the true 'culture change' called for (sometimes rhetorically) by medical educators.

2 Medical education is not something medical schools deliver. It is a system. It is a system formed by the intersection of several types of curriculum (formal, informal, hidden, null and so forth) – all of which function within a dynamic web of intersecting influences. The formal curriculum, while central to the educational enterprise, is not the only or 'most important' site of learning. Nor is the hc the only alternative learning process. The formal, informal, hidden and so on, are intersecting social practices – all of which create the system of medical education.

3 The term 'learning environment' is what medical education does. It is the system of medical education in practice. As practised (and as a system), learning environments are complex, emergent, self-organizing, evolving, adaptive systems where the whole is more than the sum of the parts (Capra 2002).

4 When we study (or attempt to reform) the system of medical education, we cannot do so by targeting one component or another in isolation. Instead, we work with and through the system to see how these segments form very specific, concrete instances of medical learning. Different schools will exhibit different learning configurations. Each overall learning environment for each and every medical school is a unique combination of the formal, informal and hidden curriculum. As such, each process of educational reform is unique. Nonetheless, educators still work with the same 'parts' (formal, informal, hidden), the same overall structure (network) and the same overall process (dynamic).

5 Because it is part of this overall system, the hc cannot be separated from the overall process of medical learning. Nor can it be removed or otherwise marginalized in terms of its impact. There is *always* a latent to every manifest, an informal to every formal, and/or a back stage to every front stage. One can shift (aspects of something) from the realm of tacit learning to the formal curriculum (such as role models to mentoring), but this does not minimize the effect of the HC. Nor does it make the HC less relevant as a theoretical framework. Rather, the system changes. Elements are rearranged and new processes emerge. However, the overall structure and dynamics remain. Change is ubiquitous, and it is the responsibility of educators to both anticipate change and respond to the system permutations (as best as possible).

6 The fact that there will always be hidden, informal, null and so forth, curricula operating alongside the formal curriculum does not relegate remedial efforts to the dustbin of wasteful or purposeless action. If for no other reason, educators have a moral responsibility to address those instances where students find themselves wallowing in learning environments awash with inconsistent or conflicting messages. In addition to these more reactive and instance-specific reclamations, medical educators are also beginning to explore proactive structural innovations that bear future scrutiny (from an HC perspective). One involves models of 'longitudinal and integrated training' – an example being Harvard's Cambridge Integrated Clerkship (Hirsh *et al.* 2007). There are great psychological and learning costs associated with medicine's traditional requirement that students and residents rotate through discrete clinical settings (for example, services, wards, departments), each with its own knowledge base, skill sets, cast of characters and 'ways of doing things'. Under such circumstances, students spend a prodigious amount of time and energy tacitly learning the ropes for each clerkship/rotation (particularly as they first enter these settings and situations) rather than focusing on the clinical skills that supposedly sit at the core of that learning environment's formal curriculum. Longitudinal learning experiences (for example, a single, integrated and continuous third-year clerkship), provide students with a more stable and focused – and certainly less disjointed and disruptive – opportunity to learn what the formal curriculum says it wants to impart. A similar movement involves efforts to

construct more vertically positioned learning structures, this time those that cut across the hierarchically ordered years of medical education (such as learning communities) and thus seek to link (and network) students at different levels of training. Other structural changes await our imagination.

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